Applicant: **Sasmal, Indrani**
Organisation: **Cheetah Conservation Fund**
Funding Sought: **£599,995.00**

DIR30S2\1048

Human-wildlife coexistence toolkit for biodiversity conservation and rural community sustainability

This project will address threats to biodiversity conservation and rural poverty by developing a model (toolkit) for human-wildlife coexistence within shared landscapes of southern Africa. The effectiveness of the community-centred model will be assured through robust spatio-temporal understanding of conflict patterns, processes, and drivers. We will integrate social science, ecological and genetic techniques to generate the knowledge required for toolkit development. The coexistence model will empower communities and will be implemented demonstratively in conflict hotspots identified through the project.

DIR30S2\1048

Human-wildlife coexistence toolkit for biodiversity conservation and rural community sustainability

Section 1 - Contact Details

PRIMARY APPLICANT DETAILS

Title	Dr
Name	Indrani
Surname	Sasmal
Website (Work)	[redacted]
Tel (Work)	[redacted]
Email (Work)	[redacted]
Address	[redacted]

GMS ORGANISATION

Type	**Organisation**
Name	Cheetah Conservation Fund
Phone (Work)	[redacted]
Email (Work)	[redacted]
Website (Work)	[redacted]
Address	[redacted]

Section 2 - Title, Ecosystems, Approaches & Summary

Q3. Title:

Human-wildlife coexistence toolkit for biodiversity conservation and rural community sustainability

Please upload a cover letter as a PDF document.

Cover Letter Cheetah Conservation Fund – Darwin Initiative Main Project – Stage 2

27/11/2023

19:24:11

pdf 163.72 KB

What was your Stage 1 reference number? e.g. DIR29S1\1123

DIR30S1\1328

Q4. Key Ecosystems, Approaches and Threats

Select up to 3 biomes that are of focus, up to 3 conservation actions that characterise your approach, and up to 3 threats to biodiversity you intend to address, from dropdown lists.

Biome 1

Savannas and grasslands

Biome 2

Shrublands & shrubby woodlands

Biome 3

Deserts and semi-deserts

Conservation Action 1

Species Management

Conservation Action2

Education & Training

Conservation Action 3

Research & Monitoring

Threat 1

Agriculture & aquaculture (incl. plantations)

Threat 2

Other threats

Threat 3

Biological resource use (hunting, gathering, logging, fishing)

Q5. Summary of project

Please provide a brief non-technical summary of your project: the problem/need it is trying to address, its aims, and the key activities you plan on undertaking.

This project will address threats to biodiversity conservation and rural poverty by developing a model (toolkit) for human-wildlife coexistence within shared landscapes of southern Africa. The effectiveness of the community-centred model will be assured through robust spatio-temporal understanding of conflict patterns, processes, and drivers. We will integrate social science, ecological and genetic techniques to generate the knowledge required for toolkit development. The coexistence model will empower communities and will be implemented demonstratively in conflict hotspots identified through the project.

Section 3 - Title, Dates & Budget Summary

Q6. Country(ies)

Which eligible host country(ies) will your project be working in?

Country 1	Namibia	**Country 2**	*No Response*
Country 3	*No Response*	**Country 4**	*No Response*

Do you require more fields?

⦿ No

Q7. Project dates

Start date:	**End date:**	**Duration (e.g. 2 years, 3 months):**
01 April 2024	31 March 2027	3 years

Q8. Budget summary

Year:	**2024/25**	**2025/26**	**2026/27**	
Amount:	£250,465.00	£212,537.00	£136,993.00	**£** 599,995.00

Q9. Do you have matched funding arrangements?

⦿ Yes

Please ensure you clearly outline your matched funding arrangement in the budget.

Q10. If you have a significant amount of unconfirmed matched funding, please clarify how you will deliver the project if you don't manage to secure this?

Cheetah Conservation Fund (CCF) will provide one 4x4 vehicle and essential equipment (e.g.,camera traps, genetic laboratory instruments) for fieldwork and laboratory expenses. CCF will also provide the infrastructure (e.g., genetics laboratory, office environment) for the project's scientific component. The estimated matched funding is valued at £150,000 with regard to field equipment, £500,000 with regard to the genetics lab and £500,000 when considering infrastructure to give a total of £1,150,000. These assets are already secured.

Q11. Have you received, applied for or plan to apply for any other UK Government funding for the proposed project or similar?

⦿ No

Section 4 - Problem statement

Q12. Problem the project is trying to address

Please describe the problem your project is trying to address in terms of biodiversity and its relationship with multi-dimensional poverty.

Biodiverse ecosystems are critical for environmental and human well-being. Human-wildlife conflict (HWC) is the most significant conservation challenge to the biodiversity of mammals in Africa, impacting animal conservation and the welfare of rural communities (Salerno et al. 2021). Umbrella and keystone species such as apex mammalian carnivores and megaherbivores are vital for functioning of ecosystems and biodiversity conservation (Daskin & Pringle 2016, Wolf & Ripple 2017).

In southern Africa, the majority of the landscape is unprotected and used by humans for free-range livestock grazing. 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 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). These conservancies were identified to experience HWC (Tavolaro et al. 2022) and reports from community leaders and on the ground partners suggest that conflict is a major burden on the livelihoods of component 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 marginalised and 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.

Livestock losses to carnivores and damage to water infrastructure by elephants cause major problems to coexisting with wildlife as they can have dire consequences on the well-being of the local communities. The lack of knowledge on effective ways to protect their livelihoods from wildlife damage can cause fear and frustration, leading to the retaliatory killing of predators or to dangerous encounters when people try to chase away wildlife. A community-based HWC coexistence model is needed to minimise HWC and secure rural livelihoods. In addition to the urgent need to quantify and mitigate HWC challenges, project partners are also aware that conservancies might differ in terms of wildlife communities due to variable levels of unsustainable utilisation. The project will be quantifying these differences in biodiversity, strategise, and implement conservation action measures tailored to site-specific conditions.

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 (Branco et al. 2019, Naha et al. 2020).

Section 5 - Darwin Objectives and Conventions

Q13. Biodiversity Conventions, Treaties and Agreements

Q13a. Your project must support the commitments of one or more of the agreements listed below. Please indicate which agreement(s) will be supported.

- ☑ Convention on Biological Diversity (CBD)
- ☑ Convention on International Trade in Endangered Species (CITES)
- ☑ Convention on the Conservation of Migratory Species of Wild Animals (CMS)
- ☑ United Nations Framework Convention on Climate Change (UNFCCC)
- ☑ Global Goals for Sustainable Development (SDGs)

Q13b. National and International Policy Alignment

Using evidence where available, please detail how your project will contribute to national policy (including NBSAPs, NDCs, NAP etc.) and in turn international biodiversity and development conventions, treaties and agreements that the country is a signatory of.

Namibia's Nature Conservation Ordinance and NBSAP2 (Namibia's Second National Biodiversity Strategy And Action Plan): These highlight HWC and unsustainable land management practices as two of the most critical threats to the conservation of biodiversity e.g. under the CBD (Convention on Biological Diversity), which undermine the economic and social development of the country. Achieving sustainable economic growth and poverty alleviation are identified as essential for Namibia's NBSAP2 success, which is contingent on biodiversity being central to the country's development efforts.
Namibian National Policy on HWC: The project aligns with managing HWC in a way that acknowledges the rights and development needs of local communities while also recognizing the need to promote biodiversity conservation.
CBNRM Approach: This project complements Namibia's Community Based Natural Resource Management (CBNRM) program, which advocates the management of wildlife and conservation of biodiversity outside of national parks.
IUCN SSC Guidelines on HWC: This project aligns with the IUCN SSC guidelines on HWC and coexistence which prescribes collaborative approaches considering social, cultural and economic contexts of HWC management.
Africa-Rangewide Cheetah Conservation Initiative and the Rangewide Conservation Program for Cheetah and African Wild Dog: Project activities address priority aspects highlighted in the global strategies for the conservation of these target species, including collecting scientific information on HWC and conflict hotspots, using data to inform conflict mitigation, community awareness towards sustainability, and poverty alleviation within these species' ranges.
Namibia's NDC (Nationally Determined Contribution): The project implements climate change adaptation activities such as understanding and mitigating HWC around water sources.
Namibia's NAP (National Action Plan): Through fair inclusion of women in project activities, the project promotes responsible business conduct regarding women. The project also adheres to two policies regarding women: Namibian National Gender Policy (promoting gender equality) and Namibia's National Youth Policy (targeting women and youth development and empowerment).

Section 6 - Method, Change Expected, Gender & Exit Strategy

Q14. Methodology

Describe the methods and approach you will use to achieve your intended Outcome and contribute towards your Impact. Provide information on:

- **how you have reflected on and incorporated <u>evidence and lessons learnt</u> from past and present similar activities and projects in the design of this project.**
- **the specific approach you are using, supported by <u>evidence</u> that it will be effective, and <u>justifying why you expect it will be successful</u> in this context.**
- **how you will undertake the work (activities, materials and methods)**
- **what will be the <u>main activities</u> and where will these take place.**
- **how you will <u>manage the work</u> (governance, roles and responsibilities, project management tools, risks etc.).**

Building on the successes of past surveys and implementation in other parts of Namibia, we designed a project strategy combining 6 interdisciplinary approaches: a) use of detection dogs for carnivore scat collection, b) camera trapping, c) questionnaires and participatory workshops, d) community training and employment to record depredation and elephant damage, e) genetic techniques to quantify livestock depredation with certainty, and f) community empowerment to implement practical and effective mitigation of human-carnivore and elephant conflicts.
Scat detection dogs increase the efficiency of scat collection in carnivore surveys through cost-efficient and reliable detection of target scats, while minimising sampling bias. Genetic markers for carnivore identification are optimised for work in degraded scat samples and routinely used at the CCF genetics laboratory. The newly developed genetic diet typing assay provides faster results than the microscopic analysis used previously.
Camera trap surveys provide an efficient non-invasive framework to determine the status and occurrence of carnivores and elephants. CCF has used camera traps extensively to estimate carnivore occupancy, mammalian diversity and infer interrelationships with environmental and anthropogenic factors.
Understanding the challenges that communities encounter and promoting bottom-up solutions for HWC mitigation and biodiversity conservation are foundational for the success of coexistence projects. Project partners have a vast track record of participatory workshops, community outreach programs, educating communal livestock farmers to implement non-lethal conflict mitigation and conserve biodiversity. For example, CCF's Future Farmers of Africa, Livestock Guardian Dog, and Farmer Carnivore Help Hotline programs have reduced losses to carnivore attacks and improved husbandry practices.
Effectiveness of the project strategy is ensured through the project leader's (CCF) extensive work with rural communities for several decades. CCF is also registered as a research institute and has produced a large volume of scientific outputs on the conservation of African carnivores. The project team includes a senior conservation biologist with over 30 years of experience in Africa, and Ph.D.-level scientists with expertise in ecology, HWC, social science, and genetics. CCF team members are well-versed in HWC mitigation and applied carnivore research, and two team members have worked extensively with human-elephant conflict before joining CCF.
All partner organisations have demonstrated work experience in community settings of Namibia, including research, conservation, regulatory, and implementation work in conservancies. Moreover, the team has trained rural capacity for biodiversity conservation and improvement of rural livelihoods. The team includes the government authority responsible for wildlife management in Namibia (MEFT), organisations in charge of managing communal conservancies, non-profit conservation organisations, and the largest Namibian academic institutions. NACSO has pioneered the communal conservancies network, one of the most effective conservation programs in Africa. EHRA has been monitoring elephants and empowering local communities through workshops, trainings and mitigation of damage.
Our project is interdisciplinary integrating ecology, genetics, human dimensions, and community-based approaches.
Output 1: We will train and employ community game guards in data collection on HWC. Semi-structured questionnaire surveys and focus group discussions will be conducted with communities. Female community members will be trained in coordinating and inventorying genetic material from livestock depredation sites. Scat detection dog and community teams will collect carnivore scat, which will be analysed molecularly. The laboratory workflow for identification of carnivore species from genetic forensics of bite marks will be optimised and individuals of endangered carnivore species involved in depredation will be identified. Community game guards will collect data on elephant damage to water infrastructure.
Output 2: We will train and employ the same community game guards as for output 1 to use camera traps.

Camera traps will be deployed to sample carnivore and elephant
distribution and we will analyse the data to derive carnivore multiple-species occupancy, elephant occurrence, and mammalian biodiversity metrics.
Output 3: We will compile data from outputs 1 and 2 to model the spatial probability of HWC risk, identify major socio-ecological drivers and map areas of conservation importance for carnivores, elephants and mammalian biodiversity. We will design a toolkit for HWC mitigation incorporating ecological and social science data collected and consultation with partners, stakeholders and community representatives.
Output 4: We will pilot the toolkit in a sample of the identified HWC hotspots. Livestock losses, perceptions and effectiveness of interventions in reducing HWC, carnivore and elephant responses will be assessed with questionnaires and dedicated monitoring in a comparative experimental design.
Output 5: We will implement awareness workshops for communities presenting project findings, importance of biodiversity conservation and effectiveness of the toolkit in HWC mitigation resulting in poverty reduction and improved livelihoods. We will share project outputs with national and international audiences and strategise upscaling the toolkit.

Q15. Capability and Capacity

How will the project support the strengthening of capability and capacity of identified local and national partners, and stakeholders during its lifetime at organisational or individual levels? Please provide details of what form this will take, who will benefit (noting GESI considerations), and the post-project value to the country.

Communities:
Community members will be trained and hired as game guards to record and raise awareness on HWC and to monitor wildlife. Female representatives from the communities will be trained and hired part-time to coordinate genetic sample collection and inventory for estimating HWC incidence. Additional community members in transparently selected households will be trained and incentivized to implement conflict mitigation methods. Workshops targeting both males and females will be conducted to raise awareness and provide increased capacity in animal husbandry and in effective HWC mitigation.
Project partners:
CCF will increase the spatial extent of activities to new conservancies and will further develop its connections with communities and project partners.
NACSO will be provided through this project a framework to non-invasively monitor and report HWC and estimate wildlife population status, and a HWC toolkit to reduce wildlife damage.
NNF will increase their capability to support communal conservancies by hiring game guards and using advanced technologies for monitoring wildlife and HWC.
EHRA will expand its activities in Namibia and the application of proven techniques for human-elephant coexistence.
MEFT will benefit from the project devising a comprehensive monitoring and implementation framework for HWC mitigation, biodiversity estimation and safeguarding, and improvement of rural livelihoods. The knowledge base generated will help in making data-based policy decisions for mutual biodiversity and livelihood benefits within communal areas of Namibia.
NUST and UNAM will benefit by having three Namibian graduate students engaged in applied research that identifies practical solutions for environmental and societal challenges in real-world settings.
International:
A wide range of stakeholders and organisations will learn about the HWC mitigation toolkit and community empowerment framework that is applicable outside Namibia. Knowledge dissemination for capacity building will occur through scientific and popular publications, a comprehensive media strategy, and a seminar with international attendance that will facilitate networking.

Q16. Gender equality and social inclusion

All applicants must consider whether and how their project will contribute to promoting equality between persons of different gender and social characteristics. Explain your understanding of how individuals may be excluded from equal participation within the context of your project, and how you seek to address this. You should consider how your project will proactively contribute to ensuring individuals achieve equitable outcomes and how you will engage participants in a meaningful way.

Our project focuses on traditional rural communities living within communal conservancies. Those communities are among the poorest and most disadvantaged socio-economic groups in Namibia. In communal conservancies of Namibia, women often remain in the minority with regard to social positions and are less influential in decision making at the community level, than men. They also struggle to speak up in communal meetings that include both men and women and will rather join meetings silently. In conservation educational seminars, only a few women are able to partake, due to their household responsibilities and therefore end up losing out on important information. We will overcome this by offering training that is exclusive to women and that is inclusive to their lifestyle and flexible to their time and schedules.
We will implement a fair selection process for community members who will work on designated project activities. We will remedy the gender-based gap by aiming for an equal representation of women and men on the project. Fundamental to project success is the empowerment of women game guards and other community members in monitoring human-wildlife interactions and in assisting the community more broadly in wildlife damage prevention and mitigation. Furthermore female community members will be selected as liaison between game guards and CCF to coordinate sample collection. We will also ensure that female candidates will be considered for the positions of graduate students and M&E.
Within communal conservancies, ethnicity is diverse and consists of indigenous groups including Herero, San, Damara, and Aawambo, to name a few. We will consult with community representatives and partners to ensure that individuals from different ethnic groups are provided equal opportunities to participate in the project activities.
Moreover, the key personnel working at CCF for this project will comprise of the female project lead, Co-lead (genetics), educator, Landscape Geneticist.

Q17. Change expected

Detail the expected changes to both biodiversity and multi-dimensional poverty reduction, and links between them, that this work will deliver. You should identify what will change and who exactly will benefit a) in the short-term (i.e. during the life of the project) and b) in the long-term (after the project has ended).

When talking about how people will benefit, please remember to give details of who will benefit, differences in benefits by gender or other layers of diversity within stakeholders, and the number of beneficiaries expected. The number of communities is insufficient detail – number of households should be the largest unit used.

Short-term: The project will result in improved understanding of challenges to human-wildlife coexistence and reduction in poverty for communal conservancies. In addition to providing science-based information for conservancy management, including mapping HWC hotspots and areas of high biodiversity value, the project will empower members of the rural communities for natural resource management through training, skill development and employment. Through the project we will train and employ a core group of 20 community game guards and 8 women from the conservancies. We will also provide education to the broader communities in sustainable livestock farming, improved husbandry and use of non-lethal HWC mitigation measures, thereby contributing to food security and increase in personal safety in a landscape with potentially dangerous wildlife. The project will improve the well-being of 50 households where mitigation will be implemented and a minimum of 200 additional households where education programs will be carried out. The project will establish a model of human-wildlife coexistence and reduce costs of sharing the landscape with wildlife for the marginalised and indigenous communities of Namibia.

Long-term: The training programs will increase tolerance and improve attitudes and knowledge of wildlife as a vital component of ecosystems. The delineation and implementation of a toolkit for human-wildlife coexistence will reduce retaliatory killing of carnivores, alleviate human-elephant conflict, improve biodiversity status and ecosystem functioning, and reduce poverty and costs of co-occurrence with wildlife. Community members (game guards) including women will have enhanced capacity to monitor and conserve biodiversity helping to strengthen the communal conservancy model in Namibia and potentially providing future alternative livelihood options such as wildlife-based ecotourism. Recognition of rights and developmental needs of local communities will eventually help in improving tolerance and reducing pre-emptive and/or retaliatory killings of wildlife. Involvement of government agencies (MEFT), NACSO and non-governmental organisations (NNF, EHRA, CCF) will ensure that the key project activities can be continued beyond the designated lifespan.
Potential to scale: The toolkit derived from this project has the potential to be scaled to other regions of Namibia, and more broadly in other countries of southern Africa and further afield in South Asia where people share land with wildlife and are dependent on their livestock for subsistence. Project partners will work synergistically to scale the project beyond the project sites to other conservancies, and to implement the recommended changes such as developing the community game guard program and community trainings in the human-wildlife coexistence toolkit. We will work with partners to scope long-term financing of community game guard positions with the aim to reduce the economic gap to other societies in Namibia. The database on HWC and biodiversity status will serve as a guide for development of a long-term conservation plan/strategy by the Namibian government and other conservation partners in implementing a human-wildlife coexistence model for similar communal areas. The project will therefore facilitate a strengthened connection among partners and communities, which will help in conservation of wildlife outside of protected areas.

Q18. Pathway to change

Please outline your project's expected pathway to change. This should be an overview of the overall project logic and outline why and how you expect your Outputs to contribute towards your overall Outcome and, in the longer term, your expected Impact.

As keystone species, carnivores and elephants create the ecosystem conditions for other mammals, birds, insects and plants that benefit from large carnivore top-down effects (regulating herbivore populations) or rely on elephant feeding habits, water-digging abilities and seed dispersal (Ripple et al. 2014, Daskin & Pringle 2016). Without carnivores, excess herbivory would result in ecosystem collapse, and without elephants landscapes can become bush-encroached (Atkinson et al. 2022). Carnivores and elephants can also generate revenue from ecotourism as an alternative or complementary livelihood to livestock raising.
Through training and effective engagement with communities, the project will reduce livestock depredation, elephant damage to waterpoints, and wildlife killing, thereby conserving biodiversity and its services and maintaining productive and diverse rangelands for wildlife and livestock. By minimising HWC, the project will directly improve rural livelihoods and food security. The project-generated toolkit will build local capacity and empower communities as environmentally conscientious stewards of their land.
The project promotes gender equity by including women as game guards and in active roles in workshops, trainings, and monitoring HWC. Involving women in decision-making for biodiversity conservation within communal areas facilitates community social cohesion, further strengthened by the project bringing people from different indigenous communities together for common cause.

Q19. Sustainable benefits and scaling potential

Q19a. How will the project reach a point where benefits can be sustained post-funding? How will the required knowledge and skills remain available to sustain the benefits? How will you ensure your data and evidence will be accessible to others?

Through training in reporting HWC, monitoring biodiversity, and implementation of effective HWC mitigation techniques, communal conservancy members learn that human well-being and livelihoods are improved if practical non-lethal conflict mitigation methods are applied, and if biodiversity is maintained on shared landscapes. This knowledge is expected to be self-sustaining, in particular given the track record of project partner commitments towards improving rural livelihoods and nature conservation. All project partners have been working on communal lands of Namibia for more than one decade and will continue to work with communities as part of their long-term organisational strategies. Direct partnership participation by the government (MEFT) and implementing organisations that assist conservancy management (NACSO, NNF) will ensure benefits remain available long-term.
Accessibility will be further facilitated by toolkit availability in the public domain through workshops, popular articles, social media, radio interviews, reports, peer-reviewed literature, and an international webinar.

Q19b. If your approach works, what potential is there for scaling the approach further? Refer to Scalable Approaches (Landscape, Replication, System Change, Capacitation) in the guidance. What might prevent scaling, and how could this be addressed?

The project will showcase an effective and practical framework for monitoring and mitigating HWC, assisting rural livelihoods through conflict mitigation, training, and direct employment, and conserving critical biodiversity. Rigorous monitoring of key indicators and quantification of socio-ecological impact will lead to robust and transferable results. National and international upscaling are integral project components and will be strategized in a dedicated workshop in year 3.
In Namibia, NACSO and NNF will replicate the human-wildlife coexistence toolkit within other communal conservancies, whereas MEFT will undertake as well as support other organisations in toolkit implementation across additional landscapes, on communal lands both inside and outside conservancies.
Internationally, the framework can be applied to countries with land use comparable to Namibian conservancies (Kenya, Zimbabwe), and countries in the process of establishing such systems (e.g., Zambia, Botswana). CCF will apply the toolkit in Somaliland. Several elements are applicable to South and South-East Asian landscapes.

If necessary, please provide supporting documentation e.g. maps, diagrams, references etc., as a PDF using the File Upload below:

ToC
27/11/2023
22:35:32
pdf 118.12 KB

Map
27/11/2023
19:43:04
pdf 341.21 KB

References-CCF-Darwin Grant Round 30-stage 2
27/11/2023
19:43:03
pdf 122.97 KB

Section 7 - Risk Management

Q20. Risk Management

Please outline the 6 key risks to achievement of your Project Outcome and how these risks will be managed and mitigated, referring to the Risk Guidance. This should include at least one Fiduciary, one Safeguarding, and one Delivery Chain Risk.

Risk Description	Impact	Prob.	Gross Risk	Mitigation Header	Residual Risk
Fiduciary Because more than 90% of project funds will be used to fund in-country project activities in an African country, there is a risk of excessive cost quotations, e.g. from raw material providers for construction material for building carnivore-proof bomas and elephant walls	10%	Possible	20%	Avoid: Project funds transferred to project partners to cover their expenses with transparent book-keeping records, internal safeguards against fraud, financial mishandling and misappropriation. Reduce: Work with reliable materials supplier companies and obtain quotes from multiple suppliers. Detailed budgetary estimates and signed commitments to stay within budget	No
Safeguarding Collecting data during surveys, providing training for various project components, monitoring fieldwork progress, and carrying out educational workshops involve working with community members.	50%	Unlikely	5%	Avoid and reduce: CCF has a SafeGuarding policy and all project staff will be trained on following all points to ensure there is no abuse, harm or exploitation of community members. Comparable standards are expected of all project partners, which are all established large organisations with long history of	No
Delivery Chain The project is built in close collaboration with the Namibian Government (MEFT), non-profit organisations and local communities. There is a risk that delivery will be affected by ineffective cooperation. Also, political issues may affect willingness to participate in project activities.	50%	Unlikely	10%	Avoid and reduce: CCF planned this project based on more than 3 decades of experience working in Namibia, which has involved close collaboration with local communities, government agencies and non-profit organisations. This project is designed so that jurisdictions with uncertain levels of collaboration are not included.	Some
Risk 4 Some of the complex fieldwork tasks required to deliver on project activities have a risk of not being delivered due to shortage of transportation and access difficulties because of seasonality.	75%	Rare	2%	Avoid/reduce: All project partners with fieldwork assignments have committed suitable 4x4 vehicles for the work. The grant also includes purchase of one 4x4 vehicle. The project activities and timeframes are designed to avoid the wettest part of the year, when access can be substantially impeded even for 4x4 vehicles.	No

Risk 5 Despite the project being highly participatory with local communities, there is a risk that community members do not apply the toolkit due to lack of motivation, lack of social acceptance of the toolkit, or poor commitment to participate in the training programs.	50%	Unlikely	10%	Avoid and reduce: Approval for the project has been secured from all 8 conservancies involved and HWC mitigation is a key part of conservancy mandates. The HWC toolkit will exclusively comprise culturally acceptable practices and the project is designed to engage community members through consultation, employment, training, and awareness raising.	No
Risk 6 Government officials, representatives of conservation based organisations, and communities may not be sufficiently convinced of the benefits of the project, to be willing to invest the time and effort into applying it to other areas.	50%	Unlikely	5%	Avoid/reduce: The lead organisation has secured strong partnerships with key organisations that have authority over Namibian wildlife and conservancy management, engaging them from the concept stage. Risk will be mitigated with robust M&E, open and traceable dialogue (minuted online meetings, in-person workshops, reports), international webinar, and extensive media strategy.	No

Q21. Project sensitivities

Please indicate whether there are sensitivities associated with this project that need to be considered if details are published (detailed species location data that would increase threats, political sensitivities, prosecutions for illegal activities, security of staff etc.).

⦿ Yes

Please provide brief details.

Georeferenced locations of carnivores and elephants detected through survey activities will not be shared publicly, and the predictive modelling framework for wildlife occurrence and HWC hotspot analysis will yield mapping outputs that won't reveal the precise locations of data underlying the models.
Security of project staff is not a concern because Namibia is one of the safest countries in Africa, project partners have long-term working relationships in the project landscapes, the project has approval and support from conservancy committees, and traditional authorities and community members at the household level will be consulted for refining the HWC toolkit and implementation.

Section 8 - Workplan

Q22. Workplan

Provide a project implementation timetable that shows the key milestones in project activities.

CCF-Workplan-Darwin Grant Round 30-stage 2
27/11/2023
20:00:59
pdf 220.43 KB

Section 9 - Monitoring and Evaluation

Q23. Monitoring and evaluation (M&E)

Describe how the progress of the project will be monitored and evaluated, making reference to who is responsible for the project's M&E.

Darwin Initiative projects are expected to be adaptive and you should detail how the monitoring and evaluation will feed into the delivery of the project including its management. M&E is expected to be built into the project and not an 'add' on. It is as important to measure for negative impacts as it is for positive impact. Additionally, please indicate an approximate budget and level of effort (person days) to be spent on M&E.

CCF as project lead, in conjunction with project partners and the M&E Project consultant will develop an M&E framework and monitoring tools during the start-up phase of the project. Baseline indicators stated in the logframe will be reviewed and if required, small adjustments made, in order to provide a reference point for measurement of success against key project indicators. The partners will integrate M&E procedures to ensure effective implementation of the programme outlined in the logical framework and workplan, according to the timetable and budget. As lead partner, CCF will take primary responsibility for M&E and will hire an M&E consultant who will perform the following duties:
-- Work with partners and project teams responsible for the different tasks to develop monitoring tools and protocols;
Conduct regular internal monitoring throughout the duration of the project to provide overall quality control, track expenditures working with the local and international project accountants, verify that timeframes are respected, and that implementing teams are collecting data on project activities, in particular relative to the indicators, goals and outcomes in the logical framework;
-- Collate and analyse project data and share the results through regular minuted discussion with partners and key stakeholders to generate feedback, lessons learnt, and recommendations to be integrated adaptively into subsequent project activities;
-- Coordinate with CCF's Project Leader and Project Manager, and partners and stakeholders to manage risk and make any adjustments to the project necessitated by external events, and;
-- Undertake a broader and deeper consultation process with stakeholders at the end of each financial year to provide a detailed assessment of progress so the project framework can be adjusted as needed and targets set for the remainder of the project. Annual reports will be produced within 30 days after these consultations are completed.
A final evaluation will be carried out at the end of the project by an external independent M&E evaluator selected through an open tender.
The evaluator's findings and conclusions, and the lessons learnt through workshops and interactions with the stakeholders will be documented and shared with all project partners, along with any final recommendations to sustain the processes and actions initiated by the project. Findings will also be shared with other interested governmental and non-governmental parties.
Because the project includes as partners conservation management, implementation and community support authorities in Namibia (both governmental and non-profit) and was designed with their input, the entire process will be transparent and any lessons learned adaptively will be highly valuable for practice. Critically, communities are consulted at various stages in the project, for example for refinement of the HWC mitigation toolkit adaptively, and for selection of sites for toolkit implementation.

Input from the supervisory committees of the 3 graduate students trained in this project and the peer-review process associated with scientific publication of project findings will provide additional validation.

Total project budget for M&E (£) **(this may include Staff and Travel and Subsistence Costs)**	£[redacted]
Total project budget for M&E (%) **(this may include Staff and Travel and Subsistence Costs)**	[redacted]
Number of days planned for M&E	500

Section 10 - Logical Framework

Q24. Logical Framework (logframe)

Darwin Initiative projects will be required to monitor and report against their progress towards their Outputs and Outcome. This section sets out the expected Outputs and Outcome of your project, how you will measure progress against these and how we can verify this.

CCF-BCF Round 30-St2-and-Single-Stage-Logical-Framework
27/11/2023
20:14:20
pdf 76.76 KB

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 toolkit for human-wildlife coexistence.

Outcome:

Identification and reduction of carnivore and elephant conflict, resulting in improved livelihoods.

Project Outputs
Output 1: Perceived and real livestock losses to carnivores and damage by elephants quantified
Output 2: Spatially-explicit knowledge on carnivore and elephant occurrence and status, as well as mammalian biodiversity developed
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 4:

HWC mitigation toolkit implemented in select conflict hotspots identified in the project; damage from and towards wildlife minimized, poverty reduced and human well-being improved.

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.

Do you require more Output fields?

⦿ No

Activities

Each activity is numbered according to the Output that it will contribute towards, for example, 1.1, 1.2, 1.3 are contributing to Output 1.

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, 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 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 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.

Section 11 - Budget and Funding

Q25. Budget

Please complete the appropriate Excel spreadsheet, which provides the Budget for this application and ensure the Summary page is fully completed. Some of the questions earlier and below refer to the information in this spreadsheet.

Darwin_Grant_Budget_for_CCF-2023-11-Final
27/11/2023
22:31:41
xlsx 375.77 KB

Q26. Alignment with other funding and activities

This question aims to help us understand how familiar you are with other work in the geographic/thematic area, and how this proposed project will build on or align with this to avoid any risks of duplicating or conflicting activities.

Q26a. Is this new work or does it build on existing/past activities (delivered by anyone and funded through any source)?

⦿ Development of existing/past activities

Please provide details:

This project focuses on two clusters of communal conservancies in eastern and western Namibia as a model system to derive a framework for human-wildlife coexistence that can be applied across broad geographies. The project partners work across large areas of Namibia and have decades of involvement with rural communities on communal lands. Our project team is a consortium that includes the major groups involved in activities in communal conservancies in the country. Open communication among project organisations and with

conservancy leadership and our shared experience guarantee that there is no comparable work or funding for the outcome and activities listed in this proposal.

MEFT is the government entity responsible for wildlife management in Namibia. NACSO coordinates activities in all the communal conservancies in the country, whereas CCF, NNF and EHRA are key stakeholders engaged in community based natural resource management activities. As a research intensive organisation that uses scientific evidence to guide conservation activities, CCF has implemented surveys in several Namibian conservancies, but not those included in this project. NNF, NACSO and MEFT have had extensive engagement with the conservancies targeted in this project and have identified them as critical focus areas for this partnership due to high HWC levels.

Q26b. Are you aware of any current or future plans for work in the geographic/thematic area to the proposed project that may duplicate or cut across this proposed project?

⦿ No

Q27. Value for Money

Please demonstrate why your project is good value for money in terms of impact and cost-effectiveness of each pound spend (economy, efficiency, effectiveness and equity). Why is it the best feasible project for the amount of money to be spent?

The project cost estimates are based on developing and running other large-scale conservation and research programs in Namibia. The project team is with one exception already in the country, thereby international travel expenses are minimised. Staff salaries are based on approved Namibian rates, with some project scientists covered through other programs. Adequate expertise is available in the team, with a female leader with more than 30 years of experience in delivering conservation programs in Africa, and Ph.D.-level scientists in ecology, human-wildlife interactions and genetics. The 3 students to be trained on the project will be registered at Namibian universities, avoiding international travel costs and large student program fees.

All partners have existing infrastructure and staff which will allow low operating costs. The project lead organisation (CCF) has management and research infrastructure including office environment and fully equipped genetics laboratory. CCF will make available for the project one existing 4x4 field vehicle and research equipment (e.g., camera traps, camping equipment).

Partners have familiarity with the project areas, which will facilitate the planning of efficient fieldwork activities. CCF has implemented camera trapping and scat detection dog surveys in several areas of Namibia and is well-versed in delivering on activities that are time-bound by seasonality or accessibility. NNF routinely manages community game guards across its programs and has workflows in place to maximise effectiveness. CCF and EHRA have extensive experience working with livestock farmers and providing training and implementation on non-lethal HWC mitigation, which enables streamlined delivery of educational workshops.

Q28. Capital items

If you plan to purchase capital items with Darwin Initiative funding, please indicate what you anticipate will happen to the items following project end. If you are requesting more than 10% capital costs, please provide your justification here.

The project involves extensive fieldwork in two of the most remote and disadvantaged regions of Namibia, with unpaved roads and difficult accessibility. Activities include among others ecological surveys; social science questionnaires with communities; training, management and troubleshooting of community game guard tasks; training and assistance to households for implementation of HWC mitigation; and educational workshops with

communities. The only feasible way to access these areas is with 4x4 vehicles. CCF will avail one 4x4 vehicle from its existing vehicle pool to the project, but another 4x4 pickup truck is additionally required to cover project sites and activities. We request one 4x4 vehicle through the grant, which will remain with CCF upon project completion and will continue to be used for facilitating CCF's long-term work with communities on Namibian communal lands. Additional capital investments are elephant-proof walls and predator-proof reinforced bomas, which will protect rural livelihoods long after project completion.

Section 12 - Safeguarding and Ethics

Q29. Safeguarding

All projects funded under the Biodiversity Challenge Funds must ensure proactive action is taken to promote the welfare and protect all individuals involved in the project (staff, implementing partners, the public and beneficiaries) from harm. In order to provide assurance of this, projects are required to have specific procedures and policies in place.

Please upload the following required policies:

- **Safeguarding Policy: including a statement of commitment to safeguarding and a zero tolerance statement on bullying, harassment and sexual exploitation and abuse.**
- **Whistleblowing Policy: which details a clear process for dealing with concerns raised and protects whistle blowers from reprisals.**
- **Code of Conduct: which sets out clear expectations of behaviours – inside and outside the workplace – for all involved in the project and makes clear what will happen in the event of non-compliance or breach of these standards, including compliance with IASC 6 Principles.**

If any of these policies are integrated into a broader policy document or handbook, please upload just the relevant or equivalent sub-sections to the above policies, with (unofficial) English translations where needed.

Please outline how (a) beneficiaries, the public, implementing partners, and staff are made aware of your safeguarding commitment and how to confidentially raise a concern, (b) safeguarding issues are investigated, recorded and what disciplinary procedures are in place when allegations and complaints are upheld, (c) you will ensure project partners uphold these policies.

If your approach is currently limited or in the early stages of development, please clearly set out your plans address this.

Some aspects of CCF's work deal with gathering information about Human-Wildlife Conflict, carrying out analyses and providing actionable items to responsible authorities (MEFT), conservancy support organisations (NACSO, NNF) and to communities directly. CCF has a duty to ensure the information is graded and evaluated so its quality and confidentiality are recorded and issued with a handling code to ensure correct dissemination. In addition, CCF's Operations Director and the Project Manager will continue to monitor the implementation of the Safeguarding Policy within CCF while recording incidents and approaching them as outlined in the policy. To support downstream partners' application of the same standards as CCF, a start-up webinar on CCF's Safeguarding Policy will be developed and delivered to all financial and non-financial partners and consultants. The webinar will be followed by a short quiz to ensure participants' retention of CCF's safeguarding principles.

Q30. Ethics

Outline your approach to meeting the key principles of good ethical practice, as outlined in the guidance.

The proposed project will work in partnership with government authorities and local communities to ensure community interests are respected. An important goal is to change community behaviour to discourage participation in/tolerance of wildlife killing, and support law enforcement efforts to end it. To be sustainable, community values and traditional knowledge need to be respected. Selecting training candidates who demonstrate leadership, honesty, dedication, commitment, and strong connection with their communities, and ensuring that communities benefit from any employment opportunities, are two elements of the project that will facilitate this. Because of the focused nature of the community work and emphasis on a cooperative approach, there will not be a significant risk of adverse human rights or humanitarian impacts on the communities involved.
CCF safeguarding policy offers ethical principles which project staff will follow to ensure ethical conduct when approaching communities, government officials, and other stakeholders. In addition, the proposed project will train Game Guards on data collection to mitigate HWC. More effective training, and greater public awareness will strengthen the rule of law and create positive, cooperative relationships between law enforcement authorities and their communities.

Section 13 - British embassy or high commission engagement

Q31. British embassy or high commission engagement

It is important for UK Government representatives to understand if UK funding might be spent in the project country/ies.

Please indicate if you have contacted the relevant British embassy or high commission to discuss the project.

⦿ Yes

Please attach evidence of request or advice if received.

British HIgh Commission - Concent email
27/11/2023
20:26:18
pdf 404.36 KB

Section 14 - Project Staff

Q32. Project staff

Please identify the core staff (identified in the budget), their role and what % of their time they will be working on the project.

Name (First name, Surname)	Role	% time on project	1 page CV or job description attached?
Laurie Marker	**Project Leader**	10	Checked
Bogdan Cristescu	Co-Lead (Ecology & HWC)	10	Checked
Anne Schmidt-Kuentzel	Co-Lead (Genetics)	10	Checked

Dipanjan Naha	Conservation Scientist HWC, Project Manager	100	Checked

Do you require more fields?

⦿ Yes

Name (First name, Surname)	Role	% time on project	1 page CV or job description attached?
Shweta Singh	Landscape Geneticist, Project Supervisor (Genetics)	40	Checked
Shannon Kandjai	Education Manager	20	Checked
Tim Hofmann	Scat Detection Dog Trainer	10	Checked
Jeff Muntifering	External Consultant, SMART Technology Trainer	6	Checked
No Response	*No Response*	*No Response*	Unchecked
No Response	*No Response*	*No Response*	Unchecked
No Response	*No Response*	*No Response*	Unchecked
No Response	*No Response*	*No Response*	Unchecked

Please provide 1 page CVs (or job description if yet to be recruited) for the project staff listed above as a combined PDF.

CCF-CVs-Darwin Grant Round 30-Stage2
27/11/2023
20:47:58
pdf 1.52 MB

Have you attached all project staff CVs?

⦿ Yes

Section 15 - Project Partners

Q33. Project Partners

Please list all the Project Partners (including the Lead Partner who will administer the grant and coordinate delivery of the project), clearly setting out their roles and responsibilities in the project including the extent of their engagement so far.

This section should demonstrate the capability and capacity of the Project Partners to successfully deliver the project. Please provide Letters of Support for all project partners or explain why this has not been included. The order of the letters must be the same as the order they are presented in below.

Lead partner name:	Cheetah Conservation Fund (CCF), Namibia
Website address:	www.cheetah.org
Why is this organisation the Lead Partner, and what value to they bring to the project? (including roles, responsibilities and capabilities and capacity):	CCF has more than 30 years of experience working in Namibia of which a vast amount of time has been spent on communal lands. However, CCF has not had direct involvement with communal conservancies that are included in this project, whereas other project partners have and are included in this project. CCF complements the work of other partners by bringing expertise on wildlife ecology and human-wildlife conflict mitigation. CCF is a research intensive organisation that brings key expertise to the project including in ecology, conflict mitigation, forensic kill investigation (genetics) and education with communities. CCF chairs groups such as the Large Carnivore Management Association of Namibia, which brings together several of the organisations that partner in this project.
International/In-country Partner:	⦿ In-country
Allocated budget (proportion or value):	£[redacted]
Representation on the Project Board (or other management structure):	⦿ Yes
Have you included a Letter of Support from the Lead Partner?	⦿ Yes

Do you have partners involved in the Project?

⦿ Yes

1. Partner Name:	Namibian Association of CBNRM Support Organisations (NACSO), Namibia
Website address:	https://www.nacso.org.na/
What value does this Partner bring to the project? (including roles, responsibilities and capabilities and capacity):	NACSO is the official body responsible for coordinating the management of all the communal conservancies in Namibia. It fosters sustainable natural resource management activities integrating conservation and human livelihoods. NACSO has helped identify key regions to focus for this project and facilitated connections between the various organisations. NACSO will continue to help coordinate the large number of partners and will also be leading the economic model for the project.
International/In-country Partner:	⦿ In-country
Allocated budget:	£[redacted]
Representation on the Project Board (or other management structure):	⦿ Yes

Have you included a Letter of Support from this partner?	⦿ Yes

2. Partner Name:	Ministry of Environment, Forestry & Tourism (MEFT), Namibia
Website address:	https://meft.gov.na/
What value does this Partner bring to the project? (including roles, responsibilities and capabilities and capacity):	MEFT is the government of Namibia branch that is tasked with wildlife and habitat management across the country. MEFT has helped identify the specific conservancies as priority areas for the project due to high levels of human-wildlife conflict and poverty. The project approaches and toolkit outcome will integrate in MEFT's adaptive strategy and the project is envisioned to provide a framework that can be adopted more widely to achieve MEFT's mission of facilitating coexistence between people and wild animals across Namibia.
International/In-country Partner:	⦿ In-country
Allocated budget:	£[redacted]
Representation on the Project Board (or other management structure):	⦿ Yes
Have you included a Letter of Support from this partner?	⦿ Yes

3. Partner Name:	Namibia Nature Foundation (NNF), Namibia
Website address:	https://www.nnf.org.na/
What value does this Partner bring to the project? (including roles, responsibilities and capabilities and capacity):	NNF is the implementing organisation under NACSO that manages the conservancies included in this study. NNF has long-standing connections with conservancy traditional authorities and its involvement will enable an equitable and transparent project investment in conservancies it manages. NNF will also coordinate the operations of community game guards once they have been trained by CCF, EHRA and consultant.
International/In-country Partner:	⦿ In-country
Allocated budget:	£[redacted]
Representation on the Project Board (or other management structure)	⦿ Yes
Have you included a Letter of Support from this partner?	⦿ Yes

4. Partner Name:	Elephant-Human Relations Aid (EHRA), Namibia
Website address:	https://www.ehranamibia.org/
What value does this Partner bring to the project? (including roles, responsibilities and capabilities and capacity):	EHRA is a support organisation under NACSO that works with rural communities to decrease elephant-human conflict. EHRA has had a long-term presence in communal areas of Namibia and extensive experience in implementing effective methods for conflict mitigation involving elephants. EHRA will coordinate the building of elephant-proof structures at waterholes heavily used by humans and livestock and will also help train community game guards and rural households on elephant issues.
International/In-country Partner:	⦿ In-country
Allocated budget:	£[redacted]
Representation on the Project Board (or other management structure):	⦿ Yes
Have you included a Letter of Support from this partner?	⦿ Yes

5. Partner Name:	University of Namibia (UNAM), Namibia
Website address:	https://www.unam.edu.na/
What value does this Partner bring to the project? (including roles, responsibilities and capabilities and capacity):	UNAM is the largest academic institution in Namibia and has a long-term collaboration with CCF formalised through a Memorandum of Understanding. UNAM will support the project through providing two M.Sc. students who will undertake laboratory analyses on genetics and carnivore diet aspects of the project. This will be a two-way benefit as the project will contribute to capacity building of these local Namibian students.
International/In-country Partner:	⦿ In-country
Allocated budget:	£[redacted]
Representation on the Project Board (or other management structure):	⦿ Yes
Have you included a Letter of Support from this partner?	⦿ No
If no, please provide details	We have a signed Memorandum of Understanding with UNAM regarding their students working with CCF. MOU is attached.

6. Partner Name:	Namibia University of Science and Technology (NUST), Namibia
Website address:	https://www.nust.na/

What value does this Partner bring to the project? (including roles, responsibilities and capabilities and capacity):	NUST is a science-focused academic institution in Namibia and has a long-term collaboration with CCF formalised through a Memorandum of Understanding. NUST will support the project through providing one Ph.D. student who will undertake field data collection, socio-ecological analyses and evaluation of the HWC toolkit on the project. This will be a two-way benefit as the project will contribute to capacity building of this local Namibian student.
International/In-country Partner:	⦿ In-country
Allocated budget:	£[redacted]
Representation on the Project Board (or other management structure):	⦿ Yes
Have you included a Letter of Support from this partner?	⦿ No
If no, please provide details	We have a signed Memorandum of Understanding with NUST regarding their students working with CCF. MOU is attached.

If you require more space to enter details regarding Partners involved in the project, please use the text field below.

No Response

Please provide a combined PDF of all letters of support.

Support Letters - Darwin Grant Round 30 - stage 2
27/11/2023
22:20:42
pdf 3.08 MB

Section 16 - Lead Partner Capability and Capacity

Q34. Lead Partner Capability and Capacity

Has your organisation been awarded Biodiversity Challenge Funds (Darwin Initiative, Darwin Plus or Illegal Wildlife Trade Challenge Fund) funding before (for the purposes of this question, being a partner does not count)?

⦿ Yes

If yes, please provide details of the most recent awards (up to 6 examples).

Reference No	Project Leader	Title
IWT-066	Laurie Marker	Legal Intelligence for Cheetah Illicit Trade (LICIT)
IWT-113	Laurie Marker	LICIT-II: Legal Intelligence and Community Governance for Cheetah Illicit Trade

No Response	*No Response*	*No Response*
No Response	*No Response*	*No Response*
No Response	*No Response*	*No Response*
No Response	*No Response*	*No Response*

Have you provided the requested signed audited/independently examined accounts?

⦿ Yes

Section 17 - Certification

Q.35 Certification

If this section is incomplete the entire application will be rejected.

Please note if you do not upload the relevant materials below your application may be made ineligible.

On behalf of the

Trustees

of

Cheetah Conservation Fund

I apply for a grant of

£599,994.00

I certify that, to the best of our knowledge and belief, the statements made by us in this application are true and the information provided is correct. I am aware that this application form will form the basis of the project schedule should this application be successful.

(This form should be signed by an individual authorised by the applicant institution to submit applications and sign contracts on their behalf.)

- **I have enclosed CVs for key project personnel, cover letter, letters of support, a budget, logframe, Safeguarding and associated policies, and project workplan.**
- **Our last two sets of signed audited/independently verified accounts and annual report (covering three years) are also enclosed.**

Checked

Name	Laurie Marker
Position in the organisation	Executive Director
Signature (please upload e-signature)	LMsignature 27/11/2023 22:25:21 pdf 222.07 KB
Date	27 November 2023

Please attach the requested signed audited/independently examined accounts.

CCF FS 2021
27/11/2023
22:26:45
pdf 1.06 MB

Cheetah Conservation Fund Namibia - 2020
27/11/2023
22:26:44
pdf 1.12 MB

Cheetah Conservation Fund Namibia - 2019
27/11/2023
22:26:44
pdf 472.69 KB

Please upload the Lead Partner's Safeguarding Policy, Whistleblowing Policy and Code of Conduct as a PDF

CCF 2022 Code of Conduct
27/11/2023
22:29:51
pdf 171.88 KB

CCF Safeguarding Policy
27/11/2023
22:28:58
pdf 106.07 KB

CCF Whistleblower Policy
27/11/2023
22:27:13
pdf 55.28 KB

Section 18 - Submission Checklist

Checklist for submission

	Check
I have read the Guidance**, including the "Darwin Initiative Guidance", "Monitoring Evaluation and Learning Guidance", "Standard Indicator Guidance", "Risk Guidance", and "Finance Guidance".**	Checked
I have read, and can meet, the current Terms and Conditions **for this fund.**	Checked
I have provided actual start and end dates **for the project.**	Checked
I have provided my budget based on UK government financial years **i.e. 1 April – 31 March and in GBP.**	Checked
I have checked that our budget is complete, **correctly adds up and I have included the correct final total at the start of the application.**	Checked
The application been signed by a suitably authorised individual **(clear electronic or scanned signatures are acceptable).**	Checked
I have attached the below documents to my application: **• a cover letter from the Lead Partner, outlining how any feedback received at Stage 1 has been addressed where relevant, as a single PDF.**	Checked
• **my completed logframe as a PDF using the template provided and using "Monitoring Evaluation and Learning Guidance" and "Standard Indicator Guidance".**	Checked

• **my budget (which meets the requirements above) using the template provided.**	Checked
• **a signed copy of the last 2 annual report and accounts (covering three years) for the Lead Partner, or provided an explanation if not.**	Checked
• **my completed workplan as a PDF using the template provided.**	Checked
• **a copy of the Lead Partner's Safeguarding Policy, Whistleblowing Policy and Code of Conduct (Question 29).**	Checked
• **1 page CV or job description for all the Project Staff identified at Question 32, including the Project Leader, or provided an explanation of why not, combined into a single PDF.**	Checked
• **a letter of support from the Lead Partner and partner(s) identified at Question 33, or an explanation of why not, as a single PDF.**	Checked
I have been in contact with the FCDO **in the project country/ies and have included any evidence of this. If not, I have provided an explanation of why not.**	Checked
My additional supporting evidence is in line with the requested evidence, amounts to a maximum of 5 sides of A4, and is combined as a single PDF.	Checked
(If copying and pasting into Flexi-Grant) I have checked that all my responses have been successfully copied into the online application form.	Checked
I have checked the Darwin Initiative website **immediately prior to submission to ensure there are no late updates.**	Checked
I have read and understood the Privacy Notice on the Darwin Initiative website**.**	Checked

We would like to keep in touch!

Please check this box if you would be happy for the lead applicant (Flexi-Grant Account Holder) and project leader (if different) to be added to our mailing list. Through our mailing list we share updates on upcoming and current application rounds under the Darwin Initiative and our sister grant scheme, the IWT Challenge Fund. We also provide occasional updates on other UK Government activities related to biodiversity conservation and share our quarterly project newsletter. You are free to unsubscribe at any time.

Checked

Data protection and use of personal data

Information supplied in the application form, including personal data, will be used by Defra as set out in the **Privacy Notice**, available from the Forms and Guidance Portal.

This **Privacy Notice must be provided to all individuals** whose personal data is supplied in the application form. Some information may be used when publicising the Darwin Initiative including project details (usually title, lead partner, project leader, location, and total grant value).

Project Title: Human-wildlife coexistence toolkit for biodiversity conservation and rural community sustainability.

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. (Max 30 words)			
Outcome: (Max 30 words) 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 Baseline data compiled from questionnaire surveys analysed.	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 Completion of genetic analysis on prey items found in carnivore scat. 0.2.2 Completion of genetic identification of predators from saliva of carnivore bite marks.	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 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,	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 Community members are interested in adopting the toolkit.

	resulting in 50% decrease in HWC by Y3-Q2.	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.	
	0.6 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.	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.
Outputs: **1**. Perceived and real livestock losses to carnivores and damage by	1.1 Conduct questionnaire surveys in a minimum of 200 households (100/conservancy cluster) and 16 focus group discussions (8/conservancy with men,	1.1 Progress report and compiled survey data.	1.1 Community members agree to participate in questionnaire surveys.

elephants quantified.	8/conservancy with women) in Y1-Q2.		
	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).	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 (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]**.	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-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.	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	1.5 Entries in CCF laboratory notebooks; sequences submitted to GenBank.	1.5 No unexpected setback to the laboratory work.

	submitted to GenBank **[DI-C16]** in Y1-Q3 and Y1-Q4; individual identities determined for key indicator species.		
	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 Entries in CCF laboratory notebooks and databases.	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 Record of consistent results in CCF laboratory notebooks.	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 Entries in CCF laboratory notebooks and databases; sequences submitted to GenBank.	1.8 Workflow will be successful at >80%.
	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).	1.9.1 Graduate students registered with their respective universities. 1.9.2 Theses submitted to academic assessment committees.	1.9 Suitable students and universities are identified.

2. Spatially-explicit knowledge on carnivore and elephant occurrence and status, as well as mammalian biodiversity developed.	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.	2.1.1 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-Q2.	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 Y1-Q3.	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 Y1-Q4 **[DI-B11] [DI-C08]**.	2.4 Results available and shared in grants report.	2.4 Suitable student and university are identified.
3. Spatially-explicit model of human-wildlife interactions generated, HWC hotspots mapped, and framework of practical	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 HWC hotspot map generated.	3.1 Questionnaire surveys are representative of HWC at conservancy level, and statistical models have good predictive accuracy.

conservation actions for human-wildlife coexistence toolkit formulated.	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 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-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 HWC toolkit strategy ready to use.	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, including government authority **[DI-B05]**.	3.4 HWC toolkit further refined with community consultation ready to use.	3.4 Communities will actively engage in providing feedback for toolkit refinement.
4. HWC mitigation toolkit implemented	4.1 4 HWC hotspots to be targeted for mitigation implementation (2	4.1 HWC hotspots selected.	4.1 Selected HWC hotspots are accessible.

in select conflict hotspots identified in the project; damage from and towards wildlife minimised, poverty reduced and human well-being improved.	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.		
	4.2 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 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-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.	4.3.1 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	4.4 Tools delivered.	4.4 Toolkit is used effectively and community members are committed during the implementation period.

	selected for implementation, in the first part of Y2-Q2 **[DI-D02]**.		
	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]**.	4.5.1 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-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]**.	4.6 Revised HWC toolkit available.	4.6 Data from questionnaire surveys, carnivore scat, game guards and camera trap surveys will be sufficient for adaptive management of the toolkit.
5. Dissemination of HWC toolkit to broader communal areas communities, and of project findings to the national and international conservation	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]**.	5.1 Record of delivered training and toolkit dissemination.	5.1 Community members agree to participate in the workshops.

community through a comprehensive outreach plan; upscaling strategies deliberated.	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]**.	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 Y3-Q4.	5.3 Thesis/dissertation submitted to universities.	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 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 Y3-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 Y3-Q4 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. Each activity should start on a new line and be no more than approximately 25 words.)

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 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 Consultant 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 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 NNF 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, 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 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 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.