



Evidence use and generation

Biodiversity Challenge Funds: Building and Applying Evidence

Department for Environment, Food and Rural Affairs (Defra)

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Disclaimer

NIRAS is the fund administrator for the [Biodiversity Challenge Funds](#) and commissioned this work on behalf of the Department for Environment, Food and Rural Affairs (Defra) under Workstream 5 of the Biodiversity Challenge Funds.

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Cover photograph: Marine turtle tag-and-release program - Madagascar - ReefDoctor

Executive summary

Study purpose & methodology

The present study sought to assess the current state of evidence use and generation by Biodiversity Challenge Fund projects, including those of the Darwin Initiative, Darwin Plus, and Illegal Wildlife Trade Challenge Fund. Findings draw on a series of key informant interviews with staff and expert group members, as well as a review of a sample of projects from the latest funding round. Recommendations are made for improved systems and processes for evidence use and generation going forwards.

Use of evidence by projects

Use of evidence by BCF projects is considered mixed overall, with proposed strategies often relying more on applicants' own past experiences than wider evidence on the efficacy of certain approaches. University-led teams tend to include more evidence sources in their proposals than other types of applicants, though these tend to be skewed towards peer-reviewed scientific literature. While the latter has typically been considered the preferred standard of evidence, more diverse sources are increasingly encouraged – though barriers remain to the inclusion of non-traditional sources, such as local and indigenous knowledge.

Beyond teams led by Western universities and international NGOs, encouragement of more successful applications from the Global South will likely require additional support and guidance on the use of evidence. Clarifying existing written guidance on evidence use, and complementing this with clear examples of best practice, could help to build capacity for evidence-based grant writing across the Funds.

The assessors who make up the Funds' expert groups have a key role to play in shaping the overall evidence base for the BCF portfolio, and while each Fund currently draws on world-leading expertise across a diverse range of topics, continued efforts will be required to ensure these groups keep pace with the latest developments in the field, as well as to increase the diversity represented within the groups.

Generation of evidence by projects

The long history of BCF projects provides a tremendous learning opportunity for the conservation field, important not only for guiding the future of BCF, but also for the global evidence base. While the Funds already feature a commendable level of transparency in the publication of project documents, more work is needed to synthesize evidence on particular themes and approaches, and to develop and disseminate evidence products tailored to different audiences.

Recommendations for improved use of evidence

Priority recommendations	
A1	Update the guidance documents on use of evidence to ensure that basic evidence definitions, uses, and types are clear and accessible, particularly to applicants with less experience in evidence-based grant writing.
A2	Facilitate thematic workshops, webinars, or other events that bring together teams seeking to address common problems in order to share evidence and co-develop strategies.
A3	Ensure that assessors have access to information on the performance of past projects in order to calibrate their assessments of future proposals.
A4	Continue to promote a diverse range of evidence types, avoiding an over-emphasis on peer-reviewed scientific literature.

A5	Continue to build capacity and diversity of the expert groups, particularly in areas related to livelihoods, markets, and conservation finance.
Additional suggestions	
B1	Increase the centrality of an evidence-based theory of change in proposals.
B2	Include links to resources such as Conservation Evidence, the Collaboration for Environmental Evidence, or other conservation evidence repositories in the application guidance.

Recommendations for improved generation of evidence

Priority recommendations	
C1	Develop a public database of projects on the Funds' websites, including searchable tags, maps, and summary data.
C2	Conduct reviews of thematic clusters of projects, ensuring that results are published on the Funds' websites as knowledge products tailored to specific audiences.
C3	Publish the projects' own knowledge products on the Funds' websites.
Additional suggestions	
D1	Collaborate with initiatives such as Conservation Evidence and the Collaboration for Environmental Evidence to enable BCF project data to inform future evidence syntheses. This may require additional resources to compile and process historic data into usable formats, and/or to ensure that future project data collection is suitable for input into global evidence syntheses.
D2	Develop an overarching BCF learning and communications strategy capturing the range of activities suggested here, and creating formal accountability for learning and outreach.
D3	Develop evidence/evaluation funding schemes supporting projects that seek to address a specific evidence gap through a research project or evaluation.

1. Introduction

1.1 Background

The UK Government Department for Environment, Food and Rural Affairs' (Defra) Biodiversity Challenge Funds (BCF), comprising the Darwin Initiative, Darwin Plus, and Illegal Wildlife Trade Challenge Fund (IWTCF) have collectively disbursed some £239 million to over 1,400 projects in 159 countries and UK Overseas Territories since the launch of the Darwin Initiative at the Rio Earth Summit in 1992.

Between the Darwin Initiative's support for biodiversity conservation and poverty reduction across the Global South, Darwin Plus's dedicated work in UK Overseas Territories, and IWTCF's technical focus on the illegal wildlife trade, the Funds have the potential to play an influential role at the forefront of evidence-based conservation and development programming, while also presenting a tremendous learning opportunity, both in terms of extracting lessons from over 30 years of projects, as well as continuously building the global evidence base moving forwards.

To succeed on these fronts, it is critical that the Funds have systems and processes in place that support the effective use and generation of evidence by both applicants and projects. To this end, the present study seeks to assess the current state of evidence use and generation across the Funds, and to propose potential improvements going forwards.

1.2 Objectives

The focus of the study is split across the following objectives:

1. Assess the current state of evidence use by BCF projects and applicants. How do projects justify their proposed approach and expected results? What is the strength of evidence used by applicants across the BCFs?
2. Assess the current state of evidence generation by BCF projects for wider learning. Note that this objective does not seek to address routine project monitoring and evaluation efforts, or the issue of legacy evaluations, both are which are the subject of a parallel study. Instead, the focus here is on explicitly for wider learning among a diverse audience including Defra and wider UK Government policymakers, global conservation and development practitioners, and local stakeholders in target countries, including government, private sector, NGO partners, and local communities.
3. Suggest potential systems and processes for improved use and generation of evidence.

1.3 Methodology

1.3.1 Data sources

The study involved a combination of a BCF portfolio desk review and key informant interviews as follows:

- Portfolio review: Analysis of a sample of 40 projects (37%) from the latest funding round of each BCF¹ to ascertain the types and extent of evidence used and generated by projects. Stratified random sampling was used to ensure coverage of each fund and their specific funding schemes (Main, Capability & Capacity, Extra, and Innovation for the Darwin Initiative; Main, Evidence, and Extra for IWTCF), although greater weight was given to the Extra schemes (Darwin Initiative and IWTCF), as they are intended be held to a greater evidence standard than other schemes, and are therefore of particular interest to the current study.
- Key informant interviews: Interviews were conducted with the Defra leads of each fund and the overall BCF, as well as the NIRAS fund manager, and a range of experts from the various technical groups responsible for the assessment of BCF applications².

2. Use of evidence

Summary

Use of evidence by BCF projects is considered mixed overall, with proposed strategies often relying more on applicants' own past experiences than wider evidence on the efficacy of certain approaches. University-led teams tend to include more evidence sources in their proposals than other types of applicants, though these tend to be skewed towards peer-reviewed scientific literature. While the latter has typically been considered the preferred standard of evidence, more diverse sources are increasingly encouraged – though barriers remain to the inclusion of non-traditional sources, such as local and indigenous knowledge.

Beyond teams led by Western universities and international NGOs, encouragement of more successful applications from the Global South will likely require additional support and guidance on the use of evidence. Clarifying existing written guidance on evidence use, and complementing this with clear examples of best practice, could help to build capacity for evidence-based grant writing across the Funds.

The assessors who make up the Funds' expert groups have a key role to play in shaping the overall evidence base for the BCF portfolio, and while each Fund currently draws on world-leading expertise across a diverse range of topics, continued efforts will be required to ensure these groups keep pace with the latest developments in the field, as well as to increase the diversity represented within the groups.

¹ Including 23 out of 62 Darwin Round 28 projects (including 10 Main projects, 3 Capability & Capacity projects, 5 Extra projects, and 5 Innovation projects), 8 out of 24 Darwin Plus Round 10 projects, and 9 out of 21 IWTCF Round 8 projects (including 4 Main projects, 4 Evidence projects, and 1 Extra projects).

² Including the respective chairs of the Darwin Expert Committee, Darwin Plus Advisory Group, and Illegal Wildlife Trade Advisory Group, plus four additional group members.

2.1 Key findings

The strength of evidence underpinning BCF projects is considered mixed, with smaller organizations, particularly in the Global South, often lacking capacity and experience in evidence-based grant writing.

While larger organizations with extensive experience in research and grant writing tend to generate more convincing proposals – especially those with a track record of multiple successful BCF grants in the past (benefiting from an element of ‘knowing what we want’) – even these often struggle to demonstrate a firm grasp of the latest global evidence on their approaches. Smaller organizations, and particularly those in target countries across the Global South (from whom the Funds are eager to elicit more successful applications in future) often lack capacity in terms of the skills, time, and/or access to evidence required to identify, compile, assess, and present evidence in support of their proposals.

Use of evidence is typically stronger in defining the problem than in justifying the proposed approach of the project. In the latter case, applicants are more likely to base strategy primarily on their own prior experience, with limited reference to broader evidence of the efficacy of the strategy, or comparisons with alternative approaches. This creates a challenge for appraising proposals, since reference to a team’s own experience is difficult to verify externally.

Explicit written guidance in the Darwin Initiative and IWTCF guidelines on use of evidence is welcome, but could be strengthened to ensure that all applicants are clear on the basics of evidence use (see Annex 3 for details). Key elements to incorporate could include (a) clearer definitions of ‘evidence’, how it should be used, and the types of evidence that may be admissible, (b) clear instructions on which proposals sections require which kinds of supporting evidence (e.g., what kinds of information might support the context, problem statement, methodology, theory of change, and expected results?), (c) guidance on how to present evidence of own past experience (e.g., Was a formal evaluation conducted? What methodology was used? What causal factors were behind the initial success or failure? How transferable are these findings to the present context?), (d) examples of good use of evidence.

Peer reviewed scientific literature has tended to be implicitly favoured over other evidence sources by reviewers. While a growing diversity of evidence sources is encouraged today, barriers remain to their use. Interviewees voiced a particular concern for frequent reliance on self-assessed prior experience, with no means of assessors independently verifying this evidence. Use of indigenous and local knowledge is increasingly encouraged, though there is currently no guidance for applicants (or assessors) as to what forms this might take, or how best to incorporate it. Finally, in certain areas, the global evidence base itself is limited – particularly with regards to the illegal wildlife trade.

Development of a portfolio underpinned by robust evidence is heavily dependent on the makeup of the expert groups who are responsible for assessing applications. Since responsibility for the judgement of evidence in proposals lies with the respective expert groups, an element of subjectivity is hard to avoid, as individual members will bring their own experiences, knowledge, and opinions to bear on the pool of applications. While a range of checks and balances are already in place to guard against reviewer bias, objectivity could be enhanced by providing reviewers with clear guidance on the assessment of evidence. While the Funds seek to maintain a diverse range of expertise on different biomes, species, and approaches, the broad thematic and geographic scope of the Funds, particularly the Darwin Initiative, makes it challenging to ensure appropriate breadth of technical expertise.

Diverse expert groups require more than diverse expertise. Besides diversity in technical expertise, the broader diversity of assessors’ backgrounds plays an important role in the judgement of evidence. To date, expert groups across the Funds lean heavily towards Western academics and (often UK-based) international

NGO staff. Historically, this is seen to have engendered an implicit preference for academic literature over other forms of evidence – though this is perceived to be changing over time. Encouragement of successful applications from the Global South, and the continued diversification and decolonization of evidence used to support such projects, should benefit from diversity being reflected in the expert groups themselves.

Use and assessment of evidence relating to livelihoods, markets, and human development will be a key area to strengthen going forwards. Since human development and livelihoods play an increasingly central role across the Funds, building expertise in these areas among the assessors will be important going forwards. Specialties such as market-based approaches to conservation and conservation finance will be of particular importance. Closer collaboration with the UK Foreign, Commonwealth, and Development Office (FCDO) may help to tap into best practice on livelihoods from the international development field.

Improved access to information on past BCF projects could serve as a useful source of evidence for future applicants, as well as Defra and the expert groups. While many documents relating to past projects are already publicly available on the respective Funds' websites, it was noted that a searchable database with tags relating to key project elements, more accessible project summary information, and/or an interactive project map could help applicants to more easily identify past and present projects engaged in similar approaches or locations. Such a resource would also be beneficial to both Defra (who currently rely largely on ad-hoc information requests to the fund administrator) and the expert groups (who currently see little of projects beyond the application stage) in managing the Funds and appraising applications respectively.

The nature of challenge funds requires balancing risk and innovation against confidence in proven approaches. While the desire for robust evidence is stressed in the application guidance (Annex 3), interviewees noted that projects should not merely focus on expanding tried and tested interventions (besides through 'Extra' funding schemes). Specific funding schemes with expressly different evidence thresholds, such as the Darwin Initiative's 'Innovation' scheme (lower evidence threshold) and 'Extra' scheme (higher evidence threshold), help to clarify requirements and expectations in this regard. The new IWTCF 'Evidence' scheme was praised as a means of funding a dedicated evidence generation phase that can potentially inform a subsequent full project application. Elsewhere (e.g., the 'Main' schemes, or Darwin Plus), more guidance could help both applicants and assessors to navigate the expected balance of innovation and demonstration of existing evidence.

Existing evidence repositories may be useful to applicants – but there are arguments against being too prescriptive in directing applicants to specific resources. Initiatives such as Conservation Evidence³ and the Collaboration for Environmental Evidence⁴ that synthesize existing evidence on conservation policy and practice may serve as useful repositories for applicants to draw upon. However, it has been noted that the outputs of these initiatives remain largely academic-focused, UK-focused, and/or narrowly focused on single interventions, as compared to the more complex social-ecological approaches typically adopted by BCF grantees. Moreover, BCF management voiced a reluctance to being overly specific in guidance to applicants, for fear of making the use of certain evidence sources appear obligatory.

³ <https://www.conservationevidence.com/>

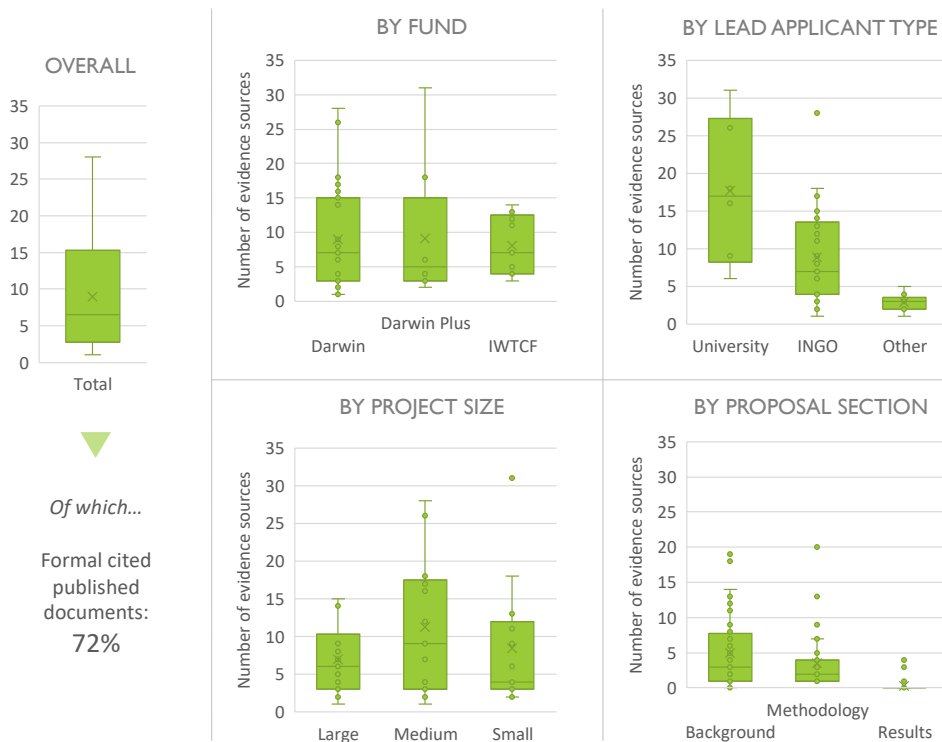
⁴ <https://environmentalevidence.org/>

2.2 Portfolio review

The following section presents additional analysis of current use of evidence by BCF projects based on the portfolio review.

Across all projects, the reviewed proposals featured an average of 9 evidence sources supporting the application, with little variation between the Funds (**Error! Reference source not found.**). Applications with universities as lead applicants contained a significantly greater number of evidence sources than any other type of application, followed by teams led by international NGOs. Finally, applications led by other organizations such as local NGOs, government agencies, or the private sector tended to include very few evidence sources⁵.

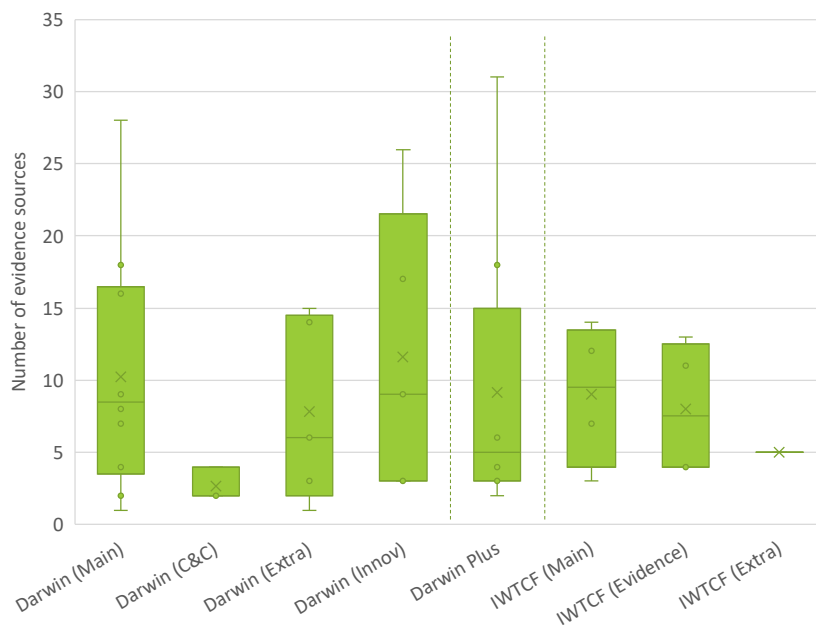
Figure 1: Number of evidence sources used



Proposal sections setting out the background, context, or problem to be addressed tended to feature a greater number of evidence sources than the methodology or results sections. While the latter two are closely linked, little evidence was provided for quantification of expected results in logframes.

Figure 2: Number of evidence sources used by fund & scheme

⁵ Though a small sample is noted in the 'other' category (n=9).



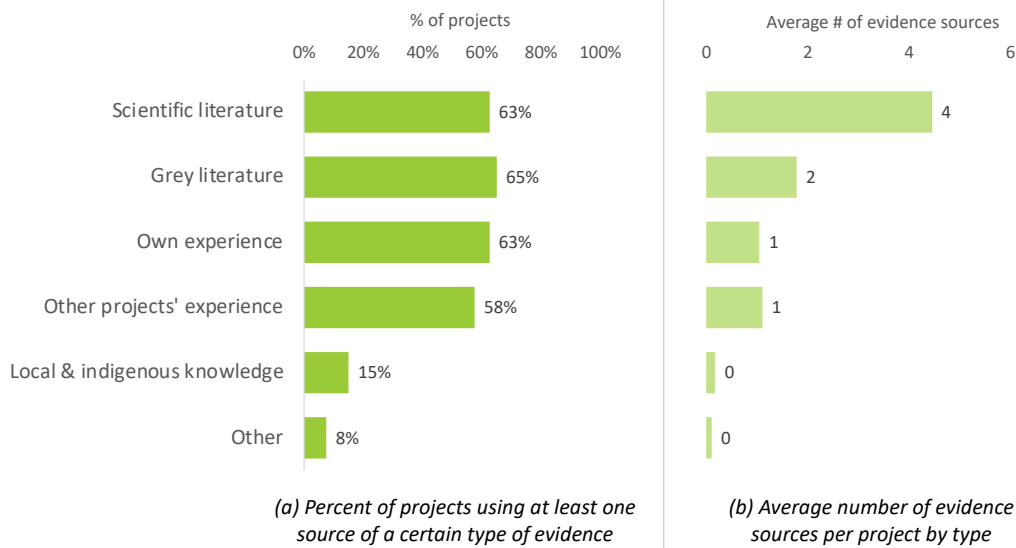
On average, 72% of evidence sources were formally referenced with citations guiding the reader to published scientific or grey literature, while one-third of evidence sources involved an in-text description of sources such as the project team’s own prior experience, the experiences of other projects, or local and indigenous knowledge.

Comparing across the funding schemes, little difference in the extent of evidence provided was observed, despite different schemes technically having different evidence thresholds⁶ (Figure 2). However, the small sample size for specific schemes is again noted here, as is the limitation of assessing quantity – rather than quality – of evidence sources.

A mix of evidence types including scientific literature, grey literature, and past experiences of the project team or other projects featured commonly across the proposals, though scientific publications appeared in greater number than any other source (Figure 3). Inclusion of local and indigenous knowledge remains relatively rare.

Figure 3: Types of evidence source used

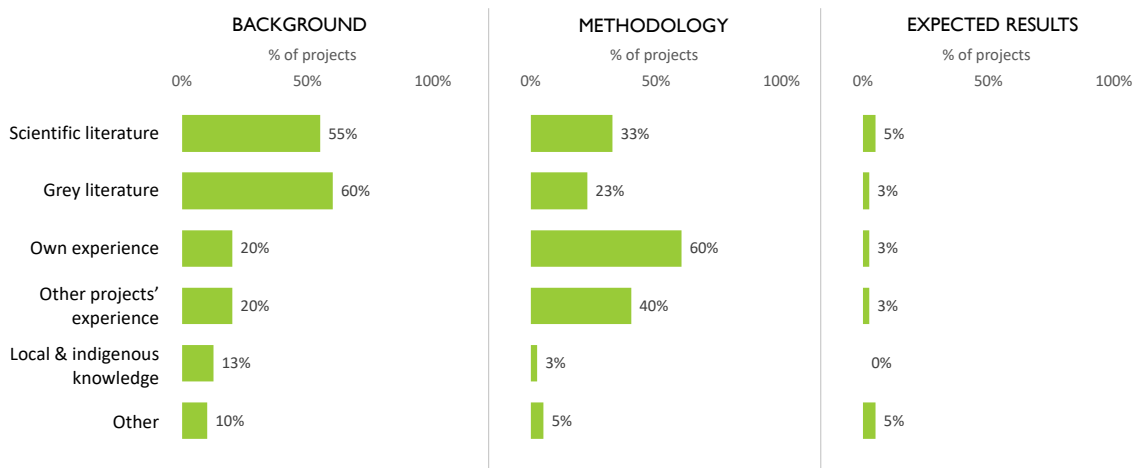
⁶ Darwin Initiative and IWTCF ‘Extra’ projects are expected to have the highest evidence standards, as they are larger grants for the scale-up of proven approaches. Conversely, Darwin ‘Innovation’ and IWTCF ‘Evidence’ grants are not expected to demonstrate as much evidence, since they are explicitly designed to test innovations or gather evidence in areas where existing evidence may be limited.



Notably, when breaking this down by proposal section, we find that scientific and grey literature is most commonly used in setting out the background or project context, while prior project experience is most commonly used as supporting evidence for the proposed project methodology (Figure 4).

While somewhat intuitive, this is suggestive of two potential factors of note with regards to justification of proposed interventions. First, it may indicate a scarcity of usable published evidence on the efficacy of specific interventions – a commonly observed shortcoming in the literature on the science-practice gap. Second, since projects include, on average, only a single piece of prior project experience as evidence (Figure 3), this can place substantial weight on a narrow evidence base which typically cannot be accessed or scrutinized by assessors.

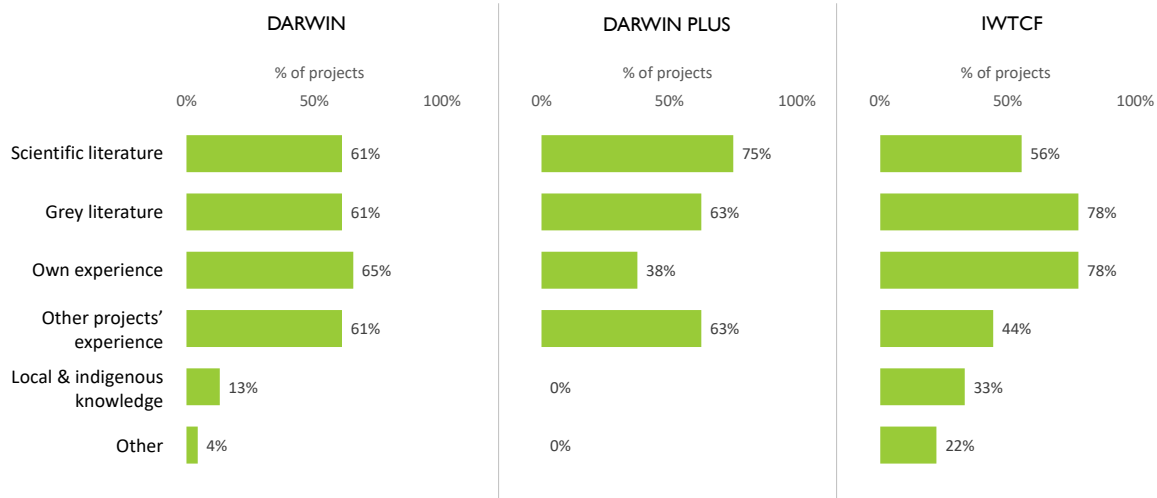
Figure 4: Types of evidence source used by proposal section



Breaking evidence types down by fund, we see that, relative to the other Funds, IWTCF generally relies towards on technical literature and prior experiences than scientific literature, suggesting

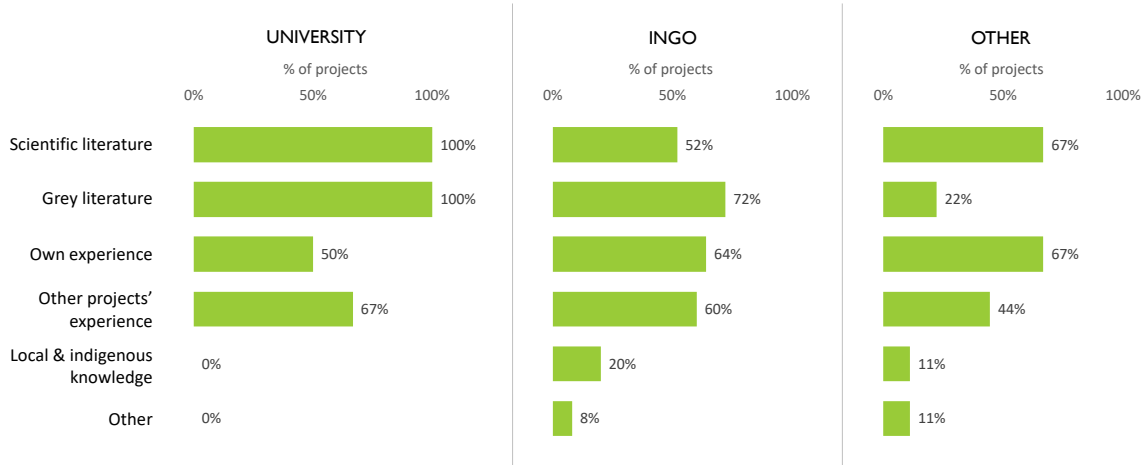
potential practical limitations in the peer reviewed academic literature on the subject (Figure 5)Figure 5.

Figure 5: Types of evidence source used by Fund



Finally, applications led by universities are unsurprisingly almost twice as likely to feature scientific literature as other lead applicant types, likely due to a combination of academics' familiarity with, preference for, and access to such literature (Figure 6). For many outside of academia, peer reviewed literature is often inaccessible due to prohibitively expensive paywalls (despite progress in open access publishing), while featuring technically challenging language and a limited focus on practical applications [ref].

Figure 6: Types of evidence source used by lead applicant type



At the same time, while local & indigenous knowledge was rarely used in the sample, it only ever appeared in non-university-led teams, suggesting stronger connections with local and indigenous knowledge systems by NGOs and other (often local) applicants.

3. Generation of evidence

Summary

The long history of BCF projects provides a tremendous learning opportunity for the conservation field, important not only for guiding the future of BCF, but also for the global evidence base. While the Funds already feature a commendable level of transparency in the publication of project documents, more work is needed to synthesize evidence on particular themes and approaches, and to develop and disseminate evidence products tailored to different audiences.

3.1 Key findings

The long history of BCF projects provides a tremendous opportunity to learn about what works and what doesn't in conservation – important not only to global conservation science and practice, but also for ensuring that BCF grants are directed to cost effective projects in future. Making sense of past projects' efforts would be a great contribution to the global evidence base, but would also serve as important feedback into future funding decisions within the BCF itself. At present there is a risk that, without robust learning mechanisms, successive rounds of funding go to popular but largely unproven interventions (e.g., beekeeping, fuel efficient cookstoves, non-timber forest products).

The Funds already make a commendable effort to publish all successful applications and project reports – but more could be done to distil these into digestible knowledge products for different audiences, as well as to synthesize across projects. The vast amount of freely available online documentation goes beyond what most programs do, but a large repository of lengthy PDF documents is difficult to navigate and extract lessons from.

Individual projects already produce a range of evidence products, but more could be done to ensure the quality of these outputs, and to disseminate them to wider audiences. Projects produce a wide range of knowledge products, from peer reviewed journal articles, through technical reports, traditional and digital media outputs, datasets, maps, trainings, events, and other outputs. Additional central BCF resources could help to strengthen these outputs and amplify their message.

Ongoing efforts to harmonize indicators and aggregate results will strengthen Defra accountability, but are unlikely to generate meaningful lessons on specific interventions and approaches. Accountability for funds invested through BCF is critical, and aggregation of results should allow Defra to more easily assess value for money across the Funds. However, the wide diversity of projects across the three Funds poses a challenge for the extraction of meaningful lessons through results aggregation. Instead, evidence generation efforts should focus on clusters of projects working on common issues, approaches, or geographies.

Thematic calls for proposals and dedicated funding schemes within each Fund can direct future projects towards priority evidence gaps – but being too prescriptive risks being a barrier to innovation and a bottleneck in the search process. Some argued that the extremely broad nature of the Darwin Initiative was preferable in order to cast as wide a net as possible in search of innovative projects. Others saw the four thematic pillars of the IWTCF⁷ as an appropriate way to provide slightly more structure around the challenges to be addressed. Introducing greater specificity than this, such as a proposed focus on the Nigeria-Vietnam wildlife trade corridor under IWTCF, was perceived as having two key risks – first, in potentially discouraging

⁷ (a) Reducing demand for IWT products; (b) Ensuring effective legal frameworks and deterrents, (c) Strengthening law enforcement; (d) Developing sustainable livelihoods to benefit people directly affected by IWT.

other promising applicants from applying, and second, in the Funds lacking the responsiveness to address specific (and often fast-changing) issues in a timely manner, given the substantial time lag between any policy decision and subsequent grantee projects being implemented. If proposals on specific themes or geographies *are* desired, it would be preferable to create a dedicated funding window for these, rather than including them in general application guidance.

Dedicated evidence generation funding schemes may be useful means of supporting more research-oriented projects that can contribute to the global evidence base.

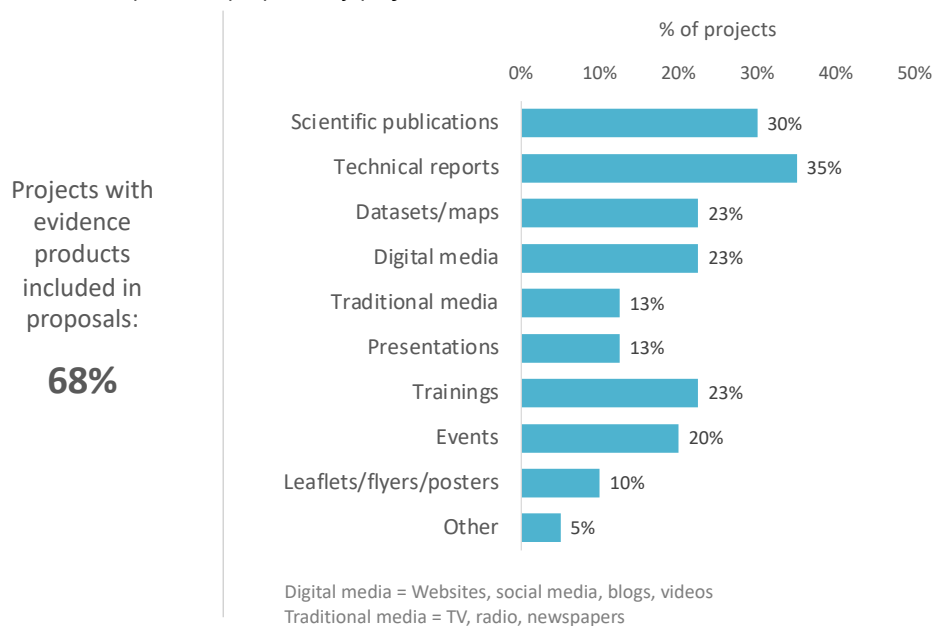
While the IWTCF already has an ‘evidence’ scheme, its primary intention is for teams to gather evidence upon which they themselves can develop a future project. Evidence schemes that instead invite teams to address global evidence gaps (potentially by evaluating one of their own previous projects) could help to sharpen the focus on external learning. Priority evidence gaps could be defined by the Funds, or left open to applicants.

3.2 Portfolio review

The following section presents additional analysis of current generation of evidence by BCF projects based on the portfolio review.

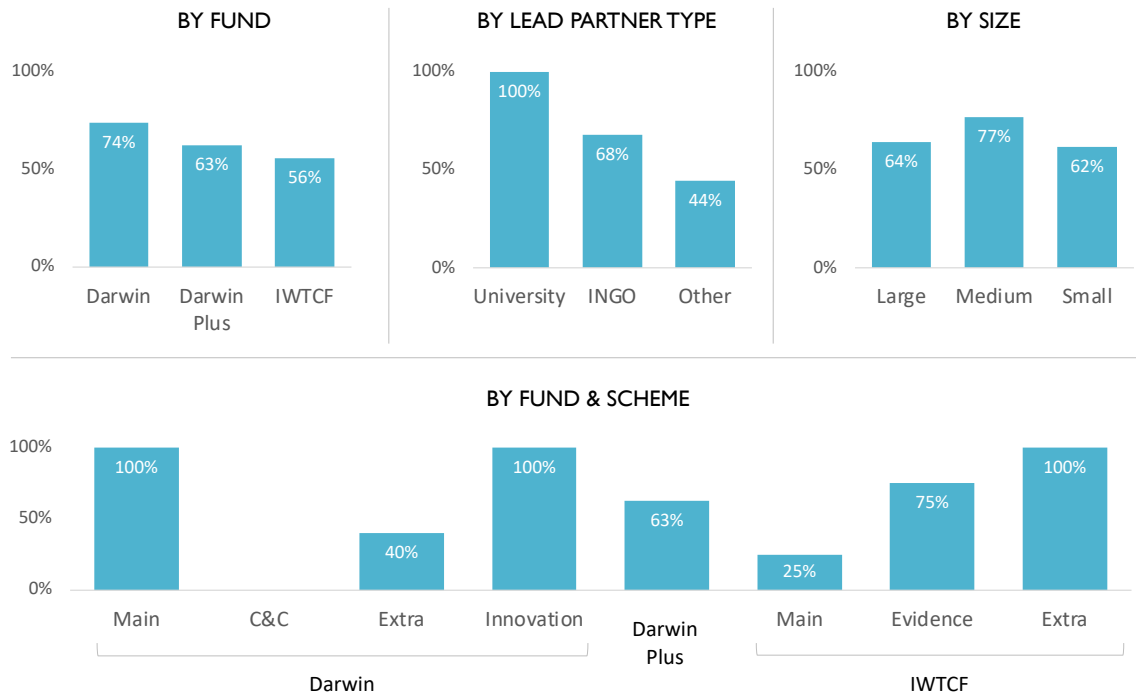
A little over two-thirds of projects included the production of evidence products in their proposals, ranging from scientific and technical publications, through datasets and maps, traditional and digital media products, to events, trainings, presentations, and other media (Figure 7).

Figure 7: Types of evidence products proposed by projects



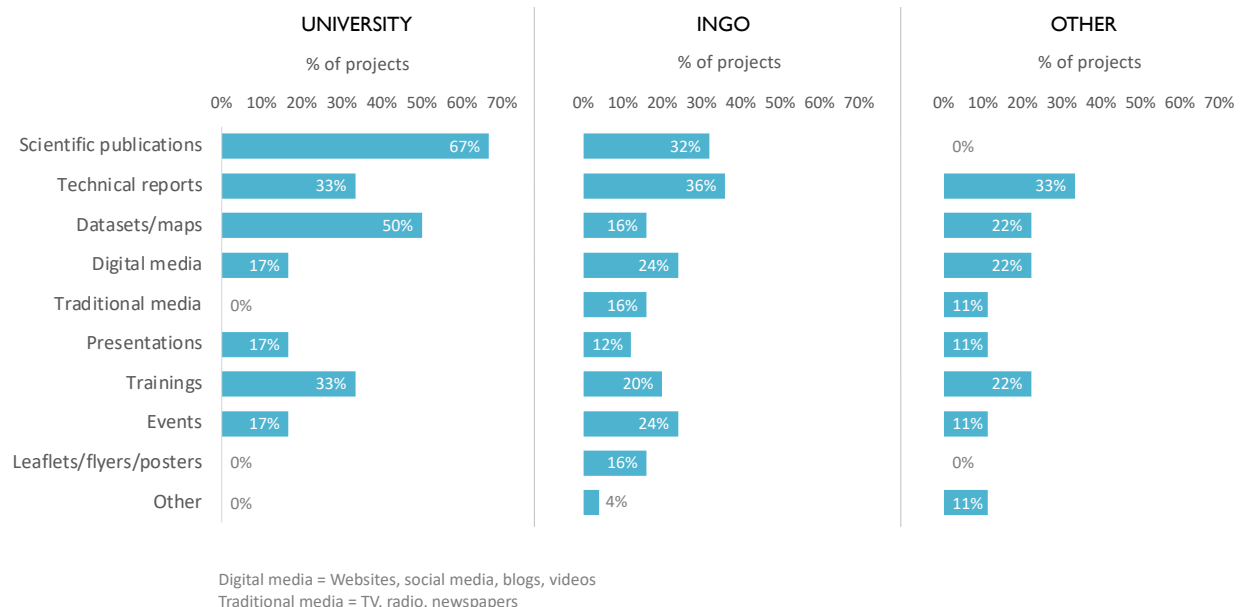
The production of evidence products featured in all university-led teams, compared to only around two-thirds of INGO-led teams, and fewer than half of other (non-university/INGO) teams (Figure 8). Darwin Initiative projects were slightly more likely to make explicit reference to the production of evidence than the other two funds, while there was again little consistent pattern between the separate schemes within the Funds.

Figure 8: Percentage of projects including evidence products in proposals



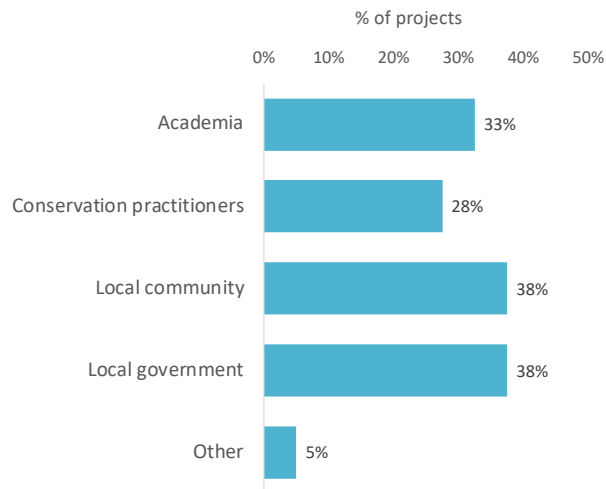
Unsurprisingly, evidence products produced by university-led teams were skewed towards peer reviewed scientific publications, while teams in the 'other' category – predominantly local NGOs, government agencies, or private sector – made no mention of scientific publishing (Figure 9). INGO-led projects, the largest group of the three, featured a balanced range of evidence products.

Figure 9: Percentage of projects including evidence products in proposals, by lead partner type



Evidence products were most commonly targeted at local communities and governments, suggesting an emphasis across the Funds of building local capacity for sustainable natural resource management (Figure 10). Academia and conservation practitioners were also common target audiences.

Figure 10: Target audience for evidence products



4. Recommendations

The following sets out recommendations for use and generation of evidence across BCF projects, based on the findings above. Recommendations are organized into ‘priority’ recommendations, which had broad support from key informants, and ‘additional suggestions’, which may be considered for further refinement going forward. Finally, limitations and areas for further research are discussed in Section 0.

The following sets out recommendations for use and generation of evidence across BCF projects, based on the findings above. Recommendations are organized into ‘priority’ recommendations, which had broad support from key informants, and ‘additional suggestions’, which may be considered for further refinement going forward. Finally, limitations and areas for further research are discussed in Section 0.

Across all recommendations, a common request was that any proposed changes to BCF systems or processes be mindful of the needs and capacities of applicants and grantees, and to avoid over-burdening teams in an already relatively intensive application and grant management process. Similarly, any recommendations should be tailored to the day-to-day practical limitations faced by many teams, noting that availability of time, financial resources, internet bandwidth are often limited, while time zones and languages can serve as additional barriers.

4.1 Recommendations for use of evidence

Priority recommendations	
A1	Update the guidance documents on use of evidence to ensure that basic evidence definitions, uses, and types are clear and accessible, particularly to applicants with less experience in evidence-based grant writing. Complementing this with practical examples of best practice in evidence use should help to clarify the expected standards.
A2	Facilitate thematic workshops, webinars, or other events that bring together teams seeking to address common problems in order to share evidence and co-develop strategies. Events could be held either with cohorts of new grantees, or with interested organizations independent of any particular funding round. Emphasis could be placed on hearing from local organizations in target countries, in order to develop partnerships and co-develop locally led strategies in anticipation of future funding rounds.
A3	Ensure that assessors have access to information on the performance of past projects in order to calibrate their assessments of future proposals. Closing this feedback loop should be a critical step in enhancing the scrutiny of future projects.
A4	Continue to promote a diverse range of evidence types, avoiding an over-emphasis on peer-reviewed scientific literature. This could be done through clarifying the application guidance on evidence, as well as through guidance to assessors as to the treatment of different evidence types. Particular focus could be placed on how exactly local and indigenous knowledge can be incorporated into proposals, as well as the relevant details required to build credibility when referencing one's own past experiences.
A5	Continue to build capacity and diversity of the expert groups, particularly in areas related to livelihoods, markets, and conservation finance. Keeping abreast of the latest trends and conservation evidence in new and/or fast-moving specialisms should help to ensure that the portfolio is at the cutting edge of the field. Building greater diversity in the composition of the expert group itself should also help to diversify the portfolio away from its historic emphasis on Western universities and international NGOs.
Additional suggestions	
B1	Increase the centrality of an evidence-based theory of change in proposals. At present, theories of change are only required under certain funding schemes, and no specific template is provided. The theory of change section of the Funds' monitoring and evaluation guidance does not currently explain how the theory of change should draw on existing evidence. Grounding existing logframes in robust theories of change (featuring clarity on expected causal relationships and assumptions backed up by evidence) could provide a useful framework for the presentation of evidence.
B2	Include links to resources such as Conservation Evidence, the Collaboration for Environmental Evidence, or other conservation evidence repositories in the application guidance. If this is pursued, it should be made clear that these are suggestions that will not be relevant to all projects, and are not required to be used.

4.2 Recommendations for generation of evidence

Note that the below recommendations are specific to wider learning beyond routine monitoring and evaluation, as well as legacy evaluations, both of which are discussed in a parallel study.

Priority recommendations	
C1	Develop a public database of projects on the Funds' websites, including searchable tags, maps, and summary data. Doing so would be valuable to multiple stakeholders, including prospective applicants (to identify past and present initiatives working in similar areas), Defra (for overall BCF transparency and accountability), the expert groups (to more readily understand the progress of previously approved projects), plus a range of external stakeholders, including researchers, conservation organizations, and other funders.
C2	Conduct reviews of thematic clusters of projects, ensuring that results are published on the Funds' websites as knowledge products tailored to specific audiences. These could include briefing notes, blogs, videos, or other media.
C3	Publish the projects' own knowledge products on the Funds' websites. These could include links to scientific publications, white papers, news articles, other digital media, or any of the other products discussed above (and may come after the close of the project).
Additional suggestions	
D1	Collaborate with initiatives such as Conservation Evidence and the Collaboration for Environmental Evidence to enable BCF project data to inform future evidence syntheses. This may require additional resources to compile and process historic data into usable formats, and/or to ensure that future project data collection is suitable for input into global evidence syntheses.
D2	Integrate the range of activities suggested here into the existing draft learning and communication strategy. This could ensure that an annual budget, implementation plan, and accompanying monitoring and evaluation efforts are dedicated to ensuring the widest possible learning from BCF projects.
D3	Develop evidence/evaluation funding schemes supporting projects that seek to address a specific evidence gap through a research project or evaluation. While the IWTCF's 'evidence' scheme is similar to this, the focus would be primarily on external learning and communication.

4.3 Limitations and areas for further research

The present study has featured the following limitations, which should be considered in future work on evidence use and generation in the BCFs:

- Despite sampling 40% of the current round of projects, the sampling methodology of the portfolio analysis meant that only very small samples of certain funding schemes were assessed (Annex 2). Future work could broaden the analysis to multiple years of funding.
- Key informant interviews focused on Defra and NIRAS staff, plus expert group members. With more time, the views of BCF project teams would have been important to incorporate.
- The portfolio analysis only sampled from grant recipients – comparing with a sample of unsuccessful projects may help to understand the difference between ‘successful’ and ‘unsuccessful’ use of evidence in proposals.
- The portfolio analysis was limited to an assessment of quantities and types of evidence sources and evidence products, rather than quality of evidence. While the latter was assessed through key informant interviews, more structured strength of evidence assessments could be carried out.
- Overall, the study focused heavily on proposals, both via the desk review and the key informant interviews since many of the experts interviewed do not receive project information beyond the proposal stage. Future assessments could seek to examine the extent to which the evidence used to justify a given project held true in reality, and/or the efficacy of evidence product generation and dissemination.

Annex 1: Key informants interviewed

The following key informants were interviewed as part of the present study:

Name	Role
Doug Gibbs	BCF lead, Defra
Serene Hargreaves	IWTCF lead, Defra
Ben Yexley	Darwin Initiative lead, Defra
Jordan Newman	Darwin Plus lead, Defra
Victoria Pinion	BCF lead, NIRAS
John Scanlon	IWTCF Advisory Group (chair)
Amy Hinsley	IWTCF Advisory Group
Steven Broad	IWTCF Advisory Group
Tanya Wyatt*	IWTCF Advisory Group
EJ Milner-Gulland	Darwin Expert Committee (chair)
Howard Nelson	Darwin Plus Expert Committee (chair)
Dilys Roe	Darwin Expert Committee, IWTCF Advisory Group

* Provided written feedback via email.

Annex 2: Projects reviewed

The following projects were reviewed as part of the portfolio analysis:

Project code	Project name
Darwin Initiative	
Main	
DIR28S2\1039	Embedding Sustainable Pollination Management into Nepalese Agricultural Systems
DIR28S2\1024	Kaya Connect: Restoring the Eastern Africa Coastal Forest biodiversity hotspot
DIR28S2\1073	Empowering Cabo Verde communities towards responsible practices in artisanal fisheries
DIR28S2\1050	Protecting biodiversity through biocontrol of papaya mealybug in East Africa
DIR28S2\1083	Livelihoods enhancement through community-based conservation of Bornean orangutan and habitat
DIR28S2\1031	Indigenous biocultural landscapes for livelihoods and connectivity in Verapaces, Guatemala
DIR28S2\1020	Community-led fisheries management in the Mara Wetlands, Tanzania.
DIR28S2\1023	Investigating hunting causes and implementing community-led mitigations in the Philippines
DIR28S2\1005	Nature Climate Solutions to protect mangrove biodiversity and improve livelihoods
DIR28S2\1047	Improved conservation and community benefits in Kenya's critical mountain forests
Capability & capacity	
DIR28CC\1017	Upskilling Uganda Wildlife Authority staff to tackle human wildlife conflict
DIR28CC\1082	Alor Community-based Surveillance Group and Local Youths Development Program
DIR28CC\1116	Capacity for Natural Capital Accounting for Sustainable Development in Ghana
Extra	
DIR28EX\1035	Developing a Global Biodiversity Standard certification for tree-planting and restoration
DIR28EX\1039	Ensuring the socio-ecological viability of High Atlas cultural landscapes

Project code	Project name
DIR28EX\1059	Climate resilience, food and livelihood security for agro-pastoralists in Somalia
DIR28EX\1046	Partnering for a biodiverse, prosperous and resilient Tarangire Ecosystem landscape
DIR28EX\1052	Ridge to Reef Conservation in West Papua, Indonesia
Innovation	
DIR28IN\1071	Incentivising responsible fisheries in Central America: testing novel intermediary models
DIR28IN\1054	Introducing research-informed conservation agreements for forest restoration in Anjouan, Comoros
DIR28IN\1079	Replenishing Bolivia's Water Footprint: Scaling Watershed Conservation through Public-Private Partnerships
DIR28IN\1023	Sound Of Safety: Testing Pingers for River Dolphins and Fishers
DIR28IN\1073	Scaling evidence-based Inclusive Conservation Finance models in Uganda and Tanzania
Darwin Plus	
DPR10S2\1019	Growing hope – a blueprint for saving Ascension's endemic plants
DPR10S2\1032	Multi-Purpose Soil Survey: informing environmental management and climate change mitigation
DPR10S2\1007	Preserving endemic threatened wildlife populations through effective protected area management
DPR10S2\1017	Barcoding an island – expanding genetic biomonitoring on Ascension
DPR10S2\1013	Pathogens as a threat to seabirds in the Falkland Islands
DPR10S2\1004	New Island: completing preparatory steps for restoration against invasive mammals
DPR10S2\1008	Humpback Whales of the Pitcairn Islands
DPR10S2\1018	East Caicos Wilderness Area: Protecting the Caribbean's largest uninhabited island
IWTCF	
Main	
IWTR8S2\1006	Combating illegal trade of bears and diversifying livelihoods in Laos

Project code	Project name
IWTR8S2\1044	LICIT-II: Legal Intelligence and Community Governance for Cheetah Illicit Trade
IWTR8S2\1026	Empowering Malawi's government agencies to control wildlife crime related corruption
IWTR8S2\1019	Reduced illegal wildlife trade and strengthened rural communities
Evidence	
IWTR8S2\1036	Developing a problem-oriented approach to reduce turtle trafficking in Cambodia
IWTR8S2\1038	Understanding wild meat demand, supply and trade in Western Equatoria
IWTR8S2\1040	Developing a unique open-source global wildlife crime tracker
IWTR8S2\1016	Increasing Chimpanzee Guardianship Values to Reduce IWT in Liberia
Extra	
IWTR8S2\1048	Dismantling illegal pangolin trade in Vietnam

Annex 3: Current BCF guidance on use of evidence

The existing written guidance for applicants on the use and generation of evidence under the three Funds is presented below.

Darwin Initiative

The Darwin Initiative application guidance features a dedicated section on use and generation of evidence, reproduced below. The guidance stresses the importance of evidence use and generation, and emphasizes the need for ethical data collection, as well as a specific data initiative, FAIR (Findability, Accessibility, Interoperability, and Reuse), with which projects are encouraged to comply.

The section may, however, benefit from the addition of (a) a definition of 'evidence', (b) a basic outline of how and where in the application evidence should be used, (c) further guidance as to types of evidence sources considered admissible under the Funds, and/or (c) examples of types of evidence and their use in an application. While much of this will be second nature to experienced grant writers at Western universities and international NGOs, conservation and development practitioners elsewhere may benefit from clear and simple guidelines on the use of evidence.

The use of evidence to support project design, and the generation of evidence to support effective project implementation and future scaling, is at the core of the Darwin Initiative, and is strongly considered in the assessment of applications.

Evidence ranges in format, quality and relevance and includes, documented and undocumented experiences, data, studies, policies, best practices etc.

The strengthening, promotion and use of evidence and improvement in best practices that can be shared to inform the actions of others, and support future scaling-up, is at the core of the Darwin Initiative.

In 2016, the 'FAIR Guiding Principles for scientific data management and stewardship' were published with the intention to provide guidelines to improve the Findability, Accessibility, Interoperability, and Reuse of digital assets (evidence). These principles provide a recognised and useful approach to enhancing the value of evidence and should where possible inform decisions on the collection, storage and dissemination of evidence by projects. Further information can be found at www.go-fair.org.

Evidence presented in applications helps identify and select which proposals meet the funding criteria. It can demonstrate that the project partners understand the context, challenges (risks and assumptions) and the opportunities, underpinning the funder's confidence in their capabilities to deliver.

Where projects are proposed in areas of existing related initiatives and activities, demonstrating an understanding of these, how the proposed project fits in and how it adds value will help demonstrate the case for the project.

By improving the quality, accessibility and use of evidence and best practices, then decisions by individuals and organisations funded by the Darwin Initiative and beyond should lead to more effective solutions and greater impact.

The role of local knowledge and evidence held by indigenous groups and local communities is vital to improvements in biodiversity conservation and to poverty reduction. It is important that all evidence gathering, and use is conducted within a robust ethics framework that respects the prior informed consent of and benefit sharing with the owners of such evidence, in addition to appropriate procedures related to the collection, storage and use of personal data.

Noting these ethical considerations, all projects should consider the role and application of evidence throughout the project and beyond, in developing the idea and approach, strengthening the implementation of the project, and the uptake of new evidence to help secure the project's legacy.

- *Evidence and refined best practices (p11)*

Darwin Plus

While the Darwin Plus guidance does not include a dedicated section on evidence, the importance of the use of evidence in applications is referred to several times throughout the document. Once again, clarity on what exactly is meant by "evidence", how and where it should be included, and illustrative examples may be beneficial – potentially in a dedicated section as in the Darwin Initiative and IWTCF (below) guidance.

"[Evidence] [r]anges in format, quality and relevance and include, documented and undocumented experiences, data, studies, policies, best practices etc. but is particularly valued when it is quality assured, accessible and applicable."

- *Glossary (p3)*

"We encourage projects proposing to implement evidence-based proven solutions as well as innovative approaches... As much as possible, you should draw on existing work to provide evidence, where available, to support your application."

- *Eligible and non-eligible activities (p7)*

"Projects can demonstrate Value for Money by... [c]onsidering evidence, including lessons learnt, from relevant historical and existing initiatives, and reflecting this in project design."

- *Value for money (p10)*

"The project description clearly demonstrates the intended change(s) the project is aiming to bring about, how these changes will be measured, and exhibits a clear understanding of the evidence needed to demonstrate these changes, and how this evidence will be shared and made publicly available."

- *Assessment criteria (desirable technical excellence) (p17):*

IWTCF

As with the Darwin Initiative, the IWTCF guidance includes a dedicated section on evidence, with largely similar text. Improvements to the guidance could mirror that outlined for the Darwin Initiative, above.

All projects should consider the use of evidence to support project design, and effective project implementation. Projects should also generate evidence through project delivery to secure its legacy and contribute to best practices.

Due to the clandestine and complex nature of IWT, significant evidence gaps exist around the scale, Impact, and appropriate responses. Improving the development and use of evidence and best practice is essential to support more effective design and implementation of interventions and global strategies to combat IWT, while also making better use of limited resources.

Evidence presented in applications helps identify and select which proposals meet the funding criteria. It can demonstrate that the project partners understand the context, challenges (risks and assumptions) and the opportunities, underpinning the funder's confidence in their capabilities to deliver. Evidence ranges in

format, quality and relevance and includes documented and undocumented experiences, data, studies, policies and best practices.

Where projects are proposed in areas of existing related initiatives and activities, demonstrating an understanding of these, how the proposed project fits in and how it adds value will help demonstrate the case for the project.

All IWT Challenge Fund projects should demonstrate that they are based on the best available evidence and scientific theory; have a robust monitoring and evaluation framework to demonstrate impact and value for money; be able to demonstrate how they are going to promote learning and support best practice, including through the open access of project Outputs. For further guidance on open access and data sharing, see 4.8.1.

The role of local knowledge and evidence held by indigenous groups and local communities is vital to improvements in biodiversity conservation and to poverty reduction. All evidence gathering should be conducted within a robust ethics framework. For further guidance on ethics, see 4.5.

- *Evidence and refined best practices (p11)*