Darwin Initiative Main & Extra Annual Report

To be completed with reference to the "Project Reporting Information Note":
(https://www.darwininitiative.org.uk/resources/information-notes/)

It is expected that this report will be a **maximum of 20 pages** in length, excluding annexes)

Submission Deadline: 30th April 2025

Submit to: BCF-Reports@niras.com including your project ref in the subject line

Darwin Initiative Project Information

Scheme (Main or Extra)	Main
Project reference	DI-31-007
Project title	Human-wildlife coexistence toolkit for biodiversity conservation and sustainability of rural communities
Country/ies	Namibia
Lead Organisation	Cheetah Conservation Fund (CCF)
Project partner(s)	Namibia Nature Foundation (NNF) Namibia Association of CBNRM Support Organisations (NACSO) Elephant-Human Relations Aid (EHRA) Ministry of Environment, Forestry & Tourism (MEFT) University of Namibia (UNAM) Namibia University of Science and Technology (NUST)
Darwin Initiative grant value	£599,994
Start/end dates of project	Start date: 01/09/2024 End date: 31/08/2027
Reporting period (e.g. Apr 2024 – Mar 2025) and number (e.g. Annual Report 1, 2, 3)	Sep 2024 - Mar 2025, Annual Report 1
Project Leader name	Dr. Laurie Marker, Founder and Executive Director, CCF
Project website/blog/social media	*https://cheetah.org*
Report author(s) and date	Laurie Marker, Bogdan Cristescu, Anne Schmidt Kuentzel, Dipanjan Naha, Nancy Poisson, Nathaniel Fields April 30, 2025

1. Project summary

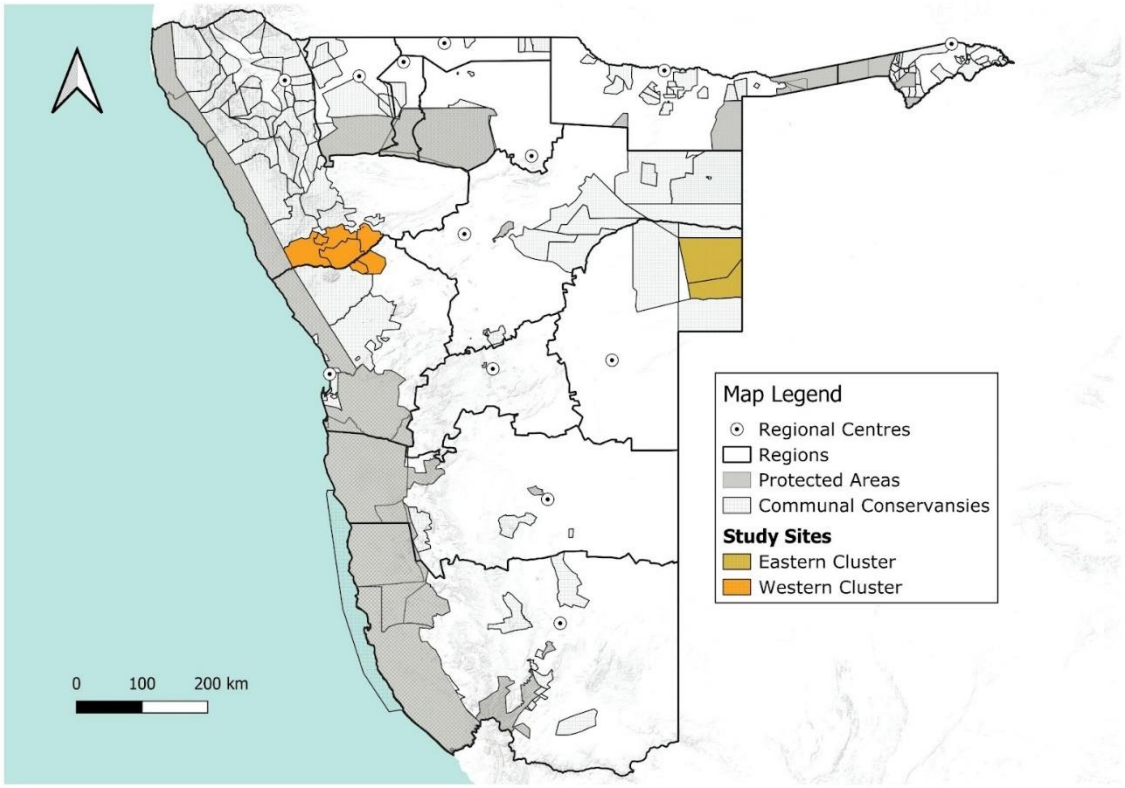
This project is designed to address threats to biodiversity conservation and rural poverty by reducing Human-wildlife conflict (HWC) through developing a model (toolkit) for human-wildlife coexistence within shared landscapes of Namibia. The communal conservancies of Namibia hold significant wildlife populations and important conservation areas. Biodiverse ecosystems are critical for environmental and human well-being. HWC is widely recognized as the most significant conservation challenge to the biodiversity of mammals especially within these areas where wildlife and human populations overlap in space impacting both animal conservation and the welfare of rural communities (Tavolaro et al. 2022).

Umbrella and keystone species such as apex mammalian carnivores and megaherbivores are vital for functioning of ecosystems and biodiversity conservation (Duskin & Pringle 2016, Wolf & Ripple 2017).

Livestock losses to carnivores and damage to water infrastructure by elephants cause major problems to human well-being as they can have dire consequences on the livelihood and food security of the local communities. The lack of knowledge on effective ways to protect their livelihoods from wildlife damage causes fear and frustration, leading to the retaliatory killing of endangered predators or dangerous encounters when people try to chase away wildlife. A community-based HWC coexistence model is needed to minimise HWC and secure rural livelihoods. The conservancies differ in environmental conditions, wildlife communities, socio-economic and cultural factors. The project will help monitor biodiversity, identify important conservation areas, map hotspots of HWC, develop a flowchart and toolkit to identify best suited mitigation tools, and demonstratively implement recommended conservation action measures tailored to site-specific conditions of identified conflict hotspots. Implementation of the coexistence model and adoption of the HWC mitigation toolkit will reduce negative impacts of carnivores and elephants, improve well-being and tolerance of communities and safeguard wildlife populations outside protected areas.

These conservancies were identified as experiencing HWC based on findings from a recent study by Tavolaro et al. 2022 as well as reports from community leaders and ground partners, which suggested that conflict is a major burden on the livelihoods of local communities. Moreover, information from government authorities and non-profit organisations suggests that HWC has increased within communal conservancies more broadly as a result of increased livestock raising activities with lack of actionable conflict mitigation measures, little landscape-level planning, prolonged droughts, and collapse and slow recovery of the tourism industry due to Covid-19 (Gargallo 2021).The local people living within communal conservancies are amongst the poorest economic groups in Namibia. Local people mainly live off subsistence farming, depending solely on livestock to feed themselves and their families and to send their children to school. People residing within the eastern conservancy cluster in this project receive no economic benefits from wildlife (Verschueren et al., 2020) whereas people in the western cluster partially benefit through tourism related opportunities yet still rely heavily on livestock. Livestock remains the mainstay of the rural economy in Namibia and Africa in general.

The project was initiated due to reports of HWC from communities, government, and partner non-profit organizations. The partnerships in this project will enable effective scaling of the project in close collaboration with local people, MEFT and non-profit support organizations.



Our project sites are located in 8 communal conservancies in Namibia, where people and livestock share semi-arid and arid landscapes with carnivores such as cheetah and African wild dog, and elephants: i) Eiseb and ii) Omuramba ua Mbinda (eastern cluster), and iii) Doro !nawas, iv) Sorris Sorris, v) Otjimboyo, vi) Ohongu, vii) Twyfelfontein, and viii) Khoro Goreb (western cluster).

2. Project stakeholders/ partners

The Cheetah Conservation Fund leads the project in close collaboration with 6 project partners. In order to initiate and start the project, the 1st step was to organize in-person and virtual meetings with the partners to define the scope of work and discuss the financial resources, allocated funds and staff to implement the agreed project activities. Contact was also established through e-mails and phone calls. Between Oct 2024-Dec 2024, we had multiple virtual meetings with NNF and EHRA regarding collaboration and planning for the project activities. All partners identified key staff members who would comprise the core project team for implementation of the activities. The core project team has agreed to maintain dialogue between all partners and monitor the progress of activities. In the starting phase of the project, the Conservancy Management Committees (CMC) expressed interest to meet the CCF team in-person. In accordance with this, in-person meetings were organized with the conservancy leadership from 8 conservancies in the 1st year (7 months, Sept 2024-March 2025) to discuss the major activities and economic benefits of the project. Game guards, CMC members from each conservancy attended these meetings. Informed consent was obtained from all conservancy committees for conducting social surveys (see annex 4). Whether partnerships were based on demand stemming from the host country/ies or communities, and the extent to which all partners are involved in project planning, monitoring and evaluation and/or decision making.

The partnership is functioning well with the majority of the partners despite some challenges. We have had challenges in scheduling in-person meetings with the MEFT officials due to elections in Namibia in late 2024, unavailability of key personnel, and busy work schedules. However, we managed to organise in-person meetings with MEFT officials in March and April 2025 (see annex 5). We discussed the project activities, collaboration and planning in organizing SMART training workshops for the local community members. We also discussed bimonthly meetings regarding project progress between the two partners. The major challenge we have experienced since the start of the project is that the Namibian Nature Foundation

(NNF) is no longer able to implement the agreed-upon activities with the allocated budget. To overcome some of the delays due to this issue and to keep within approved Darwin budget, CCF has taken on some of the responsibilities of NNF, including reaching out to the conservancy leadership directly, for them to nominate the list of community members (20 game guards and 8 women) who could be employed under the project. CCF has also approached MEFT over phone calls and with in-person meetings to identify solutions for the project responsibilities initially assigned to NNF. MEFT have expressed interest in organising the SMART application training sessions and managing data collection of the game guards as well as the SMART database. Moving forward, we are confident that we can continue to deliver on the project with MEFT involvement and with funding support through reallocation of some of the originally approved Darwin funds (details in Change request submitted in April 2025).

All CMC members from the 8 communal conservancies (2 in the eastern and 6 in the western part of Namibia) participated in the project meetings. The CCF team organized 5 training sessions for the community members, particularly women, to coordinate the hair sample collection for quantifying real HWC losses (see annex 6). The team also organised 8 training sessions for game guards regarding use of camera traps in monitoring biodiversity (see annex 7). Pamphlets and brief project progress reports were provided to the participants during these meetings.

Stakeholders have been made aware of biodiversity issues through in-person and virtual meetings, pamphlets and brief project progress reports.

3. Project progress

3.1 Progress in carrying out project Activities

Output 1. Perceived and real livestock losses to carnivores and damage by elephants quantified.

The following activities took place to support the achievement of Output 1. In the first 7 months of the project, the CCF team conducted 46 out of 200 planned semi-structured questionnaire surveys (29 in Cluster 1 and 17 in Cluster 2) across 8 conservancies to assess perceived HWC conflict levels, attitudes, and tolerance of wildlife in the communities as part of Activity 1.1. This was initially planned for Y1-Q2 but the project started only in Sept 2024. The data collected so far has been archived in a digital platform (see annex 8, Snapshot of the questionnaires from the Kobo Toolbox and the surveys). The 16 focus group discussions were delayed due to unavailability of community officer, CMC members and will be conducted along with the remaining 154 semi-structured questionnaires in the next 3-4 months (Y2-Q1 and Y2-Q2).

As part of Activity 1.2.1, CCF has procured rugged smart phones for the data collection in HWC. The training sessions for the deployment of the smartphones will take place as soon as the relevant community members and the 2 MEFT SMART managers (who replace NNF staff - details in Change request) are employed. This will take place in Y2-Q1 (third project quarter). The 20 community members have been identified by the CMC in Y1-Q4 (see annex 9 Annex for list of community members). Their employment was delayed due to unforeseen difficulties encountered by the responsible team member, NNF, but will be initiated from Y2-Q1 and will be managed by 2 MEFT staff members as part of Activity 1.2.2.

As part of Activity 1.2.3, CCF has procured rugged smart phones for the data collection in HWC. The training sessions for the deployment of the smartphones will take place as soon as the relevant community members and the 2 MEFT SMART managers (who replace NNF staff - details in Change request) are employed. The consultant and MEFT SMART managers will ensure that the data collection is synchronized with the SMART database. This was delayed due to NNF being unable to organize the training in Y1 but will take place from Y2-Q1 (third project quarter). CCF has trained 5 out of 8 female community members in coordinating the collection of hair clippings from bite marks on livestock as soon as they were identified in Y1-Q4 (see annex 6, list of participants who participated in the training) as part of Activity 1.3.1. The training sessions were also attended by game guards and community members. The

remaining 3 female community members could not participate in the training as they were not identified on time and will thus only be trained in Y2-Q1. Employment of the 8 identified females could not be initiated in Y1-Q4 (corresponding to Y1-Q2 of the original timeline) as intended, due to the delay in NNF project activities. Moving forward, the conservancy office/CMC will take over the responsibility of hiring them instead of NNF (details in Change request).

CCF scat detection dog team has collected over 200 carnivore scats in the first 6 months of the project as planned under Activity 1.4 (now Y1-Q3 and Q4). All samples have been logged in the CCF genetics laboratory biobank hosted in Namibia (see annex 10 for inventory and select pictures of scat samples collected). The game guards from 5 conservancies have been provided training by CCF genetics team on collection of scats (see annex 6).

The genetic work for the identification of carnivore and prey species from scat and bite mark samples using mini-barcoding as well as the identification of prey species of Activities 1.5, 1.6, and 1.8 is on track for being performed in months 6-12 of the project, which now correspond to Y2-Q1 and Y2-Q2. Laboratory protocols were designed to determine optimised laboratory workflow for the identification of carnivore species from bite marks, which is on track for implementation in months 6-9 of the project (now Y2-Q1) as intended under Activity 1.7 (see Annex 11). All other tasks relating to Activities 1.5-1.8 are also on track and are subsequent to the tasks reported on here.

In compliance with Activity 1.9, CCF, NUST, and UNAM have competitively recruited 1 male PhD student and 2 Namibian female M.Sc. students to undertake the proposed research. The selected PhD student is a Botswana national, as we could not identify a Namibian candidate (initially proposed) with the desired skills through the competitive recruitment process. All University registrations were finalized with NUST and UNAM by March 2025 (see Annex 12 for 3 students, 2 MSc, 1 PhD).

Output 2: Spatially-explicit knowledge on carnivore and elephant occurrence and status, as well as mammalian biodiversity developed.

The following activities took place to support the achievement of Output 2. CCF organized training for community members and game guards from all the 8 conservancies in the use of camera traps for monitoring biodiversity in Y1-Q3 as part of Activity 2.1. Compensation was paid during the training and camera deployment (see annex 7 for pics of training game guards and project budget tracking sheet, invoices available). This was initially planned in Y1-Q1 but got delayed due the project starting in Sept 2024.

CCF, PhD student and game guards deployed 100 camera traps across sampled sites in the 2 conservancy clusters (50 per cluster) starting Sept 2024 as part of Activity 2.2. Two cameras were deployed in 8*8 km grids within a random sampling framework and were operational util Y1-Q4. (see annex 13, Maps and pics of mammals photo captured). This was planned in Y1-Q2 but got shifted to Y1-Q3 due to the delayed start of the project.

CCF ecologist, PhD student and interns are currently in the process of compiling the database for the camera trap photos and uploading them on the online platform TrapTagger (see annex 14, snapshot of the data uploading on TrapTagger) as part of Activity 2.3.This will be completed in Y2-Q1. This was initially planned in Y1-Q3 but got shifted to (Y1-Q4, Y2-Q1) due the delayed start of the project.

Once the camera trap database is compiled, the PhD student will perform the spatial predictive modelling of carnivore and elephant occurrence and map important biodiversity areas. This is in compliance with Activity 2.4 and will be completed by Y2-Q2. This was initially planned in Y1-Q4 but got delayed due to the project starting in Sept 2024.

Outputs 3-5.4, and 5.6-5.7 are planned for later project periods.

Output 5: Dissemination of HWC toolkit to broader communal areas communities, and of project findings to the national and international conservation community through a comprehensive outreach plan; upscaling strategies deliberated.
Once the toolkit has been developed as per project timeline, it will be disseminated widely through diverse media platforms.

3.2 Progress towards project Outputs

Indicator 1.1-1.9 for Output 1. Perceived and real livestock losses to carnivores and elephants quantified. Some baseline information on HWC was available from the study by Tavolaro et al. 2022 and discussion with MEFT, project partners and the CMCs. The project started in Sept 2024. Progress has been made in the past 7 months. We have conducted 46 questionnaire surveys (29 in the eastern cluster and 17 in the western cluster) during this period (see annex 8, snapshot of the data on Kobo toolbox). The focus group discussions were delayed, but planned for Y2-Q1. We have collected over 200 carnivore scats across the 8 conservancies. The training for SMART-use and employment of the 20 community members was slightly delayed, as NNF was unable to organize the training in Y1 and this will now take place in Y2-Q1. The CCF genetics laboratory has developed the protocol for collection of hair clippings from carnivore bite wounds. We have organised 5 out of 8 training programs for women community members and game guards to collect hair clippings from carnivore bite mark wounds on livestock (see annex 6, participant list and photos; the identification and training of the remaining 3 was delayed due to the situation with NNF and will take place in Y2-Q1). One PhD student and 2 MSc students have been recruited through a competitive process. The PhD student is registered with NUST and the 2 MSc students are registered with the UNAM (see annex 13). We are confident of analyzing the scat samples to determine actual levels of conflict by Y2-Q2 (Aug 31 2025).

Indicator 2.1-2.4 for Output 2. Spatially-explicit knowledge on carnivore and elephant occurrence and status, as well as mammalian biodiversity developed. Some baseline information on carnivore and elephant occurrence available based on the reports by NACSO and discussion with project partners. CCF staff conducted training for game guards from the 8 conservancies between (Sept 2024-Oct 2024) in use of camera traps for monitoring biodiversity (see annex 7 and photos for the training and records of employment from invoices). Camera traps were deployed at 100 stations (50 stations in each cluster) for a period of 90 days in Y1-Q3 (see annex 13, pics of mammals photo captured). PhD student and CCF Ecology staff are currently compiling the camera trap database on TrapTagger. The uploading of pictures takes time since we collected > 1 million photos from the camera traps (see annex 14, snapshot of TrapTagger). Once the database has been updated, the camera trap photos will be tagged for identification of species. Once the tagging is completed, the database will be analyzed and carnivore and elephant occupancy will be modelled. Based on the modelling outputs important biodiversity areas will be mapped. This was initially planned for Y1-Q2-Q4 but got delayed due to the project starting in Sept 2024. We will achieve this Output by Y2-Q2.

Indicator 3.1-3.4 Output 3. Spatially-explicit model of human wildlife interactions generated, HWC hotspots mapped, and framework of practical conservation actions for human-wildlife coexistence toolkit formulated. No baseline information available. The perceived (questionnaire surveys) and actual HWC data (scat and bite mark samples) is currently being collected by the project staff and the community members (see photos in annex 6, 8 and 10). This was delayed since the project started only in Sept 2024 and data collection was possible from Y1-Q3. The important biodiversity and HWC hotspot areas will be mapped based on the camera trap and HWC data by Y2-Q2. The human-wildlife coexistence toolkit will be developed based on the analysis of the baseline (perceived and actual) HWC data. This will be shared with the partners for feedback by the end of Y2-Q2. Consultative meetings are due in Y2.

Indicator 4.1-4.6 Output 4. HWC mitigation toolkit implemented in hotspots and damage from and towards wildlife minimised. Some baseline information on HWC mitigation toolkit is available with CCF and the project partners. The data is being collected to identify hotspots and

develop the toolkit. This was initially planned between Y2-Q1 and Y3-Q4 and was delayed due to the project starting in Sept 2024. This is now planned from Y2-Q2 onwards until Y3/Y4.

Indicator 5.1-5.7 Output 5. Dissemination of HWC toolkit to broader communal areas communities, and of project findings to the national and international conservation community. No baseline information is available. This is planned for Y3/Y4.

3.3 Progress towards the project Outcome

The project is on track and is making progress. The project started only in Sept 2024 and in the past 7 months collaborations have been established/enhanced with the major partners and the local communities. Project staff have started collecting data on perceived HWC levels by conducting questionnaire surveys and engaging with community members. A total of 46 questionnaire surveys have been conducted within 5 conservancies (2 in the east and 3 in the west) (as evidenced in annex 8). The remaining 154 questionnaire surveys will be completed by the middle of Y2-Q2. A total of 200 carnivore scats have been collected from the 8 conservancies and will be analyzed to determine real HWC by Y2-Q2 (as evidenced in annex 10). Training has been provided to women community members from 5 conservancies in the western cluster to collect hair clippings from carnivore bite mark wounds on livestock (as evidenced in annex 6). A total of 100 camera traps (50 camera traps per cluster) were deployed in a grid based random sampling framework for a period of 90 days in collaboration with the community members in Y1-Q3 (as evidenced in annex 13). We are compiling the camera trap database and the data will be analyzed to model and map carnivore, elephant occurrence (as evidenced in annex 14) by Y2-Q2. We are currently collecting the perceived and actual HWC data and this will be analyzed to model and map hotspots (as evidenced in annex 6,8 and 10) by the end of Y2-Q2. The HWC mitigation toolkit will be developed and implemented in the hotspot areas based on the synthesis of the baseline data. We are committed to rigorous data collection and monitoring during implementation of the toolkit. We believe that the toolkit will minimize HWC and improve wellbeing of the targeted households. We believe that the application of the SMART system and involvement of the community members will improve participation in monitoring and conserving biodiversity. Overall the indicators are adequate for measuring the intended outcome and the project is highly likely to achieve the outcome by the end of the funding period.

3.4 Monitoring of assumptions

Assumption 1: Communities agree to participate

Comments: This assumption holds true. During in-person meetings with all CMC members, training programs for women members and involvement of game guards (camera traps and scat, hair sample collection) from the specific areas, communities have expressed willingness to participate in the social surveys and reporting of HWC incidents.

Assumption 2: Sufficient samples collected

Comments: This assumption holds true. Over 200 scat samples were already collected. The protocol for collection of hair clippings from carnivore bite wounds on livestock have also been provided to women members and game guards from 5 conservancies. However we have not been able to employ the game guards and women members in Y1 and this has affected reporting of HWC incidents and collection of genetic samples from carnivore bite marks. We are confident of employing and managing the game guards and women members in Y2-Q1 in collaboration with the CMC and MEFT.

Assumption 3: Field conditions are favourable for data collection

Comments: This assumption holds true. Our project team in collaboration with the game guards were successful in deploying camera traps across the 8 conservancies. The use of 4x4 vehicles have aided in navigating through rough terrain in the eastern and western communal conservancies. However heavy rain and flood between Dec 2024-March 2025 have made certain areas challenging and difficult to access.

Assumption 4: The data show a gradient of conflict incidence, from low conflict to conflict hotspots

Comments: This relates to an activity that has not yet taken place.

Assumption 5: Community members are interested in adopting the toolkit.

Comments: This relates to an activity that has not yet taken place.

Assumption 6: Decline in HWC reflects reduced costs of coexistence with wildlife and improved rural livelihoods.

Comments: This relates to an activity that has not yet taken place.

Assumption 7: The appropriate authorities and stakeholders are interested in exploring the HWC toolkit.

Comments: This relates to an activity that has not yet taken place.

3.5 Impact: achievement of positive impact on biodiversity and multidimensional poverty reduction

The project's intended impact is: Biodiversity conservation through poverty alleviation amongst the poorest economic groups in Namibia by mitigating human-wildlife conflict, empowering rural communities as wildlife stewards, and implementing a toolkit for human-wildlife coexistence.

The project is aimed at enhancing the capacity of local community members in monitoring and conserving biodiversity within shared landscapes of Southern Africa. The project team has already conducted training for the community members from 8 conservancies across eastern and western Namibia regarding use of camera traps and is in the process of providing them direct benefits through employment for the next 2.5 years (see Annex 7 for pics). A total of 20 community members will be trained in the coming months (Y2-Q1) regarding the use of SMART application and data collection to monitor wildlife populations, ecosystems and conserve biodiversity within communal lands (see Annex 9 for the list of community members).

The project is currently collecting baseline data to understand the levels of HWC, issues around human-wellbeing and mapping of conflict hotspots within the 8 conservancies of Namibia (see Annex 6,8 and 10). The analysis of the baseline data will help the project team to document the impact of HWC on livelihoods, threats to food security and other challenges of living within arid, semiarid landscapes. This project provides direct economic benefits to community members by employing them as game guards for monitoring biodiversity and HWC. The project also plans to implement a HWC mitigation toolkit which will reduce the current levels of damage from wildlife for selected households within hotspot areas. In the 3rd year of the project, an additional 200 households will learn about the effectiveness and implementation of the toolkit for ensuring human-wildlife coexistence. Overall impact of the project activities on human-development and wellbeing will be measured in Y3 based on comparisons with the baselines and the monitoring done during the application, use of the toolkit and other interventions.

4. Project support to the Conventions, Treaties or Agreements

The project emphasizes on poverty alleviation by reducing HWC and income generation for local communities which are the major challenges for the conservation of biodiversity and sustainable land use management in Namibia. By tackling these 2 issues, the project is contributing to the major focus of Namibia's Nature Conservation Ordinance and Namibia's Second National Biodiversity Strategy and Action Plan. The project is contributing to Namibia's National Policy on HWC which emphasizes on the rights and needs of local communities while also recognizing the need to promote biodiversity. This project is empowering local communities to conserve biodiversity while also improving their capacity to coexist with wildlife within 8 communal conservancies. The project is complementing the Community Based Natural Resource Management Program for Namibia by involving the local communities in the management of wildlife and conservation of biodiversity outside the protected area network of the country. The CCF project team is predominantly composed of Namibian women, 2 of them MSc students, 1 Education Manager, 1 Community Officer and 1 Ecology Technician. In addition to this, the team of project partners also involve multiple women staff members. The project also provides part time employment to 8 women community members and game guards

from 8 communal conservancies of Namibia. This is in accordance with Namibia's NAP (National Action Plan), Namibian National Gender Policy and Namibia's National Youth Policy which advocates for the fair inclusion of women in project activities, promotion of gender equality and women and youth development and empowerment. The project activities are aligned with the IUCN SSC HWC guidelines in resolving human-wildlife conflicts and enabling local communities to coexist with wildlife. The project activities support the priority aspects highlighted in the global strategies for the Africa-Rangewide Cheetah Conservation Initiative and the Rangewide Conservation Program for Cheetah and African Wild Dog such as collecting scientific information on HWC, mapping conflict hotspots, mitigation of HWC, community awareness regarding the status of the endangered species and poverty alleviation within the species distribution range.

5. Project support for multidimensional poverty reduction

The project is currently collecting baseline data to map HWC hotspots and understand the levels of HWC within the 8 conservancies of Namibia. The people living within these conservancies are one of the poorest economic groups in Namibia. The project intends to reduce poverty, improve personal safety, food security, strengthen livelihoods by reducing HWC and providing direct income by employing community members. The project team has already engaged with the CMCs and received the list of community members to be employed as game guards. The project is developing a HWC mitigation toolkit which will be implemented targeting 50 households within the hotspots areas. Through the application of the toolkit and other interventions, the project aims to reduce the costs of coexistence with wildlife such as reducing 50% of the livestock depredation incidents, reducing retaliatory killing of carnivores by 30%, reduction in damage to water infrastructure by 50% and improving tolerance towards wildlife by 30%. Poverty reduction, livelihood improvement and enhanced capacity to coexist with wildlife will be measured through a monitoring framework. The toolkit, and non-lethal interventions will continue to help the communities in livestock farming practices beyond the timeline of this project. In addition to the 50 households an additional 200 households will learn about the effectiveness and implementation of the toolkit. This will further strengthen the community based natural resource management system (CBNRM) for Namibia. This project will serve as a pilot for other communal areas in Namibia and Southern Africa as it supports capacity building for communities, poverty reduction, and conservation of biodiversity within shared landscapes.

6. Gender Equality and Social Inclusion (GESI)

GESI Scale	Description	Put X where you think your project is on the scale
Not yet sensitive	The GESI context may have been considered but the project isn't quite meeting the requirements of a 'sensitive' approach	
Sensitive	The GESI context has been considered and project activities take this into account in their design and implementation. The project addresses basic needs and vulnerabilities of women and marginalised groups and the project will not contribute to or create further inequalities.	
Empowering	The project has all the characteristics of a 'sensitive' approach whilst also increasing equal	X

	access to assets, resources and capabilities for women and marginalised groups	
Transformative	The project has all the characteristics of an 'empowering' approach whilst also addressing unequal power relationships and seeking institutional and societal change	

The CCF project has adopted an *empowering* approach to Gender Equality and Social Inclusion (GESI), exceeding the minimum threshold of sensitivity by intentionally centering women's participation, leadership, and influence throughout the project's design and implementation. From the outset, the project team collected baseline data on the status of marginalized groups—particularly women—in conservation spaces. This informed a gender-responsive strategy that sought not just to include women, but to position them in roles traditionally denied to them. The project's field teams across all eight conservancies include a significant number of women, such as education managers, MSc-level researchers, a community officer, and an ecology field technician, all of whom are in regular communication with local communities. This has contributed to a women-led and majority-women-operated team that models inclusive leadership across technical and operational levels.

Training initiatives have extended beyond the project team to female community members, with five conservancies nominating women for technical training in non-invasive sample collection and coordination. These efforts have increased access to assets and responsibilities that are often restricted by gendered norms. Moreover, conservancy-level leadership meetings included female chairpersons, treasurers, and secretaries who actively advocated for the inclusion of more women in conservation efforts. This feedback loop—where community women shape and inform the project—demonstrates not only sensitivity but also responsiveness and adaptability.

The project has also planned a series of eight focus group discussions specifically targeting women to explore their perceptions of human-wildlife interactions. These sessions will be held in accessible venues during hours that do not conflict with domestic or farming responsibilities, ensuring that logistical barriers do not exclude participation. The inclusion of women in the training and future use of the Human-Wildlife Conflict (HWC) mitigation toolkit further underscores the project's commitment to equitable knowledge transfer and long-term sustainability. Notably, CCF's work has challenged gender norms even in areas where female game guards were previously nonexistent, actively working to hire and support women in such roles—an effort that required deliberate planning and cultural negotiation.

Altogether, the project does not simply avoid reinforcing inequality; it takes meaningful, strategic steps to redistribute power, elevate underrepresented voices, and model systems change. This makes the project firmly aligned with the "Empowering" level on the GESI scale.

7. Monitoring and evaluation

During the starting phase of the project CCF wanted to organize an in-person inception workshop with all project partners. However due to unavailability of key staff from partner organizations we decided to have virtual meetings. During these meetings, the project PIs and the project manager discussed the theory of change including the outputs, outcomes and the intended impacts. These meetings also focussed on key project indicators, baselines, timelines and budget. The M&E plan involves CCF staff performing periodic evaluations.There has been no change in the M&E plan for the reporting period.

The project team has bimonthly virtual meetings with partners to share updates on field work activities and progress made regarding the indicators. In the event that meetings cannot be attended due to conflicting time schedules, there is email communication with the key staff members from the partner organizations regarding the project progress. The partners are encouraged to discuss challenges, opportunities and learnings. Primary data collection for the baselines are done by the PhD, master students and other CCF staff. The indicators of

achievements are mostly quantitative in nature. The camera trap data from the 8 conservancies is currently being uploaded on Traptagger which is a web application capable of reducing time and associated costs in annotating camera-trap surveys. Data is also being stored in external harddisks at CCF HQ. Data on HWC and the social surveys are being stored in an online data collection platform called the Kobo Toolbox. This questionnaire data which is self reported by households is being collated in shared google drive folders and can be accessed by the project team. All these activities related to data collection, recording, logging are contributing to the outputs which will eventually help to achieve the desired outcome. The CCF project team has weekly meetings to track updates on data collection and progress. The project manager has monthly meetings with local and international project accountants to track and manage project expenditure.

8. Lessons learnt

The partnership with the local conservancy leadership has been fruitful and has enabled meaningful discussions on HWC, nomination of community members to be employed as game guards and organising training programs for collection of scat, hair samples. This has resulted in strong ownership from the communities which has built in trust and commitment to the project activities. The partnership with MEFT (local government officials responsible for wildlife management) has also been positive and has resulted in support to carry out the project activities and planning for organizing SMART training workshops. There were some delays in organizing in-person meetings in Y1 due to unavailability of key government officials. The rainy season has been more severe compared to the normal rain expected during this time of the year. There has been flooding reported from the western conservancies. However, our team has been able to avoid the time period with the maximum precipitation.

There have been delays with certain project activities due to the changes in key staff members, and requests from NNF for supplementary funding to carry out originally agreed project activities. This has caused delays in hiring of game guards and women members from the communities. We are submitting a change request with the 1st Annual Report with the non-financial and financial budgeting concerns.

A key learning has been that it is important to have an MOU and an agreement with partner organizations during all stages of project implementation to avoid delays.

A key learning from engagement with the conservancy leadership has been that there has to be regular communication with the CMC and the community members regarding challenges and project updates.

9. Actions taken in response to previous reviews (if applicable)

This is the 1st Annual Report for this project.

10. Risk Management

We attach a copy of the updated risk register with this report. One new risk has been identified in the past 7 months of this project. One of the project partners (NNF) had changes in key staff members. They have requested for supplementary funding and have not been able to carry out the project activities due to shortage of dedicated staff members (Community Officer and Financial Accountant). This has been added as an issue in the project risk register. This has delayed organizing training programs, hiring of the game guards and women members and managing data collection which was planned in Y1. CCF has already received the list of community members nominated by the conservancy leadership to be employed under the project. CCF has found a solution by engaging with other partners including MEFT and EHRA to share some of the project activities that were originally planned for NNF implementation. MEFT has dedicated personnel to organize SMART training, manage game guards and supervise data collection. They could be allocated some of the budget and the associated activities initially allocated to NNF. The conservancy offices could manage the employment and payment of game guards, women members in collaboration with CCF accountants.

11. Scalability and durability

The project is an important part of the communal conservancies of Namibia where large carnivores including the cheetah occur outside of the designated protected areas. CCF as the lead organization is committed to supporting the local communities in managing human-carnivore conflicts and conservation of cheetahs and other predators within these shared landscapes. This will ensure sustainability of the project beyond the official timeline. During the project design and the start of the activities there has been involvement of the CMC and the local project partners to ensure strong collaboration and implementation.

The MEFT officials and the community leadership from the 8 conservancies have shown interest in the project objectives. They have been supportive of the fact that the project intends to provide direct employment to the community members, train people in the use of SMART application, implement a HWC mitigation model which could be further integrated into the national database for the country. The aim of the MEFT is to provide necessary support to the local leadership in ensuring human-wildlife coexistence within the communal areas of Namibia. There has been strong indication from the local leadership that the community members will continue data collection on HWC and use the conflict mitigation toolkit even after the end of the project.

MEFT and NACSO, the two major partners for this project, organise training for game guards to collect HWC data using the SMART application through rugged smartphones. They work with the CMC and the local community leadership in implementing the human-wildlife conflict self-reliance scheme to provide offsets for losses to wildlife. Their direct involvement ensures that the project activities are aligned with the local governance structure and sustainable natural resource management.

The project activities and the overall outcome compliments the Namibian National Policy on HWC and strengthens the capacity of local communities in living with wildlife and their involvement in conserving biodiversity. The project also actively supports participation and engagement of women thus aligning with Namibia's National Gender Policy and Namibia's Youth Policy.

The project team has already provided training to the community members in using camera traps for monitoring biodiversity.

EHRA has been monitoring elephants and empowering communities to coexist with elephants in the western conservancies and they would continue to support the local communities and livelihoods beyond the timeline of this project. The mapping of human-elephant conflict hotspots would enable them to monitor them and implement site specific mitigation measures.

CCF will conduct national and international workshops in Y3 or Y4 of the project which will help replicate the activities in other communal areas of Namibia and Southern Africa. Reducing the damage to wildlife and involving the local community in monitoring biodiversity will eventually help in improving their tolerance towards wildlife, reduce retaliatory killings of large carnivores and establish better working relationships with the Namibian government.

12. Darwin Initiative identity

The Darwin Initiative logo has been used for all presentations made regarding the project with partners, government agencies and universities.

Support from the Darwin Initiative has also been mentioned in project brochures and student proposals. The contribution of the UK government in funding the project has been communicated during all meetings and has been positively received by the stakeholders.

Before this project, the Darwin Initiative was only known to one partner NNF. However CCF has helped publicize the Darwin Initiative project. The Darwin Initiative funding has been recognised as a distinct project with a clear identity especially for the eastern conservancies. There are limited conservation projects on human-wildlife coexistence within the eastern conservancies of Namibia and this project will be beneficial for conserving biodiversity and human-wellbeing within this region. There is now a good understanding of the Darwin Initiative with the Namibian government agencies, the project partners and the local community leadership.

13. Safeguarding

14. Project expenditure

Table 1: Project expenditure during the reporting period (1 April 2024 – 31 March 2025)

Project spend (indicative) since last Annual Report	2024/25 Grant (£)	2024/25 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)				
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items (see below)				
Others (see below)				
TOTAL	**£162,069.**			

Table 2: Project mobilised or matched funding during the reporting period (1 April 2024 – 31 March 2025)

	Secured to date	Expected by end of project	Sources
Matched funding leveraged by the partners to deliver the project (£)			Internal CCF Funding
Total additional finance mobilised for new activities occurring outside of the project, building on evidence, best practices and the project (£)			

15. Other comments on progress not covered elsewhere

We have no other comments to add.

16. OPTIONAL: Outstanding achievements or progress of your project so far (300-400 words maximum). This section may be used for publicity purposes.

I agree for the Biodiversity Challenge Funds to edit and use the following for various promotional purposes (please leave this line in to indicate your agreement to use any material you provide here).

File Type (Image / Video / Graphic)	File Name or File Location	Caption including description,	Social media accounts and websites to be	Consent of subjects received (delete as necessary)

		country and credit	tagged (leave blank if none)	
				Yes / No
				Yes / No
				Yes / No
				Yes / No
				Yes / No

Annex 1: Report of progress and achievements against logframe for Financial Year 2024-2025

Project summary	Progress and Achievements April 2024 - March 2025	Actions required/planned for next period
Impact Biodiversity conservation through poverty alleviation amongst the poorest economic groups in Namibia by mitigating human-wildlife conflict, empowering rural communities as wildlife stewards, and generating and implementing a toolkit for human-wildlife coexistence	Initial progress to monitor and conserve biodiversity by training and involving community members in camera trapping across the 8 conservancies. Baseline data collection is in process to implement toolkit for human-wildlife coexistence.	
Outcome *Identification and reduction of carnivore and elephant conflict, resulting in improved livelihoods.*		
Outcome indicator 0.1 0.1Perceived human-wildlife conflict (HWC) identified in 8 communal conservancies through questionnaire surveys by end of Y1-Q3.	A total of 46 out of 200 planned questionnaire surveys have been conducted within 5 conservancies out of the 8 conservancies (2 conservancies in the eastern cluster and 3 conservancies in the western cluster) to determine perceived HWC (Refer to Annex related to Kobo Toolbox) Evidence provided in section 3 and annex 8.	CCF will conduct the remaining 154 questionnaire surveys and 16 focus group discussions to determine perceived HWC. This will be completed by Y2-Q2.
Outcome indicator 0.2 0.2 Real HWC levels identified in 8 communal conservancies through genetic analysis of carnivore scat samples and saliva of carnivore bite marks by the end of Y1-Q4.	A total of 200 carnivore scat samples have been collected across the 8 conservancies. We have organised 5 training programs for women members and game guards to collect hair clippings from carnivore bite wounds. Evidence provided in section 3 and annex 6,10.	M.Sc. students will analyze the scat and hair samples to determine real HWC levels
Outcome indicator 0.3 0.3 Multiple-species occupancy of carnivores, elephant occurrence and biodiversity metrics obtained in 8 communal conservancies through systematic camera trapping by Y1-Q4.	A total of 100 camera traps were deployed across the 8 conservancies in a grid based random sampling framework to determine multiple-species occupancy of carnivore and elephant occurrence. A total of approximately 1 million photos have been obtained from the camera trapping exercise (Evidence needed). Evidence provided in section 3 and annex 13 and 14.	CCF will compile and analyze the database and perform predictive modelling of carnivore, elephant occurrence and map the important biodiversity areas. This will be completed by Y2 Q2.
Outcome indicator 0.4 0.4 Conflict hotspots modelled spatially and mapped across the 8 conservancies.	A total of 200 scat samples have been collected (8 conservancies), 46 questionnaires have been conducted (5 conservancies), recording of HWC incidents and collection of hair samples from carnivore bite marks (5 conservancies) are	CCF will conduct additional questionnaires, recording of HWC incidents and collection of bite mark samples. This dataset

	being undertaken to determine actual and perceived HWC (Evidence needed). Evidence provided in section 3 and annex 6, 8 and 10.	will be compiled and analyzed to model and map hotspots across the 8 conservancies in Y2.
Outcome indicator 0.5 0.5 Toolkit for HWC conflict mitigation designed and implemented in targeted hotspot areas identified through the project resulting in 50% decrease in HWC by Y3-Q2.	Baseline data is being collected to determine HWC and map hotspot areas. The toolkit will be designed based on the baseline data and implemented in the targeted hotspots. This is scheduled in Y3.	CCF will develop the HWC conflict mitigation toolkit in consultation with partners, community members. The toolkit will be implemented in Y2-Q3. The effectiveness of the toolkit in reducing HWC will be monitored in collaboration with the community members and partners.
Outcome indicator 0.6 0.6 HWC damage minimised and well-being improved to reduce poverty in 50 households, 5 workshops conducted to deliver knowledge on non-lethal wildlife conflict mitigation tools to 200 additional community members, and major stakeholders and knowledge sharing with project partners by Y3-Q3.	Baseline data is being collected to determine HWC and map hotspots. The effectiveness of the toolkit in reducing HWC will be determined through a control and experiment monitoring framework. This is scheduled in Y3.	CCF will monitor the efficacy of the toolkit in minimizing HWC in collaboration with the partners and community members. CCF will collaborate with partners to organize workshops for community members on use of non-lethal wildlife conflict mitigation tools.
Outcome indicator 0.7 0.7 Project outputs shared with national and international audiences through 2 peer-reviewed publications, 3 technical reports (1/year), 3 popular articles, Namibian radio stations (2/year), 6 blog posts (1/6 months), partner social media (1/month), 1 national workshop and 1 international webinar for strategic upscaling the toolkit by Y3-Q3.	3 students have been recruited and they are collecting the data related to the project outputs. The CCF team is submitting the 1st Annual Report for this project. The students are working on blog posts for the project.	CCF team will share the project outputs through peer-reviewed publications, blog posts, annual reports, workshops and webinars with Namibian and international audiences. This will be done in Y2, Y3 of the project.
Output 1 Perceived and real livestock losses to carnivores and damage by elephants quantified.		

Output indicator 1.1 1.1 Conduct questionnaire surveys in a minimum of 200 households (100/conservancy cluster) and 16 focus group discussions (8/conservancy with men, 8/conservancy with women) in Y1 Q2.	A total of 46 out of the 200 questionnaire surveys have been conducted across 5 conservancies (2 in eastern cluster and 3 in the western cluster). Evidence provided in section 3 and annex 8.	The remaining 154 questionnaire surveys and 16 focus group discussions are scheduled for the first half of Y2 and will be completed by Y2 Q2.
Output indicator 1.2 1.2 A total of 20 community game guards (standardised per conservancy size) trained (Y1-Q1) [DI-A01] and employed to collect non-invasive samples (carnivore scat and hair clippings from bite marks) and elephant damage records (Y1-Q2 to Y3-Q2).	The 20 game guards have been identified in consultation with the community leadership. They will be trained in HWC data collection through the SMART application and will be employed from Y2-Q1. A total of 5 women and the game guards from 5 conservancies have already been trained to collect non-invasive samples. Evidence from section 3 and annex 6 and 9.	The game guards will be provided a formal employment contract in Y2. Training program for SMART application and collection of non-invasive samples will be completed by Y2-Q1. The work done by the game guards will be monitored by the Community Officer.
1.3 8 female community members (1 per conservancy) trained (Y1 Q1) [DI-A01] and employed to coordinate sample collection and inventorying (both scat and hair clippings from bite marks) (Y1-Q2 to Y3-Q2) [DI-B05].	A total of 5 female community members from 5 conservancies (western cluster) have been trained in coordinating scat and hair sample collection. They will be employed from Y2-Q1. Evidence from section 3 and annex 6.	The remaining 3 female community members from the 3 conservancies will be trained in Y2-Q1. All the 8 female members will be provided formal employment by Y2-Q1.
1.4 A minimum of 200 carnivore scat samples collected through systematic (scat detection dog, Y1 Q2) and opportunistic (game guards, Y1-Q2 and Y1-Q3) searches; and a minimum of 30 bite wound samples collected by game guards (Y1-Q3) in 8 conservancies.	A total of 200 carnivore scat samples have been collected through systematic (scat detection dog team) and game guard involvement. Training has been provided to game guards and women to coordinate collection of bite wound samples from 5 conservancies. Evidence from section 3 and annex 6 and 10.	The scat samples will be processed by the MSc student by Y2-Q2. Bite wound samples will be collected on an opportunistic basis once the female members are employed
1.5 A minimum of 90% of carnivore scat samples genetically assigned to species level and sequences submitted to GenBank [DI-C16] in Y1-Q3 and Y1-Q4; individual identities determined for key indicator species.	Scheduled for Y2-Q1 and Y2-Q2 due to the delayed project start date.	Scheduled for Y2-Q1 and Y2-Q2 due to the delayed project start date.

1.6 Prey species genetically identified for a minimum of 80% of carnivore scat samples in Y1-Q3 and Y1-Q4, to estimate actual conflict levels from scat.	Scheduled for Y2-Q1 and Y2-Q2 due to the delayed project start date.	Scheduled for Y2-Q1 and Y2-Q2 due to the delayed project start date.
1.7 Laboratory workflow optimised for bite mark forensics using 20 reference samples of known cases in Y1-Q3.	Scheduled for Y2-Q1 due to the delayed project start date. The MSc student on bite mark forensics has developed the protocol for collection of hair clippings from carnivore bite wounds. Evidence from section 3 and annex 11.	Scheduled for Y2-Q1 due to the delayed project start date.
1.8 Species responsible for livestock depredation genetically determined for a minimum of 80% of bite mark samples and submitted to GenBank [DI-C16]; individual identities determined for key indicator species in Y1-Q4.	Scheduled for Y2-Q2 due to the delayed project start date.	Scheduled for Y2-Q2 due to the delayed project start date.
1.9 3 Namibian graduate students recruited by Y1-Q2 (1 Ph.D.: socio ecological work; 1 M.Sc. genetic identification of prey in carnivore diet from scat; 1 M.Sc. quantifying livestock depredation genetically from carnivore bite marks).	All 3 students have been recruited. The PhD student is registered with NUST, and the 2 M.Sc. students are registered with UNAM. Evidence provided in section 3 and annex 12.	The students will submit their research proposal to the academic assessment committees at the university.

Output 2. Spatially-explicit knowledge on carnivore and elephant occurrence and status, as well as mammalian biodiversity developed.

Output indicator 2.1. 2.1. The 20 game guards from output 1 will be trained for camera trap surveys on carnivore and elephant occurrence (occupancy) and biodiversity estimation (Y1-Q1) [DI-A01]; and collect data during camera deployment (Y1-Q2), as one component of their employment.	The 20 game guards from the 8 conservancies have been trained in the use of camera traps for monitoring biodiversity. They collaborated with the CCF project team in the deployment of the 100 camera traps. Evidence provided in section 3 and annex 7.	The game guards will be provided a formal employment contract in Y2-Q1.
Output indicator 2.2. 2.2 Camera traps are deployed at 100 stations (50 stations per conservancy cluster) for a period of 90 days during Y1-Q2.	A total of 100 camera traps were deployed (50 stations per conservancy cluster) for a period of 90 days in Y1-Q3. Evidence provided in section 3 and annex 13.	The camera trap database will be uploaded on TrapTagger.
Output indicator 2.3 2.3 Camera trap photos analysed for species identification in Y1-Q3.	There are more than 1 million photos from the camera traps. Evidence provided in section 3 and annex 14.	The entire camera trap dataset will be uploaded and preprocessing steps will be followed for identification of species. This will be completed by Y2-Q1.
Output indicator 2.4	The camera trap photos are being uploaded on TrapTagger. Once the data is being uploaded and	Carnivore and elephant occurrence, prey and carnivore diversity will be modeled

2.4 Carnivore and elephant occurrence (occupancy), as well as carnivore and prey diversity modelled, important biodiversity areas mapped in Y1-Q4 [DI-B11] [DI-C08].	labelled, the dataframe will be organized and analyzed using R and GIS software. Evidence provided in section 3 and annex 14. This is scheduled to be completed in Y2.	using occupancy analyses and important biodiversity areas will be mapped using ArcGIS/Q GIS.
Output 3. Spatially-explicit model of human wildlife interactions generated, HWC hotspots mapped, and framework of practical conservation actions for human wildlife coexistence toolkit formulated.		
Output indicator 3.1 3.1 Perceived (questionnaire surveys) and actual (genetic data from scat and bite marks) HWC data are integrated to model and map HWC hotspots and rural communities most vulnerable to wildlife damage in Y2-Q1.	46 questionnaires, HWC surveys have been initiated in 5 conservancies and 200 carnivore scat samples have been collected from all conservancies. Training for collection of bite mark samples have been provided to 5 women community members and game guards from 5 conservancies. Evidence provided in section 3 and annex 6,8 and 10.	The data from the surveys and scat, bite mark samples will be combined to model and map HWC hotspot areas.
Output indicator 3.2 3.2 Secure habitats, ecological traps, and major socio-ecological drivers of HWC are identified and maps generated for carnivore species, elephants and biodiversity in Y2-Q1 [DI-E03].	The data from the 100 camera traps has been compiled and are being uploaded on Traptagger. Questionnaire surveys have started in 5 conservancies to identify major socio-ecological drivers of HWC. Evidence provided in section 3 and annex 8,13 and 14.	Secure habitats and ecological traps will be mapped based on the analyses and outputs from the camera trap and HWC data. This will be completed by Y2-Q2.
Output indicator 3.3 3.3 A human-wildlife coexistence model (HWC toolkit) that is tailored to the site-specific challenges encountered in the communal conservancies is developed by the end of Y2-Q1 and shared with the partners for feedback. The toolkit will enable partners to expand the tools they have at their disposal for their conservation and livelihood improvement efforts [DI-A03].	Baseline data on HWC is being collected through social science and genetic based sampling methods. This is scheduled for Y2. Evidence provided in section 3 and annex 6, 8 and 10.	The HWC toolkit will be developed based on the synthesis of baseline data. Consultation will be done with community members and partners. This will be completed by Y2-Q2.
Output indicator 3.4 3.4 4 consultative meetings with community members from 100 households (50 households/conservancy cluster) in selected hotspots, conducted in the latter part of Y2-Q1 to obtain feedback from the community regarding the toolkit. Feedback integrated in the toolkit and endorsement by partners, including government authority [DI-B05].	This is scheduled for Y2.	CCF will organize meetings with partners, government authorities and community leadership from both conservancy clusters to discuss this toolkit. This is scheduled for Y2-Q2.
Output 4. HWC mitigation toolkit implemented in select conflict hotspots identified in the project; damage from and towards wildlife minimised, poverty reduced and human well-being improved.		

Output indicator 4.1 4.1 4 HWC hotspots to be targeted for mitigation implementation (2 hotspots/conservancy cluster) undertake an initial selection through a quantitative set of prioritisation criteria in Y2-Q1. 2 additional HWC hotspots in each cluster are proposed as controls in Y2-Q1.	Baseline data on HWC is being collected to identify HWC hotspots in each conservancy cluster. This is scheduled for Y2. Evidence provided in section 3 and annex 6,8 and 10.	The areas for implementation and control in each cluster will be selected based on the spatial-risk model outputs. This is scheduled in Y2-Q2.
Output indicator 4.2 4.2 Final hotspots for implementation selected based on 1 meeting with project partners and conservancy traditional authorities in the latter part of Y2-Q1.	This is scheduled for Y2.	CCF is in close communication with project partners, conservancy leadership and traditional authorities. In-person meetings will be organized to finalize hotspots in Y2-Q2.
Output indicator 4.3 4.3 Community members from 50 implementation households across hotspots (25 households/conservancy cluster) are trained in Y2-Q2 to use the HWC toolkit [DI-A01]. Pre implementation questionnaires to the 50 implementation households and an additional 50 control households (no implementation) are used to assess perceptions and attitudes towards carnivores and elephants.	Baseline data is being collected to understand HWC levels and map hotspots. This is scheduled for Y2. Evidence provided in section 3 and annex 6,8 and 10.	The community members will be trained in use of the HWC toolkit. Questionnaire surveys will be conducted for control and implementation households to assess perception towards wildlife. This is scheduled for Y2-Q2/Q3.
Output indicator 4.4 4.4 Deliver the HWC tools deemed appropriate to address HWC in 50 households (25 households/conservancy cluster) across the conflict hotspots selected for implementation, in the first part of Y2-Q2 [DI-D02].	Baseline data is being collected to understand HWC levels and map hotspots across the conservancy clusters. This is scheduled for Y2. Evidence provided in section 3 and annex 6,8 and 10.	The HWC tools will be delivered to the selected households in the hotspots areas across the 2 conservancy clusters.
Output indicator 4.5 4.5 Toolkit applied by 100% of the trained households throughout the year [DI-A04]. Decreased livestock depredation (50%), retaliatory killing of carnivores (30%), and damage to water infrastructure by elephants (50%); increased tolerance levels of the 50 households using the toolkit (30%) relative to 50 control groups, by Y3-Q2. [DI-A06] [DI-B09] [DI-B10] [DI-D02] [DI-08] [DI-D15] [DI-D16] [DI-D18] [DI-E02].	This is scheduled for Y3.	Monitoring framework will be developed to measure the efficacy of the toolkit in reducing livestock depredation, retaliatory killing, damage to water infrastructure and improving tolerance of people.
Output indicator 4.6 4.6 HWC toolkit revised in Y3-Q3 for potential adaptive management, based on results from the implementation experiment; toolkit published and endorsed by partners including MEFT in Y3-Q4 [DI-C01].	This is scheduled for Y3.	The toolkit will be revised based on the monitoring results and consultation with partners and government agencies.

Output 5. Dissemination of HWC toolkit to broader communal areas communities, and of project findings to the national and international conservation community through a comprehensive outreach plan; upscaling strategies deliberated.		
Output indicator 5.1 5.1 Community members across minimum 200 additional households in the 8 conservancies (other than the 50 households included in the demonstrative implementation) learn about the toolkit effectiveness and implementation in Y3-Q3 & Y3-Q4 [DI-D02].	This is scheduled for Y3.	The CCF team will organize training for community members in collaboration with the partners.
Output indicator 5.2 5.2 Minimum 2 peer-reviewed publications submitted in Y3-Q4 after working on them in Y3-Q1 through Y3-Q4: 1) A framework for quantifying human-wildlife interactions within communal lands in arid and semi-arid regions; and 2) Effectiveness of a toolkit for HWC mitigation, biodiversity conservation and improved rural resilience in communal areas [DI C17].	This is scheduled for Y3.	The students and CCF team will analyze the data, write the manuscripts and submit to high impact factor journals for publication.
Output indicator 5.3 5.3 3 graduate degrees completed [DI-A01]; and 2 theses (M.Sc.) and 1 dissertation (Ph.D.) submitted [DI-C19] by the end of Y3-Q4.	This is scheduled for Y3.	The 3 students will submit their thesis to the universities.
Output indicator 5.4 5.4 2 Interim Reports in Y1-Q4 and Y2-Q4 respectively, and 1 final project report in Y3-Q4 [DI-C19].	This is scheduled for Y1, Y2 and Y3. We are submitting the 1st Annual Report for Y1.	The reports will be submitted on time.
Output indicator 5.5 5.5 Project progress popularised with the general public with 3 comprehensive popular articles (1/year), local radio stations active in the 2 conservancy clusters and national radio (2/year), 6 blog posts (1/0.5 year throughout the project), and project partner social media (minimum 1/month) [DI-C12] [DI C15] [DI-C19].	This is scheduled for Y1, Y2 and Y3.	The project progress will be popularized with the general public through articles, social media posts, radio channels, and blogs.
Output indicator 5.6 5.6 1 in-person workshop in which project partners strengthen collaboration and strategize potential scaling outside project sites with support from national entities in Y3-Q4 [DI-C14].	This is scheduled for Y3.	In-person workshops will be organized with project partners and national leaders and traditional authorities will be involved.
Output indicator 5.7 5.7 International webinar with key organisations for publicising the project in Y3-Q4 using a Zoom platform [DI-C13].	This is scheduled for Y3.	A webinar will be organized and the project outputs will be shared with national and international conservation organizations.

Annex 2: Project's full current logframe as presented in the application form (unless changes have been agreed)

We have included the project's original log frame alongside the updated version which is also been submitted as a change request form on 30th April 2025

Project summary	SMART Indicators	Means of verification	Important Assumptions
Impact: Biodiversity conservation through poverty alleviation amongst the poorest economic groups in Namibia by mitigating human-wildlife conflict, empowering rural communities as wildlife stewards, and generating and implementing a toolkit for human-wildlife coexistence.			
Outcome: Identification and reduction of carnivore and elephant conflict, resulting in improved livelihoods.	0.1 Perceived human-wildlife conflict (HWC) identified in 8 communal conservancies through questionnaire surveys by end of Y1-Q3.	0.1 A total of 46 out of 200 questionnaire surveys have been conducted and perceived HWC data collected from 5 conservancies. This will be completed by Y2-Q2 due to the delayed start of the project. Photos and list of participants, data uploaded on Kobo Toolbox	0.1 Communities agree to participate.
	0.2 Real HWC levels identified in 8 communal conservancies through genetic analysis of carnivore scat samples and saliva of carnivore bite marks by the end of Y1-Q4.	0.2.1 A total of 200 carnivore scats have been collected and are being processed in the lab. The training for collection of hair samples from carnivore bite wounds have been provided to 5 women members and game guards. This will be completed by Y2-Q2 due to the delayed start of the project.	0.2 Sufficient samples collected.
	0.3 Multiple-species occupancy of carnivores, elephant occurrence and biodiversity metrics obtained in 8 communal conservancies through systematic camera trapping by Y1-Q4.	0.3.1 Online repository of camera trap photos being uploaded on Traptagger. 0.3.2 Occupancy/occurrence analysis will be completed in Y2-Q2 due to the delayed start of the project.	0.3 Field conditions are favourable for data collection.
	0.4 Conflict hotspots modelled spatially and mapped across the 8 conservancies.	0.4 HWC data is being collected and will be analyzed to model hotspots across the 8 conservancies.	0.4 The data show a gradient of conflict incidence, from low conflict to conflict hotspots.
	0.5 Toolkit for HWC conflict mitigation designed and implemented in targeted hotspot areas identified through the	0.5.1 HWC conflict mitigation toolkit will be designed based on the synthesis of the baseline data on HWC in Y2-Q2. 0.5.2 HWC hotspots will be mapped	0.5 Community members are interested in adopting the toolkit.

	project, resulting in 50% decrease in HWC by Y3-Q2.	and identified based on the statistical d identified based on the statistical and GIS analysis of the baseline data in Y2-Q2 0.5.3 Once the hotspots are identified and toolkit designed, workshops will be conducted to train community members regarding use of the HWC toolkit in Y2. 0.5.4 Toolkit will be implemented and effectiveness will be monitored through Y2 and Y3.	
	0.6 HWC damage minimised and well-being improved to reduce poverty in 50 households, 5 workshops conducted to deliver knowledge on non-lethal wildlife conflict mitigation tools to 200 additional community members, and major stakeholders and knowledge sharing with project partners by Y3-Q3.	0.6.1 Survey reports showing reductions of livestock loss to carnivores, damage by elephants and retaliatory killing of wildlife. 0.6.2 Damage from HWC is minimised and threats to food and social security addressed leading to reduction in poverty. Scheduled for Y3.	0.6 Decline in HWC reflects reduced costs of coexistence with wildlife and improved rural livelihoods.
	0.7 Project outputs shared with national and international audiences through 2 peer-reviewed publications, 3 technical reports (1/year), 3 popular articles, Namibian radio stations (2/year), 6 blog posts (1/6 months), partner social media (1/month), 1 national workshop and 1 international webinar for strategic upscaling the toolkit by Y3-Q3.	0.7.1 2 scientific manuscripts prepared. 0.7.2 3 technical reports prepared. 0.7.3 3 popular articles generated. 0.7.4 6 blog posts publicised. 0.7.5 Regular X, Facebook and Instagram postings. 0.7.6 Materials and minutes from 2 workshops on scaling up the toolkit in other areas with national and international authorities and major stakeholders.	0.7 The appropriate authorities and stakeholders are interested in exploring the HWC toolkit.
Output 1 Perceived and real livestock losses to carnivores and damage by elephants quantified.	1.1 A total of 46 questionnaire surveys out of the 200 households (100/conservancy cluster) was done in Y1 Q4.	1.1 The data collected so far has been uploaded on an online platform Kobo Toolbox. Evidence from Kobo Toolbox and photos.	1.1 Community members continue to be willing to participate in the questionnaire surveys.

	1.2 A total of 12 community game guards (5 conservancies) have been trained in (Y1-Q4) to collect non-invasive samples (carnivore scat and hair clippings from bite marks)	1.2 Evidence available for the list of participants (game guards) from the 5 conservancies.	1.2 Game guards nominated by the conservancy leadership collect samples.
	1.3 A total of 5 female community members (1 per conservancy) were trained in (Y1 Q4) [DI-A01] to coordinate sample collection and inventorying (both scat and hair clippings from bite marks)	1.3 Evidence available for the list of female community members who participated in the training.	1.3 Female community members trained by CCF team willing to coordinate sample collection.
	1.4 A total of 200 carnivore scat samples were collected through systematic sampling using a scat detection dog in Y1-Q3. The collection of 30 bite wound samples has been delayed due to the issues with NNF. A minimum of 30 bite wound samples collected by game guards (Y1-Q3) in 8 conservancies.	1.4 200 scat samples have been collected by the CCF scat dog team. Evidence available from samples stored in CCF genetics lab and inventory. Training has been provided to game guards, women from 5 conservancies for bite wound sample collection. We are hopeful of engaging the game guards in Y2-Q1 and this will be completed by Y2-Q2 due to the delayed start of the project. Evidence available from the participant lists and photos.	1.4 CCF scat dog team is efficient in sample collection.
	1.5 A minimum of 90% of carnivore scat samples genetically assigned to species level and sequences submitted to GenBank [DI-C16] in Y1-Q3 and Y1-Q4; individual identities determined for key indicator species.	1.5-1.8 This is in progress and will be completed in Y2-Q1 and Y2-Q2 due to the delayed start date of the project.	1.5 No unexpected setback to the laboratory work.
	1.6 Prey species genetically identified for a minimum of 80% of carnivore scat samples in Y1-Q3 and Y1-Q4, to estimate actual conflict levels from scat.		1.6 Molecular typing assay works at >80%.
	1.7 Laboratory workflow optimised for bite mark forensics using 20 reference samples of known cases in Y1-Q3.		1.7 Protocol can be streamlined effectively.

	1.8 Species responsible for livestock depredation genetically determined for a minimum of 80% of bite mark samples and submitted to GenBank [DI-C16]; individual identities determined for key indicator species in Y1-Q4.		1.8 Workflow will be successful at >80%.
	1.9 3 graduate students have been recruited by Y1-Q4 (1 Ph.D.: socio ecological work; 1 M.Sc. genetic identification of prey in carnivore diet from scat; 1 M.Sc. quantifying livestock depredation genetically from carnivore bite marks). The Ph.D student is from Botswana while the M.Sc. students are from Namibia.	1.9 All the 3 graduate students have been recruited. The Ph.D. student has registered with NUST and the 2 M.Sc. students have registered with UNAM.	1.9 The 3 graduate students have been identified and are successful in undertaking their research.
Output 2 Spatially-explicit knowledge on carnivore and elephant occurrence and status, as well as mammalian biodiversity developed.	2.1 The 20 game guards were trained in Y1-Q3 in the use of camera traps on carnivore and elephant occupancy and estimation of biodiversity. They also collaborated with the CCF team in camera deployment in Y1-Q3.	2.1 This was delayed due to the project starting in Sept 2024. Record of compensation paid to game guards and photos available during camera trap deployment and training.	2.1 Suitable game guards identified to assist the camera trap surveys.
	2.2 Camera traps were deployed at 100 stations in Y1-Q3 till Y1-Q4 for a period of 90 days.	2.2 The photos from the camera traps are being uploaded on an online platform TragTagger. Evidence from online databases and photos. This was delayed due to the project starting in Sept 2024.	2.2 Theft and destruction of camera traps are kept to a minimum and sufficient data are acquired.
	2.3 Camera trap photos analysed for species identification in Y1-Q3.	2.3 This is in progress as camera trap images are being uploaded and will be analyzed for species identification in Y2-Q1.	2.3 Camera trap photos identifiable to species level.
	2.4 Carnivore and elephant occurrence (occupancy), as well as carnivore and prey diversity modelled, important biodiversity areas mapped in Y1-Q4 [DI-B11] [DI-C08].	2.4 This is in progress and occupancy analysis and GIS mapping will be done in Y2-Q2. This was delayed due to the project starting in Sept 2024.	2.4 Suitable student and university are identified.

Output 3 Spatially-explicit model of human wildlife interactions generated, HWC hotspots mapped, and framework of practical conservation actions for human wildlife coexistence toolkit formulated.	3.1 Perceived (questionnaire surveys) and actual (genetic data from scat and bite marks) HWC data are integrated to model and map HWC hotspots and rural communities most vulnerable to wildlife damage in Y2-Q1.	3.1 46 questionnaires, HWC surveys have been initiated in 5 conservancies and 200 carnivore scat samples have been collected from all conservancies. Training for collection of bite mark samples have been provided to 5 women community members and game guards from 5 conservancies. This was delayed due to the project starting in Sept and the hotspot mapping will be done in Y2-Q2.	3.1 Questionnaire surveys are representative of HWC at conservancy level, and statistical models have good predictive accuracy.
	3.2 Secure habitats, ecological traps, and major socio-ecological drivers of HWC are identified and maps generated for carnivore species, elephants and biodiversity in Y2-Q1 [DI-E03].	3.2 The data from the 100 camera traps has been compiled and is being uploaded on Traptagger. Questionnaire surveys have started in 5 conservancies to identify major socio-ecological drivers of HWC and will be completed by Y2-Q2.	3.2 Statistical models have good predictive accuracy.
	3.3 A human-wildlife coexistence model (HWC toolkit) that is tailored to the site-specific challenges encountered in the communal conservancies is developed by the end of Y2-Q1 and shared with the partners for feedback. The toolkit will enable partners to expand the tools they have at their disposal for their conservation and livelihood improvement efforts [DI-A03].	3.3 This will be developed based on the synthesis of the baseline data on HWC. This will be completed in Y2-Q2 due to the delayed start of the project.	3.3 Data will be sufficient for developing an optimally effective toolkit.
	3.4 4 consultative meetings with community members from 100 households (50 households/conservancy cluster) in selected hotspots, conducted in the latter part of Y2-Q1 to obtain feedback from the community regarding the toolkit. Feedback integrated in the toolkit and endorsement by partners,	3.4 This is planned in Y2-Q2/Q3 after mapping of HWC hotspots and development of the toolkit. This is delayed due to the project starting in Sept 2024.	3.4 Communities will actively engage in providing feedback for toolkit refinement.

	including government authority [DI-B05].		
Output 4. HWC mitigation toolkit implemented in select conflict hotspots identified in the project; damage from and towards wildlife minimised, poverty reduced and human well-being improved.	4.1 4 HWC hotspots to be targeted for mitigation implementation (2 hotspots/conservancy cluster) undertake an initial selection through a quantitative set of prioritisation criteria in Y2-Q1. 2 additional HWC hotspots in each cluster are proposed as controls in Y2-Q1.	4.1 Baseline data on HWC is being collected to identify HWC hotspots in each conservancy cluster. This is scheduled for Y2-Q2 due to the delayed start of the project.	4.1 Selected HWC hotspots are accessible.
	4.2 Final hotspots for implementation selected based on 1 meeting with project partners and conservancy traditional authorities in the latter part of Y2-Q1.	4.2 Minutes of the meeting will be recorded. This is scheduled for Y2-Q2/Q3 due to the delayed start of the project.	4.2 Community members participate in the meetings and share the current levels of HWC.
	4.3 Community members from 50 implementation households across hotspots (25 households/conservancy cluster) are trained in Y2-Q2 to use the HWC toolkit [DI-A01]. Pre implementation questionnaires to the 50 implementation households and an additional 50 control households (no implementation) are used to assess perceptions and attitudes towards carnivores and elephants.	4.3 Baseline data is being collected to understand HWC levels and map hotspots. Records of training and questionnaire survey data for selected households will be initiated and stored. This is scheduled for Y2-Q2/Q3 due to the delayed start of the project.	4.3 Households agree to participate and understand the use of smart farming practices and mitigation measures.
	4.4 Deliver the HWC tools deemed appropriate to address HWC in 50 households (25 households/conservancy cluster) across the conflict hotspots selected for implementation, in the first part of Y2-Q2 [DI-D02].	4.4 Baseline data is being collected to understand HWC levels and map hotspots across the conservancy clusters. Toolkit is delivered to the households and all records are maintained. This is scheduled for Y2-Q2/Q3 due to the delayed start of the project.	4.4 Toolkit is used effectively and community members are committed during the implementation period.

	4.5 Toolkit applied by 100% of the trained households throughout the year [DI-A04]. Decreased livestock depredation (50%), retaliatory killing of carnivores (30%), and damage to water infrastructure by elephants (50%); increased tolerance levels of the 50 households using the toolkit (30%) relative to 50 control groups, by Y3-Q2. [DI-A06] [DI-B09] [DI-B10] [DI-D02] [DI-08] [DI-D15] [DI-D16] [DI-D18] [DI-E02]. 4.6 HWC toolkit revised in Y3-Q3 for potential adaptive management, based on results from the implementation experiment; toolkit published and endorsed by partners including MEFT in Y3-Q4 [DI-C01].	4.5 Data collected on tolerance, livestock depredation, retaliatory killing of carnivores, elephant damage and activity, occurrence of carnivores and elephants and analysed to report effectiveness of toolkit. This is scheduled in Y3. 4.6 HWC toolkit will be revised based on the results of the implementation experiment. This is scheduled for Y3.	4.5 Toolkit is used effectively and interventions will reduce the need to engage in retaliatory killing of wildlife. 4.6 Data from questionnaire surveys, carnivore scat, game guards and camera trap surveys will be sufficient for adaptive management of the toolkit.
Output 5. Dissemination of HWC toolkit to broader communal areas communities, and of project findings to the national and international conservation community through a comprehensive outreach plan; upscaling strategies deliberated.	5.1 Community members across a minimum 200 additional households in the 8 conservancies (other than the 50 households included in the demonstrative implementation) learn about the toolkit effectiveness and implementation in Y3-Q3 & Y3-Q4 [DI-D02]. 5.2 Minimum 2 peer-reviewed publications submitted in Y3-Q4 after working on them in Y3-Q1 through Y3-Q4: 1) A framework for quantifying human-wildlife interactions within communal lands in arid and semi-arid regions; and 2) Effectiveness of a toolkit for HWC mitigation, biodiversity conservation and improved rural	5.1 Workshops will be conducted and training reports will be maintained. This is scheduled in Y3. 5.2 A minimum of 2 research articles will be prepared for submission to peer reviewed journals. This is scheduled in Y3/Y4.	5.1 Community members agree to participate in the workshops. 5.2 Data from outputs 1-4 will be sufficient for generating publishable manuscripts in high visibility journals.

	resilience in communal areas [DI C17].		
	5.3 3 graduate degrees completed [DI-A01]; and 2 theses (M.Sc.) and 1 dissertation (Ph.D.) submitted [DI-C19] by the end of Y3-Q4.	5.3. The 3 graduate students will submit their thesis to the universities. This is scheduled in Y3/Y4.	5.3 Appropriate students selected.
	5.4 2 Interim Reports in Y1-Q4 and Y2-Q4 respectively, and 1 final project report in Y3-Q4 [DI-C19].	5.4 One interim Annual Report is in preparation for Y1. The other reports are scheduled for Y2 and Y3.	5.4 No unforeseen delays.
	5.5 Project progress popularised with the general public with 3 comprehensive popular articles (1/year), local radio stations active in the 2 conservancy clusters and national radio (2/year), 6 blog posts (1/0.5 year throughout the project), and project partner social media (minimum 1/month) [DI-C12] [DI C15] [DI-C19].	5.5 There were 2 (1 virtual and 1 in person) presentations regarding the project with the general public and the international carnivore experts on International Cheetah Day in Dec 2024 and Jan 2025.	5.5 Public will be interested in the results of the project.
	5.6 1 in-person workshop in which project partners strengthen collaboration and strategize potential scaling outside project sites with support from national entities in Y3-Q4 [DI-C14].	5.6 Workshop attendance, report and minutes of the meeting will be compiled. This is scheduled for Y4.	5.6 Important national leaders and traditional authority representatives are interested.
	5.7 International webinar with key organisations for publicising the project in Y3-Q4 using a Zoom platform [DI-C13].	5.7 The webinar will be recorded and a report will be prepared. This is scheduled in Y4.	5.7 Important national and international organisations are interested.

Activities (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)

1.1 CCF and PHD student conduct 200 semi-structured questionnaire surveys and 16 focus group discussions to assess perceived HWC conflict levels, attitudes, and tolerance of wildlife in the communities.

1.2.1 CCF, EHRA and consultant train 20 community members in data collection on HWC.

1.2.2 Conservancy office NNF employs 20 community members as game guards for 2.5 years in the conservancies under their jurisdiction and manages data collection with input from CCF.

1.2.3 MEFTConsultant sets up a streamlined data flow from field devices to database (SMART).

1.3.1 CCF trains 8 female community members in coordinating the collection of hair clippings from bite marks on livestock.

1.3.2 Conservancy offices NNF employs the 8 female community members part-time for 2.5 years in the conservancies under their jurisdiction and manages them with input from CCF.

1.4 CCF scat detection dog team and community game guards managed by MEFTNNF and CCF collect carnivore scats.

1.5.1 CCF Genetics laboratory and M.Sc. student identify carnivore species from scat using mini barcoding.

1.5.2 CCF submits sequence entries to GeneBank.

1.5.3 For endangered large carnivore individuals (e.g., cheetah, African wild dog) the laboratory identifies individuals genetically.

1.6 CCF Genetics laboratory and M.Sc. student analyse carnivore scat samples to identify prey species using a genetic typing assay.

1.7 CCF Genetics laboratory optimises a protocol for identification of carnivore species (and individuals of select endangered species), based on hair clippings from bite marks.

1.8 CCF Genetics laboratory performs analysis of bite marks based on the protocol optimised at 1.7.

1.9 CCF, NUST and UNAM competitively recruit 1 Namibian Ph.D. and 2 Namibian M.Sc. students to undertake research.

2.1 CCF trains the same community members from output 1 in the use of camera traps for monitoring biodiversity.

2.2 CCF, Ph.D. student and game guards conduct camera trapping surveys across sampled sites in the 2 conservancy clusters.

2.3 CCF ecologist, Ph.D. student, and CCF interns compile in a database the camera trap photos.

2.4 Ph.D. student performs spatial predictive modelling of carnivore and elephant occurrence (occupancy) and important biodiversity areas, using Geographic Information Systems and statistical techniques for mapping.

3.1 CCF and Ph.D. student compile and analyze the HWC data (output 1) in a spatially explicit modelling approach to model and map HWC hotspots.

3.2 CCF and Ph.D. student analytically integrate HWC data (output 1) and carnivore and elephant occurrence data (output 2) to model, map, and rank habitat security for wildlife and biodiversity.

3.3.1 CCF and EHRA develop a HWC mitigation toolkit based on analysis of data from outputs 1-2 and the integrative approach of 3.1-3.2. 3.3.2 The toolkit is presented, debated and optimised with all project partners.

3.4 Toolkit is refined in an adaptive management framework using information from 4 consultative meetings with communities, and finalised based on approval from all partners.

4.1 CCF and Ph.D. student perform initial selection of hotspots proposed for toolkit implementation in a case-control design.

4.2.1 Ph.D. student presents candidate HWC hotspot areas to project partners, based on the socio-ecological modelling at outputs 1-3.

4.2.2 The team of partners with approval of traditional authorities makes the final selection of hotspots for toolkit implementation.

4.3.1 CCF, EHRA, MEFT, NNF and Ph.D. student conduct training with 50 households within hotspot sites selected for HWC toolkit implementation.

4.3.2 Prior to training, pre-implementation questionnaires are filled with communities in a case-control design.

4.4.1 Community members at 50 households receive the identified tools from toolkit (e.g., reinforced bomas, flashing lights (Foxlights), guardian dogs, and/or concrete walls around waterpoints).

4.4.2 CCF, EHRA, MEFT and , NNF do site visits for troubleshooting and checks.

4.5.1 During-implementation questionnaire surveys with the 50 implementation and 50 control households, 200 carnivore scat, 50 bite marks, camera trapping, and records of HWC from game guards.

4.5.2 Genetic analysis of carnivore scat and bite marks by CCF genetics laboratory and M.Sc. students.

4.5.3 CCF scientists and the Ph.D. student assess toolkit impact through data obtained from during-implementation monitoring.

4.6 CCF and EHRA revise HWC toolkit based on data collected during-implementation and finalise it with input from partners.

5.1 CCF, EHRA, MEFT and NNF organise 8 training and awareness workshops targeting minimum 200 households across the 8 conservancies (1 workshop /conservancy).

5.2 Ph.D. student on the project with input from M.Sc. students, CCF and other project partners analyse the data and generate 2 peer reviewed publications.

5.3 Thesis/dissertation prepared and submitted.

5.4 CCF team and the graduate students prepare 2 interim (annual) and 1 final project reports and share with partners and stakeholders.

5.5 Project partners disseminate information about the project throughout the project stages using a combination of written articles, radio shows, online blogs and social media postings.

5.6 CCF and partners discuss scaling this community based human-wildlife coexistence and biodiversity conservation model within other communal areas with important Namibian leaders, MEFT personnel and traditional authorities.

5.7 CCF leads an online seminar (webinar) with support from project partners. Invitations for attendance sent to key national and international organisations.

Updated project Logframe pending formal approval (30th April 2025)

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Impact: Biodiversity conservation through poverty alleviation amongst the poorest economic groups in Namibia by mitigating human-wildlife conflict, empowering rural communities as wildlife stewards, and generating and implementing a toolkit for human-wildlife coexistence. .			
Outcome: Identification and reduction of carnivore and elephant conflict, resulting in improved livelihoods.	0.1 Perceived human-wildlife conflict (HWC) identified in 8 communal conservancies through questionnaire surveys by end of Y2-Q2. 0.2 Real HWC levels identified in 8 communal conservancies through genetic analysis of carnivore scat samples and saliva of carnivore bite marks by the end of Y2-	0.1 Baseline data compiled from questionnaire surveys analysed. 0.2.1 Completion of genetic analysis on prey items found in carnivore scat. 0.2.2 Completion of genetic identification of predators from	0.1 Communities agree to participate. 0.2 Sufficient samples collected.

	Q2.	saliva of carnivore bite marks.	
	0.3 Multiple-species occupancy of carnivores, elephant occurrence and biodiversity metrics obtained in 8 communal conservancies through systematic camera trapping by Y2-Q2.	0.3.1 Repository of camera trap photos. 0.3.2 Occupancy/occurrence analysis completed.	0.3 Field conditions are favourable for data collection.
	0.4 Conflict hotspots modelled spatially and mapped across the 8 conservancies.	0.4 Metrics of statistical model fit and predictive accuracy.	0.4 The data show a gradient of conflict incidence, from low conflict to conflict hotspots.
	0.5 Toolkit for HWC conflict mitigation designed and implemented in targeted hotspot areas identified through the project,resulting in 50% decrease in HWC by Y3-Q3/Q4.	0.5.1 HWC conflict mitigation toolkit ready to be used. 0.5.2 List of HWC hotspots to be targeted for implementation compiled. 0.5.3 Workshop conducted, community members trained to use the HWC toolkit. 0.5.4 Survey completed to measure effectiveness of conflict mitigation toolkit in reducing HWC in the conservancies.	0.5 Community members are interested in adopting the toolkit.
	0.6 HWC damage minimised and well-being improved to reduce poverty in 50 households, 5 workshops conducted to deliver knowledge on non-lethal wildlife conflict mitigation tools to 200 additional community members, and major stakeholders and knowledge sharing with project partners by Y4-Q1.	0.6.1 Survey reports showing reductions of livestock loss to carnivores, damage by elephants and retaliatory killing of wildlife. 0.6.2 Damage from HWC is minimised and threats to food and social security addressed leading to reduction in poverty.	0.6 Decline in HWC reflects reduced costs of coexistence with wildlife and improved rural livelihoods.
	0.7 Project outputs shared with national and international audiences through 2 peer-reviewed publications, 3 technical reports (1/year), 3 popular articles, Namibian radio stations (2/year), 6 blog posts (1/6 months), partner social media (1/month), 1 national workshop and 1 international webinar for strategic upscaling the toolkit by Y4-Q1/Q2.	0.7.1 2 scientific manuscripts prepared. 0.7.2 3 technical reports prepared. 0.7.3 3 popular articles generated. 0.7.4 6 blog posts publicised. 0.7.5 Regular X, Facebook and Instagram postings. 0.7.6 Materials and minutes from 2 workshops on scaling up the toolkit in other areas with national and international authorities and major stakeholders.	0.7 The appropriate authorities and stakeholders are interested in exploring the HWC toolkit.

Output 1 Perceived and real livestock losses to carnivores and damage by elephants quantified.	1.1 Conduct questionnaire surveys in a minimum of 200 households (100/conservancy cluster) and 16 focus group discussions (8/conservancy with men, 8/conservancy with women) in Y2-Q2..	1.1 Progress report and compiled survey data.	1.1 Community members agree to participate in questionnaire surveys.
	1.2 A total of 20 community game guards (standardised per conservancy size) trained Y2-Q1(Y1-Q1) [DI-A01] and employed to collect non-invasive samples (carnivore scat and hair clippings from bite marks) and elephant damage records (Y2-Q1 to Y3-Q4).	1.2.1 Completion of training logged. 1.2.2 Record of compensation for employment. 1.2.3 SMART system enabled and operational.	1.2 Suitable community game guards identified to collect samples.
	1.3 8 female community members (1 per conservancy) trained (Y2-Q1) [DI-A01] and employed to coordinate sample collection and inventorying (both scat and hair clippings from bite marks) (Y2-Q1 to Y3-Q4) [DI-B05].	1.3.1 Completion of training logged; periodic check-in by dedicated staff and internal M&E officer. 1.3.2 Record of compensation for employment.	1.3 Suitable female community members identified to coordinate sample collection.
	1.4 A minimum of 200 carnivore scat samples collected through systematic (scat detection dog, Y1-Q3) and opportunistic (game guards, Y2-Q1 and Y2-Q2) searches; and a minimum of 30 bite wound samples collected by game guards (Y2-Q2) in 8 conservancies.	1.4.1 Scat samples collected by CCF scat dog team. 1.4.2 Scat samples and bite wound saliva collected by the game guards. 1.4.3 All samples logged in the CCF genetics laboratory biobank hosted in Namibia.	1.4 Detection dogs are effective at locating scat.
	1.5 A minimum of 90% of carnivore scat samples genetically assigned to species level and sequences submitted to GenBank [DI-C16] in Y2-Q1 and Y2-Q2 ; individual identities determined for key indicator species.	1.5 Entries in CCF laboratory notebooks; sequences submitted to GenBank.	1.5 No unexpected setback to the laboratory work.
	1.6 Prey species genetically identified for a minimum of 80% of carnivore scat samples in Y2-Q1 and Y2-Q2 , to estimate actual conflict levels from scat.		1.6 Molecular typing assay works at >80%.
	1.7 Laboratory workflow optimised for bite mark forensics using 20 reference samples of known cases in Y2-Q1.		1.7 Protocol can be streamlined effectively.
	1.8 Species responsible for livestock depredation genetically determined for a minimum of 80% of bite mark samples and submitted to GenBank [DI-C16]; individual identities determined for key indicator species in Y2-Q2/Q3.		1.8 Workflow will be successful at >80%.

	1.9 3 Namibian graduate students recruited by Y1-Q4 (1 Ph.D.: socio ecological work; 1 M.Sc. genetic identification of prey in carnivore diet from scat; 1 M.Sc. quantifying livestock depredation genetically from carnivore bite marks).		1.9 Suitable students and universities are identified.
Output 2	2.1 The 20 game guards from output 1 will be trained for camera trap surveys on carnivore and elephant occurrence (occupancy) and biodiversity estimation (Y1-Q3) [DI-A01]; and collect data during camera deployment (Y1-Q4), as one component of their employment.	2.1 Completion of training logged. 2.1.2 Record of compensation for employment.	2.1 Suitable game guards identified to assist the camera trap surveys.
	2.2 Camera traps are deployed at 100 stations (50 stations per conservancy cluster) for a period of 90 days during Y1-Q3.	2.2 Photos from the camera traps.	2.2 Theft and destruction of camera traps are kept to a minimum and sufficient data are acquired.
	2.3 Camera trap photos analysed for species identification in Y2-Q2.	2.3 Database with adequately tagged photos.	2.3 Camera trap photos identifiable to species level.
	2.4 Carnivore and elephant occurrence (occupancy), as well as carnivore and prey diversity modelled, important biodiversity areas mapped in Y2-Q2 [DI-B11] [DI-C08].	2.4 Results available and shared in grants report.	2.4 Suitable student and university are identified.
Output 3	3.1 Perceived (questionnaire surveys) and actual (genetic data from scat and bite marks) HWC data are integrated to model and map HWC hotspots and rural communities most vulnerable to wildlife damage in Y2-Q3.	3.1 HWC hotspot map generated.	3.1 Questionnaire surveys are representative of HWC at conservancy level, and statistical models have good predictive accuracy.
	3.2 Secure habitats, ecological traps, and major socio-ecological drivers of HWC are identified and maps generated for carnivore species, elephants and biodiversity in Y2-Q3 [DI-E03].	3.2 Carnivore species, elephants and biodiversity map generated.	3.2 Statistical models have good predictive accuracy.
	3.3 A human-wildlife coexistence model (HWC toolkit) that is tailored to the site-specific challenges encountered in the communal conservancies is developed by the end of Y2-Q3 and shared with the partners for feedback. The toolkit will enable partners to expand the tools they have at their disposal for their conservation and livelihood improvement efforts [DI-A03]. 3.4 4 consultative meetings with community members from 100 households (50 households/conservancy cluster) in	3.3 HWC toolkit strategy ready to use.	3.3 Data will be sufficient for developing an optimally effective toolkit. 3.4 Communities will actively

	selected hotspots, conducted in the latter part of Y2-Q3 to obtain feedback from the community regarding the toolkit. Feedback integrated in the toolkit and endorsement by partners, including government authority [DI-B05].	3.4 HWC toolkit further refined with community consultation ready to use.	engage in providing feedback for toolkit refinement.
	4.1 4 HWC hotspots to be targeted for mitigation implementation (2 hotspots/conservancy cluster) undertake an initial selection through a quantitative set of prioritisation criteria in Y2-Q3. 2 additional HWC hotspots in each cluster are proposed as controls in Y2-Q3.	4.1 HWC hotspots selected.	4.1 Selected HWC hotspots are accessible.
	4.2 Final hotspots for implementation selected based on 1 meeting with project partners and conservancy traditional authorities in the latter part of Y2-Q3.	4.2 Minutes of meetings recorded and attendance registers. Pre-implementation questionnaire survey.	4.2 Community members participate in the meetings and share the current levels of HWC.
	4.3 Community members from 50 implementation households across hotspots (25 households/conservancy cluster) are trained in Y2-Q3/Q4 to use the HWC toolkit [DI-A01]. Pre implementation questionnaires to the 50 implementation households and an additional 50 control households (no implementation) are used to assess perceptions and attitudes towards carnivores and elephants.	4.3.1 Record of delivered training. 4.3.2 Log of questionnaires.	4.3 Households agree to participate and understand the use of smart farming practices and mitigation measures.
	4.4 Deliver the HWC tools deemed appropriate to address HWC in 50 households (25 households/conservancy cluster) across the conflict hotspots selected for implementation, in the first part of Y2-Q3/Q4 [DI-D02].	4.4 Tools delivered.	4.4 Toolkit is used effectively and community members are committed during the implementation period.
	4.5 Toolkit applied by 100% of the trained households throughout the year [DI-A04]. Decreased livestock depredation (50%), retaliatory killing of carnivores (30%), and damage to water infrastructure by elephants (50%); increased tolerance levels of the 50 households using the toolkit (30%) relative to 50 control groups, by Y3-Q4. [DI-A06] [DI-B09] [DI-B10] [DI-D02] [DI-08] [DI-D15] [DI-D16] [DI-D18] [DI-E02].	4.5.1 Implementation questionnaire survey. 4.5.2 Reduced livestock in carnivore scat samples. 4.5.3 Reduced number of retaliatory killings of carnivores. 4.5.4 Reduced evidence of elephant damage. 4.5.5 Difference in spatio-temporal occurrence in carnivores and elephants around hotspots and control sites.	4.5 Toolkit is used effectively and interventions will reduce the need to engage in retaliatory killing of wildlife.
	4.6 HWC toolkit revised in Y3-Q4/Y4-Q1 for potential adaptive management, based on results from the implementation experiment; toolkit published and endorsed		4.6 Data from questionnaire

	by partners including MEFT in Y4-Q1/Q2 [DI-C01].	4.6 Revised HWC toolkit available.	surveys, carnivore scat, game guards and camera trap surveys will be sufficient for adaptive management of the toolkit.
	5.1 Community members across minimum 200 additional households in the 8 conservancies (other than the 50 households included in the demonstrative implementation) learn about the toolkit effectiveness and implementation in Y4-Q1 & Y4-Q2 [DI-D02].	5.1 Record of delivered training and toolkit dissemination.	5.1 Community members agree to participate in the workshops.
	5.2 Minimum 2 peer-reviewed publications submitted in Y4-Q2 after working on them in Y3-Q3 through Y4-Q1: 1) A framework for quantifying human-wildlife interactions within communal lands in arid and semi-arid regions; and 2) Effectiveness of a toolkit for HWC mitigation, biodiversity conservation and improved rural resilience in communal areas [DI C17].	5.2 Draft articles submitted to international peer-reviewed conservation journals.	5.2 Data from outputs 1-4 will be sufficient for generating publishable manuscripts in high visibility journals.
	5.3 3 graduate degrees completed [DI-A01]; and 2 theses (M.Sc.) and 1 dissertation (Ph.D.) submitted [DI-C19] by the end of Y4-Q2.	5.3 Thesis/dissertation submitted to universities.	5.3 Appropriate students selected.
	5.4 2 Interim Reports in Y1-Q4 and Y2-Q4 respectively, Y3-Q4 and 1 final project report in Y4-Q2/Q3 [DI-C19].	5.4 Project evaluation reports.	5.4 No unforeseen delays.
	5.5 Project progress popularised with the general public with 3 comprehensive popular articles (1/year), local radio stations active in the 2 conservancy clusters and national radio (2/year), 6 blog posts (1/0.5 year throughout the project), and project partner social media (minimum 1/month) [DI-C12] [DI C15] [DI-C19].	5.5 Feedback from the general public.	5.5 Public will be interested in the results of the project.
	5.6 1 in-person workshop in which project partners strengthen collaboration and strategize potential scaling outside project sites with support from national entities in Y4-Q2Y3-Q4 [DI-C14].	5.6 Project meeting minutes and associated report.	5.6 Important national leaders and traditional authority representatives are interested.
	5.7 International webinar with key organisations for publicising the project in Y4-Q2 using a Zoom platform [DI-C13].	5.7 Webinar minutes and associated report.	5.7 Important national and international organisations are interested.

Activities (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)

1.1 CCF and PHD student conduct 200 semi-structured questionnaire surveys and 16 focus group discussions to assess perceived HWC conflict levels, attitudes, and tolerance of wildlife in the communities.

1.2.1 CCF, EHRA and consultant train 20 community members in data collection on HWC.

1.2.2 Conservancy office employs 20 community members as game guards for 2.5 years in the conservancies under their jurisdiction and manages data collection with input from CCF.

1.2.3 MEFTsets up a streamlined data flow from field devices to database (SMART).

1.3.1 CCF trains 8 female community members in coordinating the collection of hair clippings from bite marks on livestock.

1.3.2 Conservancy offices employs the 8 female community members part-time for 2.5 years in the conservancies under their jurisdiction and manages them with input from CCF.

1.4 CCF scat detection dog team and community game guards managed by MEFT and CCF collect carnivore scats.

1.5.1 CCF Genetics laboratory and M.Sc. student identify carnivore species from scat using mini barcoding.

1.5.2 CCF submits sequence entries to GeneBank.

1.5.3 For endangered large carnivore individuals (e.g., cheetah, African wild dog) the laboratory identifies individuals genetically.

1.6 CCF Genetics laboratory and M.Sc. student analyse carnivore scat samples to identify prey species using a genetic typing assay.

1.7 CCF Genetics laboratory optimises a protocol for identification of carnivore species (and individuals of select endangered species), based on hair clippings from bite marks.

1.8 CCF Genetics laboratory performs analysis of bite marks based on the protocol optimised at 1.7.

1.9 CCF, NUST and UNAM competitively recruit 1 Namibian Ph.D. and 2 Namibian M.Sc. students to undertake research.

2.1 CCF trains the same community members from output 1 in the use of camera traps for monitoring biodiversity.

2.2 CCF, Ph.D. student and game guards conduct camera trapping surveys across sampled sites in the 2 conservancy clusters.

2.3 CCF ecologist, Ph.D. student, and CCF interns compile in a database the camera trap photos.

2.4 Ph.D. student performs spatial predictive modelling of carnivore and elephant occurrence (occupancy) and important biodiversity areas, using Geographic Information Systems and statistical techniques for mapping.

3.1 CCF and Ph.D. student compile and analyze the HWC data (output 1) in a spatially explicit modelling approach to model and map HWC hotspots.

3.2 CCF and Ph.D. student analytically integrate HWC data (output 1) and carnivore and elephant occurrence data (output 2) to model, map, and rank habitat security for wildlife and biodiversity.

3.3.1 CCF and EHRA develop a HWC mitigation toolkit based on analysis of data from outputs 1-2 and the integrative approach of 3.1-3.2. 3.3.2 The toolkit is presented, debated and optimised with all project partners.

3.4 Toolkit is refined in an adaptive management framework using information from 4 consultative meetings with communities, and finalised based on approval from all partners.

4.1 CCF and Ph.D. student perform initial selection of hotspots proposed for toolkit implementation in a case-control design.

4.2.1 Ph.D. student presents candidate HWC hotspot areas to project partners, based on the socio-ecological modelling at outputs 1-3.

4.2.2 The team of partners with approval of traditional authorities makes the final selection of hotspots for toolkit implementation.

4.3.1 CCF, EHRA, MEFT, NNF and Ph.D. student conduct training with 50 households within hotspot sites selected for HWC toolkit implementation.

4.3.2 Prior to training, pre-implementation questionnaires are filled with communities in a case-control design.

4.4.1 Community members at 50 households receive the identified tools from toolkit (e.g., reinforced bomas, flashing lights (Foxlights), guardian dogs, and/or concrete walls around waterpoints).

4.4.2 CCF, EHRA, MEFT, NNF do site visits for troubleshooting and checks.

4.5.1 During-implementation questionnaire surveys with the 50 implementation and 50 control households, 200 carnivore scat, 50 bite marks, camera trapping, and records of HWC from game guards.

4.5.2 Genetic analysis of carnivore scat and bite marks by CCF genetics laboratory and M.Sc. students.

4.5.3 CCF scientists and the Ph.D. student assess toolkit impact through data obtained from during-implementation monitoring.

4.6 CCF and EHRA revise HWC toolkit based on data collected during-implementation and finalise it with input from partners.

5.1 CCF, EHRA, MEFT and NNF organise 8 training and awareness workshops targeting minimum 200 households across the 8 conservancies (1 workshop /conservancy).

5.2 Ph.D. student on the project with input from M.Sc. students, CCF and other project partners analyse the data and generate 2 peer reviewed publications.

5.3 Thesis/dissertation prepared and submitted.

5.4 CCF team and the graduate students prepare 2 interim (annual) and 1 final project reports and share with partners and stakeholders.

5.5 Project partners disseminate information about the project throughout the project stages using a combination of written articles, radio shows, online blogs and social media postings.

5.6 CCF and partners discuss scaling this community based human-wildlife coexistence and biodiversity conservation model within other communal areas with important Namibian leaders, MEFT personnel and traditional authorities.

5.7 CCF leads an online seminar (webinar) with support from project partners. Invitations for attendance sent to key national and international organisations.

Checklist for submission

	Check
Different reporting templates have different questions, and it is important you use the correct one. Have you checked you have used the **correct template** (checking fund, scheme, type of report (i.e. Annual or Final), and year) and **deleted the blue guidance text** before submission?	Yes
Is the report less than 10MB? If so, please email to BCF-Reports@niras.com putting the project number in the Subject line.	No
Is your report more than 10MB? If so, please consider the best way to submit. One zipped file, or a download option, is recommended. We can work with most online options and will be in touch if we have a problem accessing material. If unsure, please discuss with BCF-Reports@niras.com about the best way to deliver the report, putting the project number in the Subject line.	Yes
Have you included means of verification? You should not submit every project document, but the main outputs and a selection of the others would strengthen the report.	Yes
Have you provided an updated risk register? If you have an existing risk register you should provide an updated version alongside your report. If your project was funded prior to this being a requirement, you are encouraged to develop a risk register.	Yes
If you are submitting photos for publicity purposes, do these meet the outlined requirements (see Section 16)?	N/A
Have you involved your partners in preparation of the report and named the main contributors	Yes
Have you completed the Project Expenditure table fully?	Yes
Do not include claim forms or other communications with this report.	