Darwin Initiative: Final Report

*To be completed with reference to the "Writing a Darwin Report" guidance:
(http://www.darwininitiative.org.uk/resources-for-projects/reporting-forms). It is expected that
this report will be a **maximum** of 20 pages in length, excluding annexes)*

Darwin Project Information

Project reference	23-022
Project title	Developing Long-term Stakeholder Capacity for Elephant Conservation in Mali
Host country(ies)	Mali, West Africa
Lead organisation	The WILD Foundation
Partner institution(s)	The Mali Government: Ministry of the Environment, with its Direction Nationale des Eaux et Forêts (DNEF) as the principle contact; other Ministries as appropriate. The US Embassy to Mali The British Embassy to Mali The United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUSMA)
Darwin grant value	£300,000
Start/end dates of project	1st April 2016 – 31st March 2019
Project leader's name	Dr Susan Canney
Project website/blog/Twitter	Website: https://www.wild.org/mali-elephants/ Blog: https://www.wild.org/category/blog/mali-elephants-blog/ Twitter: @MaliEleProject Facebook in Mali: https://www.facebook.com/gourmamali/ WILD Facebook: https://www.facebook.com/wildfoundation/
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1 Project Rationale

The Malian NBSAP (2014) identifies the Gourma region as one of four areas of great significance for biodiversity. Chief among its threatened species is the northern-most population of African elephants that pre-conflict represented 12% of all West African elephants. It is classified as "vulnerable", listed on Appendix II of CITES, and protected by a regional MoU.

The elephants undertake the longest annual migration of all elephants to find food, water and refuge over an area the size of Switzerland (Annex 7.1- Project area map). 85% of the 235,000 human inhabitants rely on subsistence livelihoods, but increasing human pressure is resulting in desertification, biodiversity and habitat loss, reduced environmental and social resilience, and impoverished livelihoods.

Human population density is increasing sharply (1.9% and 4% per annum in rural and urban areas respectively), while "free-for-all" access to natural resources has led to their over-exploitation and degradation; and local livelihoods have suffered. National statistics show that local livestock ownership has declined for over two decades, while a study undertaken by the project showed that "prestige" herds belonging to distant, wealthy, urban-dwellers have mushroomed and make up around 96% of the livestock using the area. Anarchic habitat clearance blocks the migration route and increases human-elephant, and human-human, conflicts.

The armed conflict of 2012-2013 and subsequent insecurity (Annex 7.2 – Insecurity in the elephant range), due to absence of government, pose a serious threat both to the people and the elephants (from poaching stimulated by international trafficking networks). It has opened up social wounds and reversed some project gains; however, community-based natural resource management (CBNRM) unifies communities and promotes solidarity. The project is the only organisation that continued to operate throughout the conflict, demonstrating the resilience of its "war-tested" model, but outsiders currently profit from local efforts, and systems need to be established whereby communities can regulate access to natural resources.

The government is ill-equipped to deal with these mutually reinforcing factors and full local community empowerment is the only hope to sustain the elephants, habitats and people of the Gourma, and act as an essential complement to any military-based security interventions.

Previous studies demonstrated that the elephant migration route must be protected in its entirety although the two most urgent priorities for action were at Lake Banzena and the Porte des Eléphants. The advent of conflict and absence of government required that communities be engaged throughout the range in elephant-based. The vast area and complex socio-ecological nature of the Gourma mean that a multi-faceted approach is required to target key points where progress can be made and to link these initiatives to mutually support each other.

This project is designed to:

-       Address the urgent problem of Lake Banzena

-       Spread CBNRM across as many communities as possible. The benefits of this model have been demonstrated previously and this project was designed to capitalise on past learning.

-       Develop income-generating activities with the women who provide a powerful demonstration of the benefits

2   Project Partnerships

The project has always worked closely with the Ministry of the Environment (MEADD) and its agency responsible for conservation, the Direction Nationale des Eaux et Forêts (DNEF). Although capacity and morale are generally very low, the project has always identified and supported competent and engaged individuals with the aim of increasing DNEF's capacity. Working with a volatile government with frequent changes of personnel is challenging but the project has developed allies over the years who enable progress to be made, albeit sometimes much more slowly than at other times.

It now also works with the Malian army and the Ministries of Defence, of Internal Security and of Territorial Administration, and a 2017 Presidential directive (in response to an alert issued by the project) instructed the Cabinet of Ministers, all relevant government bodies and institutions to work together to conserve Mali's elephants. The project also works with the Parliamentary Committee on Wildlife who raise issues in Parliament and act as a "watch-dog".

During 2017-18 the MEP and its partners began executing the five year plan for elephants and implement the multi-agency strategy to protect Mali's elephants by (1) continuing the community engagement through CBNRM to maintain community solidarity in the face of the insecurity and improve livelihoods through "elephant-based" wise resource use initiatives; This included the development of a new communes approach to deliver CBNRM in the elephant range, which seeks to reinforce and work with Mali's decentralisation legislation by empowering the mayor's office in each commune to take responsibility for the implementation of CBNRM in

their respective areas through the elaboration of commune-wide convention on resource use with close support from the project. Several commune-wide general assemblies have taken place as a result and some conventions have been finalised.

British and American embassies have provided key advice and strategic support, facilitation with contacts related to the project's work; and attended key meetings at the Ministry when appropriate to demonstrate the interest of the international community in Mali's elephants.

These multi-level partnerships which have been developed over the past 15 years have enabled the project to continue its operations under challenging circumstances; they also represent a key element of the MEP's approach which seeks to build alliance between different actors for the long-term. The project has now secured a 5-year grant from the EU which will enable it to reinforce these partnerships by supporting the consolidation and expansion of community work in the elephant range.

3 Project Achievements

3.1 Outputs

Output 1. Revision of existing "Partial Elephant Reserve" text and boundaries re-drawn to cover the whole of the elephant range with Lake Banzena as a core protection zone.

A preliminary validation meeting was held in Y1 with community traditional leaders of the clans (15) and the women (3) surrounding Lake Banzena regarding the provision of a well to reduce pressure on the core elephant use area; and to discuss the re-drafting of the text of the elephant reserve legislation to support the community conventions signed pre-conflict and designate Banzena as a core protected area. This would enable the pre-conflict situation to be re-instated and the community supported by foresters in its implementation. Other communities in the area (Daroma, Sartatane, Tinhabou) were also engaged in CBNRM and additional income-generating initiatives to support the process of reducing pressure on key elephant habitats.

In Y2 additional meetings were held with clans living in the vicinity of Lake Banzena during missions to assess water levels and livestock numbers. These meetings were used to continue discussions about pressures around the lake and possible solutions, including the need for water management and a well to be created in the Mayfata relocation zone (~20 km to the north-east) to help restore the pre-conflict situation (whereby the Banzena residents relocated from Banzena to an area with clean water and good pasture outside the elephant range) with a non-sabotageable water point.

Following highly localised rainfall between July and October that resulted in low water levels in Banzena but adjacent good pasture (it rained to the south of Banzena but not in its catchment, nor in the east of the elephant range), the project sent a mission to Banzena to evaluate the state of water resources. The conclusion was that water levels were very low and predicted to dry prematurely. At the same time there was good pasture to the south which was likely to attract herders usually using the east of the elephant range, as there had been little rain in these areas, putting even more pressure on water at Banzena. This information was used to write a red alert (Annex 7.3) to government.

On the basis of this report an emergency mission to Banzena at the beginning of November was facilitated by the project to demonstrate to government representatives the seriousness of the situation and afford local community members the opportunity to voice their concerns directly (Annex 7.4 – Photos of mission and report). The report of this mission included an analysis of the situation together with an immediate plan to ease the situation in 2018, and a longer term plan to solve the problem definitively (requiring 2-3 new wells and the rehabilitation of existing water-points) through combining CBNRM, a water strategy and the designation of Banzena as a core protected area within the new Biosphere Reserve.

As a result of this Tuareg clans came together and 278 community eco-guardians created 264 km of fire-breaks to protect pasture from bush fires in the areas surrounding Banzena. This helped mitigate the tension that was building between Tuareg clans as they had to focus on a crisis that affected them all but required them all to be able to manage.

This mission gave rise to a 3-day meeting, on the 21-23 December, of senior government officials and other stakeholders which included community representatives, DNEF officials, local authorities and technical advisers. The MEADD agreed to liberate the long-delayed funds for a well at Mayfata in the relocation area; however, works needed to start immediately for the well to be ready to relieve pressure on water availability by the end of the 2018 dry season and it would take several months for the government funds to become available. The project tried to raise a short-term loan from among its project partners, including the GEF, but none could act quickly apart from the project's long-term funding partner, the International Conservation Fund of Canada (ICFC), who provided the loan that enabled the works to begin immediately. Sweeping G5 anti-terrorism operations in 2018 in response to increasing insecurity however meant that work had to be suspended for months at a time and the well is today still under construction.

The revision of the legal text and boundaries of the partial reserve to establish a new Biosphere Reserve that includes the whole elephant migration route has continued sporadically throughout Y2 and 3 and the final text is now pending signature in Parliament. Under this model there will be 2-3 areas of strict protection (including Lake Banzena and its immediate surrounds as one of them), while the rest of the Reserve legislation will be that of the CBNRM conventions. This allows DNEF and government foresters to support local communities in the enforcement of their NRM conventions and provides a complement whereby the "top down" support of government facilitates the "bottom-up" community initiatives.

While waiting for the legislation to pass through parliament, a meeting was held with community leaders in the broader zone to inform them of the provision within the new legislation.

Output 2: Training provided to improve capacity in habitat protection, natural resource management and benefit sharing.

As explained in section 2, insecurity meant the project had to widen the target area to be able to work with accessible communities. As a result of this new approach, at least 3,859 people throughout the elephant range, including 129 women, [number of participants not recorded for some meetings] attended workshops on CBNRM from April 2016 to March 2019 (**Indicator 2.1**). All communities who received training using Darwin Initiative funding demonstrated change by taking active steps in the implementation of CBNRM systems in their areas through one or more of the following: attending workshops to discuss rules to be put in place; forming a management committee; mapping resources; delimiting protected zones; putting in place monitoring by ecoguards; finalising a commune/local convention. This output can therefore be said to have been achieved and the evidence is cited below.

In Y1 >245 people from the 8 worst performing communities in the north and centre of the elephant range (mainly in the Hombori, Gossi, Ouinerden and Inadiatafane poaching/conflict hotspots) attended >10 days of workshops. This included a 3-day meeting for 90 community leaders and representatives to discuss CBNRM and its relationship to the challenges in the area; 2 training workshops for the communities of Tara, Tinkaneye & Tintabakat (3 days, 46 participants) and Daka Kouko, Douni, Kigna, Daribangui and Fargabangou (4 days, 109 participants) to map resources, determine structures and rules of resource use; and a peace and reconciliation workshop in Gossi on the need to build community solidarity in the face of insecurity. In February 2017 additional training and support to form local CBNRM and habitat protection conventions was provided to the above-mentioned communities (Annex 7.5- Examples of community resource maps). In addition, 46 eco-guardians from the vicinity of these communities were also trained to take part in CBNRM and elephant monitoring activities.

In Y2 CBNRM initiatives were launched across six core communes across the elephant range (Korarou, Mondoro, Gandamia, Hombori, Dallah, Haire). This was part of the project's new landscape-scale approach to facilitating the implementation of elephant-centred CBNRM conventions starting at the whole-commune level instead of beginning with small clusters of engaged communities. The aim is to empower mayors to take responsibility for the organisation of CBNRM and to support and promote local leaders and CBNRM committees in the sustainable management of forest, pasture and water resources for the mutual benefit of people and elephants, and allow community conventions to enter directly into the commune social and economic development plans. The first step is a general assembly of community leaders which involves the drafting of a communal convention (Annex 7.6– Example

convention), followed by a tour through the commune to present the convention to local communities and gather feedback. This is integrated, discussed and validated at a second general assembly, at which target communities are selected to take the process forward at local level. The project's field team provide close guidance, mentoring, monitoring, training (e.g. fire-break creation) and the additional income generating activities that have proved popular since they were trialled in Y1 (Output 3).

A local CBNRM convention awareness tour of villages in Hombori commune was completed as a call for participation in the planning and implementation of local natural resource use laws in May 2017. In July, a series of general assemblies were held to facilitate open dialogue within and between communities towards planning local rules on natural resource use agreed by all and the prevention of habitat degradation. A total of 1,080 people from 16 communities took part in these general assemblies of which 11 were directly funded by DI. These included Banikane (45 people), Boula (79), Bounti (67), Kikara (95) in Gandamia commune; Wamdé-Rabéré (92) and Dougoussa (86) in Mondoro commune; Boumboum (69), Kelma (59), Kelmi (61); Darawal (68), Tondibongo (57) in Hombori commune. In December 2017, 2-day general assemblies were held in 4 communes, including Hombori attended by 73 community participants, to further develop the local convention rules and requirements. This was followed by a tour of the accessible/secure villages to increase awareness of the pending implementation of the conventions and to allow any concerns to be raised.

In Y3 training focused on the integration of existing CBNRM activities and the deployment of additional activities within the framework for the new communes approach initiated in Y2. 72 people from 17 communities in Gossi commune took part in meetings over a 2-day period to discuss the implementation of local conventions. This was followed by 3-day workshops attended by 226 people in Bambara-Maoude (55); Gossi (54) and Douentza (117) aimed at informing communities and discussing integration of existing activities within the new framework. Three 3-day CBNRM introduction workshops were also organised in Kikara (Gandamia, 76 ppl incl. 13 women), Dallah (Dallah, 84 ppl incl. 17 women) and Diona (Korarou, 55 ppl incl. 4 women) to increase mobilisation following awareness raising by ecoguards and demand from the communities. In communes engaged during Y1 and Y2, 7 communities received additional support (Oguy, Koyo in Haire; Diamaga Antoum, Torbani, Omga in Haire-Dallah; Kigna, Petten N'dotty in Hombori) for putting in place monitoring activities by ecoguards to prevent illegal tree-cutting, monitor elephants, and prevent HEC. In addition, 2 3-day workshops (attendance unknown) were organised in the commune of Ouinerden in the north of the range to discuss the implementation of a habitat monitoring in Tinarab and Takarkarat, and the implementation of a 10km long protected area from Intorchawène to Eférer.

Workshops/training for Banzena communities (**Indicator 2.2**) are discussed under Output 1.

Output 3. Women's associations created to manage and nurture NTFPs in the following key areas, thereby developing a model for sustainable revenue-generation from forest resources: Daroma/Sartatane/Tinabou; N'Gaw-N'gaw; Kobou; Tinarab; Dioulouna, Niangassadjou.

Y1 - 8 initiatives were established in the above-mentioned key areas from a baseline of 0. Number of participants and activities carried out are detailed in the table below. Although income-generating activities were originally developed to support women, the initiatives proved so successful that many men were keen to join and the project had to expand the scope of its activities accordingly.

Location	Main activity	Women			Men		
		Nb of participants	Nb of individual benefitting	Nb of HH benefitting	Nb of participants	Nb of individual benefitting	Nb of HH benefitting
Daroma	Sheep breeding	4	46	7	4	28	5
Sartatane	Sheep breeding	4	72	19	4	93	9
Niangassadjou	Sheep breeding	8	881	156	8	763	137
Dioulouna	Sheep breeding	8	980	202	8	881	122
Kobou	Sheep breeding	8	600	121	8	574	147
Sub-total 1		32	2,579	505	32	2,339	420
Assoc Tinabou	Sheep breeding	39	228	39			
Assoc Tinarab	Shop	64	238	64			
Assoc N'Gaw-N'Gaw	Vetiver plantation	25	119	25			
Sub-total 2		128	585	128			
Total		160	3,164	633			

Y1 involved preliminary meetings in August and September to discuss options for activities, provide training in technical aspects (e.g. harvesting of livestock fodder), financial management, record keeping and monitoring as well as equipment such as tools and enclosure materials. Community eco-guardians have supported the activities of the women's associations by assisting with manual labour and monitoring sustainable use zone.

An initial impact assessment was conducted in Y2 which showed very promising results with substantial increases in cash (see section 3.2). In addition, each promoter in turn raises awareness about habitat protection among family and community members, mobilises them to conduct activities that support these initiatives, and encourages the creation of new income-generating activities, so the benefits stretch much further than the individual household. The 32 individual women mobilised a total of 2,579 individuals equivalent to 505 households, and the 3 women associations mobilised 585 individuals equivalent to 128 households. Other income-generating initiatives have since sprung up, motivated by the results of the first ones. In Wami-(Hombori) and Falembougou (Dangol-Bore) two women's associations are now experimenting with chili plantations as a means to deter elephants and reduce human-elephant conflicts.

Some associations and communities engaged in income-generating activities received additional training in Y3 during five 3-day workshops. The focus of the workshops was to discuss the steps involved in the creation and implementation of income-generating activities (IGA) namely: i) What is an IGA; ii) Identifying an IGA; iii) Feasibility and choice of IGA; iv) Planning of IGA-related activities; v) Implementation of activities; vi) Monitoring and evaluation. A total of 378 people including 222 women attended these workshops. These included 88 people from N'Gaw-N'Gaw in Korarou; 79 women from Daka-Kouko women's association in Hombori; 68 people from Sartatane in Bambara-Maoudé; 76 women from Kazey-Kazey women's association in Inadiatafane and 67 women from Boré women's association in Dangol-Boré.

Overall the results from income-generating activities have been very positive (see section 3.2) and there is a high demand from communities in the elephant range to expand the scope of these initiatives. The only limiting factor has been the pervading insecurity which has prevented the field team from travelling to carry out workshops and follow-up impact assessment of existing initiatives.

Output 4: Habitat, biodiversity loss and degradation halted and reversed in 1 test site. Elephant loss reversed in the whole range.

W-transect were conducted in two test sites to assess the effect of CBNRM on tree cutting and bird abundance (Annex 7.7- Example of W transect survey). Four sites, including two control sites, had originally been planned but insecurity had rendered two of them inaccessible. The team was eventually able to conduct and repeat the W-transects at Inani and N'Gaw-N'Gaw. At the time of the first W-transect there was no CBNRM in place at Inani whereas ecoguards were actively engaged in N'Gaw-N'Gaw. CBNRM has since been implemented at Inani and results show a clear decrease in the number of cut trees/km from 2,028 in 2017 to 0 in 2019, although

the surveyors noted that many trees that had been cut in 2017 had not yet had the time to regenerate. The surveyors also noted a particularly high amount of water in the area in 2019, which would explain the increase in the number of birds/km from 209 to 310. Although these results need to be confirmed with repeated surveys in other sites, they suggest the positive impact of CBNRM as a powerful tool to reverse habitat degradation and biodiversity loss.

The increase in the number of cut trees/km in N'Gaw-N'Gaw from 1 to 30.43 reflect the difficulty the ecoguards have had to patrol the area, heavily infested by armed groups who may also have cut trees for their own use. The relatively low number of birds -which otherwise remained stable - compared to Inani both in 2017 and 2019 is thought to be due to a nearby source of water at Inani.

Location	Year	Length of W transect (km)	# Cut Trees	Cut trees/km	# Birds	Birds/km
Inani	2017	0.8	1,622	2,028	167	209
N'Gaw-N'Gaw	2017	0.69	1	1	105	152
Inani	2019	0.8	0	0	248	310
N'Gaw-N'Gaw	2019	0.69	21	30.43	106	154

Elephant monitoring remains a core activity of community ecoguards and an integral part of CBNRM. This has enabled the field team to keep track of elephant movements.

Output 5: Research outputs developed and shared with target audiences

Frequent briefing reports and updates have been produced for government and partners, most notably:

- A red alert on the critical situation faced by the Gourma elephants, which resulted in a Presidential Directive to government;
- A budgeted and programmed 5-year Elephant Action plan leading to Mali becoming a signatory to the Elephant Protection Initiative;
- A draft of the FAMa-DNEF protocol leading to the signature of a tripartite protocole in 2017
- A briefing concerning the review of the elephant reserve legislation

(See Annex 7.8 for a full list of publications including briefings/reports)

Following the recent presidential elections and the appointment of a new cabinet the representative of the WILD Foundation in Mali attended a private audience with the new Minister for the environment where he briefed him on the MEP's work in the Gourma. During that meeting the Minister voiced his support for the project stating that indeed the issues facing the country today, including interethnic violence, were rooted in environmental degradation and a lack of adequate resource management.

Below is a summary of selected outputs by the project (see Annex 7.8 for the full list):

- 16 blog updates have been published on the project website (https://www.wild.org/mali-elephants/blog/) and shared via quarterly newsletters;
- 3 newsletters on third party websites;
- 6 media articles, in addition to several newspaper articles in Mali;
- 1 educational video with Oxford Sparks;
- 2 journal articles submitted and/or published;
- 2 book chapters;
- 20 presentations in the UK
- 5 presentations in Mali

3.2   Outcome

Intended outcome: Deeper deployment of locally adapted sustainable resource management that protects habitats, elephant and biodiversity, enhances local livelihoods and wellbeing.

Indicator 1 - As explained in section 2 the project has revised its approach to delivering CBNRM. This is an adaptation to the worsening security situation (Assumption 1) which requires a much more rapid delivery of these activities to counter increasing social tensions. It also means that the field team does not need to travel so much and increases the sustainability of the initiative through engaging the Mayor's office at commune level, and allowing community conventions to enter directly into the commune social and economic development plans. 9 commune conventions have been agreed and are now being implemented across the elephant range (Annex 7.6- Example convention), demonstrating the engagement of both the Mayors and the communities (Assumption 1). These conventions engage a total of 224 villages/settlements and thus benefit directly to approximately 159,625 people (2009census).

Conventions	#villages/settlements officially adhering*	Ttl Inhabitants (2009 census)
Bambara-Maoudé	42	16,485
Dallah	12	8,103
Gandamia	8	5,961
Gossi	60	24,065
Haire	32	30,008
Hombori	22	23,103
Inadiatafane	17	3,557
Korarou	8	3,449
Mondoro	23	42,194
TOTAL	**224**	**156,925**

* villages with local conventions integrated to the commune conventions

At least 3,859 people have been engaged in CBNRM such as meetings and workshops, habitat monitoring/ protection, resource mapping, the elaboration of local and communal conventions, and the identification of protected areas. The 673 registered ecoguards have been engaged in elephant monitoring, awareness raising, training, habitat, livestock, wildlife and vegetation monitoring/surveying; data collection (GPS readings and photos) and firebreak creation. An additional 628 people helped the ecoguards creating firebreaks during the last dry season (2018-2019) bringing the total number of people engaged in this activity alone to 1,301, thus demonstrating their support to CBNRM (see indicator 3 below and Annex 7.9- List of firebreaks/protection perimeters 2018-19). An additional 1,201 people (including 798 women) have participated in income-generating activities including meetings, training workshops, and implementation.

Indicator 2 - Income-generating activities initiated during the first phase of implementation in 2016 by three women's associations in Tinabou, Tinarab and N'Gaw-N'Gaw as well as individual women in Daroma, Sartatane, Niangassadjou, Dioulouna and Kobou showed great progress and all participants decided to pursue their activities. A total of 160 women were engaged, either as individuals (32 individual women) or as part of an association (128 women) in activities ranging from livestock fattening schemes to Vetiver plantation (a useful but scarce and overexploited plant. See Annex 7.10- Photos) and the establishment of a small shop for essentials. Many of these initiatives also include side activities such as the production and sale of Gum Arabic and local handicraft. An impact evaluation at the start of 2018 showed very promising results: individual women participants to the livestock fattening initiative saw their livestock increase in price by 42% on average, equating to an average of $76 return per person after loan repayment equivalent to a 458 % increase in cash on average. The Tinarab women's association engaged in a livestock fattening scheme made $2,491 in profit and $1,125 for the shop in Tinabou.

Indicator 3 – As a result of the communities' continued engagement in CBNRM (Assumption 1) habitat degradation has been halted as conventions are progressively being put in place, protected areas identified, and people witness the results of CBNRM on their livelihoods providing them with incentive to engage. A perfect example of this is drastic reduction in the

number of wild fires which usually consume vast areas of pasture during the dry season. According to communities 10-20 wild fires usually break out each year in a single area destroying all pasture by January-February. In contrast, during the latest 2018-19 dry season a single wild fire – in the area of Inadiatafane – broke out and it was quickly put out by the ecoguards thanks to the network of firebreaks already created. Firebreaks also represent a means to raise awareness among herders coming from the outside who are often to blame for wild fires: *"Thanks to the firebreaks we have areas where we can rest and make tea without risking to cause a wild fire."*

2018-2019 alone saw the creation of 24 protection perimeters to protect 34,801 ha of pastures (Annex 7.9- List of firebreaks/protection perimeters). These were identified with a GPS and vegetation surveys were conducted leading to the identification of 18 species of plants with nutritional, medicinal, or cultural value (Annex 7.11- Vegetation survey report). Cultivation of Gum Arabic has also been initiated in some of them. In addition, 20 waterholes and thickets have been identified and are subject to total or partial protection (meaning some activity is allowed, e.g. livestock is allowed to graze) to increase production and fodder reserves at the end of the hungry gap period, and will be categorised as such under local conventions in 2019 (Annex 7.12- List of protected areas identified in 2018). These are important areas for fauna and flora but are unfortunately subject to important human pressure, so increasing the number of such protected areas remains a priority. In these areas, communities themselves elaborate rules to restrict hunting, tree cutting, anarchic use of waterholes and forests used by elephants, and organise monitoring by ecoguards in collaboration with the mayor's office to enforce these rules. In areas where monitoring is most effective and consensus around the rules is highest, ecoguards and herders have reported an increase in the number of wildlife species, particularly gazelles.

Indicator 4 – Elephant poaching has been reduced as detailed under section 3.3.

3.3   Impact: achievement of positive impact on biodiversity and poverty alleviation

<u>Impact:</u> **Social and environmental resilience is restored to the Gourma region, through wise resource management that protects elephants, habitats, biodiversity and human livelihoods, enabling peaceful co-existence with humans for mutual benefits.**

Preliminary results demonstrate that wise resource management strongly prevents forest and pasture degradation, and contributes to the protection of wildlife species (Outcome indicator 3, section 3.2 and Output 4, section 3.1).

Livelihoods initiatives implemented and evaluated have so far contributed to a substantial increase in cash (section 3.2), and importantly a change in attitude about keeping large flocks:

« Avec ce projet, j'ai compris qu'il ne sert à rien d'avoir des milliers de têtes de cheptel. Il suffit seulement d'avoir quelques têtes de bonnes races, bien nourries quelques mois, tu as de quoi nourrir ta famille et subvenir à d'autres besoins. Que cherche une femme que cela. Dieu merci ».

"With this project, I realized that there is no point in having thousands of heads of livestock. You only need to have a few good breeds, feed a few months, you have enough to feed your family and meet other needs. What else does a woman look for? Thank God

These initiatives also engaged an additional 3,164 people in habitat protection to support these initiatives contributing to social cohesion.

Impact on poverty alleviation is covered in more detail in section 4.3 below.

Ecoguards have been particularly engaged in the prevention of human-elephant conflicts which has led to a decrease in the number of incidents at the hotspot of Wami-Masi from 5/year to zero.

4   Contribution to Darwin Initiative Programme Objectives

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4.1 Contribution to Global Goals for Sustainable Development (SDGs)

The project's work in promoting sustainable resource management and revenue generation benefits all parts of the community and contributes directly to goals 1, 2, 12, 15, and 16. Making more resources available that are of better quality improves the livelihoods of these subsistence populations and reduces their food insecurity, while the revenue generation activities provide income, thereby contributing to reducing poverty and increasing food security within environmental limits. Not only do these practices not cause environmental degradation (see data on biodiversity and forest destruction) but they promote ecosystem restoration thereby combating desertification, land degradation (see data on CBNRM and alternative livelihood impacts in previous section) and biodiversity loss (see data in previous section). This also contributes to improving resilience against climate change (goal 13). This model of sustainable resource management requires all parts of the community to be represented in coming together and a unity created through agreeing a common perception of the problems they face. Once this is agreed, solutions can be discussed. Transparent and accountable community structures are then created to determine and enforce rules of resource use, and the distribution of benefits, thereby promoting social cohesion (goal 16) as at Banzena in tackling a commonly shared problem. As one eco-guard said *"when you eat around a fire after a day of working together building fire-breaks, you realise we all have the same problems".*

Project activities contribute to goal 4 in providing training where necessary e.g. in book-keeping, project management, and technical aspects of resource management; and to goal 5 in supporting the women in creating associations for revenue generation activities. Helping the Banzena communities relocate to an area of good pasture and clean water outside the elephant range ensure availability and sustainable water management and reduction in water-borne disease for these communities (730 people in 2010) as evidenced pre-conflict, supports goal 6, as does the management of the use of water resources as part of the sustainable resource management plans. Providing the youth with an occupation as eco-guardians contributes to goal 8, as well as contributing to goal 16 in preventing radicalisation and taking up arms (MoV local community quotes). Empowering local communities to regulate the impact of commercial herds belonging to wealthy individuals and interests from urban centres support goal 10, although this has become more difficult since the conflict.

4.2 Project support to the Conventions or Treaties (CBD, CITES, Nagoya Protocol, ITPGRFA)

The Gourma is mentioned in the National Biodiversity Strategy (adopted in 2001) as one of the four natural regions of highest biodiversity value in Mali, and this project addresses four of its five specific programmes of work. It also addresses the key stated challenge (in the fourth and fifth national reports published in 2009 and 2014) of taking into account land-use rights of local communities. The project is supporting the implementation of the three main objectives of the CBD by conserving biodiversity (community vigilance and anti-poaching unit patrols and habitat protection initiatives); sustainable use (community based NRM, and habitat regeneration for fuel, pasture, and NTFPs); and equitable benefit-sharing (transparent consensus-based community structures).

The project directly contributes to helping Mali achieve Aichi targets 1, 2, 4, 5, 7, 11, 12, 14, 15, and 18. It will achieve targets 1,2 and 4 through the tangible model of resource management that delivers benefits to local communities and national government, as well as using these results in outreach and awareness activities internationally. The project is contributing to target 5 through preventing habitat degradation, ensuring the protection of forests, lakes and pasture, and promoting habitat restoration, and to target 7 through community-devised local and inter-communal conventions enshrining sustainable resource use that prevents degradation, for example by banning practices such as abusive tree cutting, and tightly regulating resource extraction and hunting. It supports target 11 through its work in re-drafting the text of the protected area and in the creation of community protected areas, thereby contributing to the global 17% targets for terrestrial protected systems. Target 12 is supported through the prevention from extirpation of this unique elephant population, which nurtures biodiversity through its role as an umbrella and keystone species. By restoring ecosystems and preventing

degradation the project improves the lives and livelihoods of local people including the provision of clean water for the communities of the Banzena area, which meant that the incidence of water-borne disease dropped dramatically, and target 14 is supported. The project is preventing forest clearance, annual burning of pasture, habitat degradation, thereby contributing to target 15; and target 18 is fulfilled because the project is founded on the effective participation of local communities and their traditional systems of resource management, which are then built on and developed to meet new challenges.

The project's work contributes to CBD Programme of work elements through integrating its community grass-roots approach with support to government frameworks so that the two mutually reinforce each other, as for example in the re-designation of the existing protected area to better serve the purposes of elephant and biodiversity conservation, and be part of integrated landscape planning and management. This will reduce the threats to any protected areas and the input required for enforcement. It promotes element 2 by supporting benefit-sharing and equity and involving the local communities in management while building capacity within government through developing a model and involving the government in the steps required (element 3). The project is also active in establishing monitoring systems to be able to scientifically assess the results of this work

The project contributes to Mali's obligations under the Convention on Migratory Species (CMS). The African elephant is listed in Appendix Two of the CMS and the West African elephant population is the subject of a MoU.

The CBD/CITES focal point lies within DNEF and is therefore involved with all activities where appropriate, as for example, in attending the high-level workshop convened by the Minister on an action plan for elephants and the Gourma.

4.3 Project support to poverty alleviation

"Ce projet est un projet des pauvres. Ce projet ne convoque pas les gens, ils viennent vous trouver chez vous. »

"This project is a project of the poor. This project does not summon people, they come to find you at home." (Bachba Dicko, born around 1960 à Bambara-Maoudé)

The project addresses multiple facets of poverty by:

- ***Promoting a safe environment:*** Ecoguards are also directly contributing to a safer environment for all by working to reduce human-elephant conflict in hotspot areas, as demonstrated by the case of Wami-Massi.

- ***Encouraging inclusive and participatory governance systems*** across the communes of the elephant range: The project empowers communities, elected and traditional representatives to take responsibility for the management of their natural environment through the establishment of local and commune-wide conventions agreed by all.

- ***Improving food security*** through increased availability of natural resources (pasture, water, NTFP) resulting from CBNRM (see sections 3.1 and 3.2). This in turns decreases competition for scarce resources which promotes social resilience.

- ***Contributing to increased income for participants to income-generating activities*** (Outcome Indicator 2). Following the first phase of implementation in which 160 women and 32 men participated, demand for additional income-generating activities has been growing resulting in the development of 20 additional natural-resource based initiatives in 2018. Therefore, the number of direct beneficiaries is likely to be much higher, but insecurity has so far prevented the project staff from carrying out impact evaluation surveys as planned.

  Brief household/poverty scorecard surveys were trialled in in April-May 2017 with the aim of putting these initial results in context. Of the 38 households interviewed, 52% were assessed to have a poverty likelihood score ≥ 94% (i.e. the likelihood of being below the national poverty line), and 45% of households had likelihood scores between 81-89%. Only 3% of the sampled households presented lower likelihood scores of 21%. (Annex 7.13– Example scorecard survey). During these surveys there was doubt as to the degree to which they were adapted to local perceptions and so a poverty perception survey was

conducted in 9 core communes of the elephant range in early 2018 which confirmed the results of the scorecard surveys: based on responses from 420 respondents, 64% of them perceived 91-100% of their respective community members to be poor (74% perceived ≥61% of their respective community members to be poor).

4.4   Gender equality

The project's revenue generation activities are conducted by working with women individually and through forming women's associations. This improves gender equity by providing the women with economic power and allowing them to demonstrate the superior income potential of these systems to others. A notable result was the difference in returns between the women and the men ($76 average per woman and $44 average per man).

The following quotes from two of the participants bear witness to the impact in terms of redressing gender inequality:

"If this project continues, we women, we can sit together with men to talk about serious things that concern women and men." (Participant from Niangassadiou)

"Men think they are the only ones to be able to manage. This project which lets us do what we know how to do and to show men that women are as capable of good management of their business, and moreover even better than men." (Participant from Dioulouna)

4.5   Programme indicators

- **Did the project lead to greater representation of local poor people in management structures of biodiversity?**

Local representation is embedded in the project's communes approach to CBNRM, in which communities take part in general assemblies and form management committees to discuss and decide rules of natural resource management (see sections 2, 3.1 and 3.2).

- **Were any management plans for biodiversity developed and were these formally accepted?**

A total of 224 local conventions and 9 commune conventions have been finalised over the course of the project period. In addition, the legislation on the revision of the Partial Elephant Reserve into a larger Biosphere Reserve which encompasses the whole of the elephant migration route is currently under review for signature.

- **Were they participatory in nature or were they 'top-down'? How well represented are the local poor including women, in any proposed management structures?**

Local and commune convention are bottom-up processes by definition. The project never imposes any rules on the communities, it only offers technical and material support if necessary. Although the institutions of society is male-dominated in the Gourma, women have influence and their own representatives participate in meetings and assemblies. The development of income-generating activities that target women strongly amplifies their role, allowing them to direct and provide strong support for natural resource management in a quiet but powerful way, and engage others to protect resources that support their activities (see sections 3.1 and 3.2).

- **How did the project positively influence household (HH) income and how many HHs saw an increase?**

At least 160 women, representing as many households, have seen an increase in income as a result of income-generating activities. An additional 505 households benefitted from women-targeted initiatives as they were engaged in the protection of natural resources to support these activities. However, this is likely to represent an underestimate as more income-generating activities have developed since, but insecurity has made it impossible to carry out an assessment.

The 673 ecoguards also received support from the project which contributes to a more stable income for them and their families.

- **How much did their HH income increase (e.g. x% above baseline, x% above national average)? How was this measured?**

The income of individual women taking part in livestock fattening scheme rose by 458%. This was measured based on (their initial savings + the contribution they received from the project + actual value of livestock when sold) – actual value of livestock when purchased = net savings.

4.6 Transfer of knowledge

The project works in close partnership with the Malian government, particularly the ministries of environment and defence and provides as much support as possible to these institutions in the form of knowledge and capacity building as exemplified by the list of briefings/reports which have on more than one occasion led to meaningful policies and legislation proposals (see Output 5, section 3.1 and Annex 7.8). The project director also takes part at all major national and international conferences to give presentations (Output 5, section 3.1 and Annex 7.8).

4.7 Capacity building

A female representative from DNEF accompanied the Project's Field Manager to New York to accept the 2017 Equator Prize given to the Project. Her photograph was subsequently one of three displayed in Times Square to mark the International Day of Women.

DNEF has been invited to several international conferences as a result of the GEF project that was devised to specifically support elephant conservation in the Gourma and would not have occurred without the Mali Elephant Project. The representative was male.

Due to the leadership of the Project, Mali has joined the Elephant Protection Initiative.

5 Sustainability and Legacy

The project enjoys high profile in Mali, within the government and certain embassies. Because the project works closely with government the Minister is well briefed by the project's advisor on government relations, and the Head of the Armed Forces by the project's advisor on security and enforcement. The project provides a high level of technical support to the MEADD and DNEF in planning and management; and is leading the process to find a solution for Banzena, including organising high-level visits and workshops, writing reports, proposing solutions and lobbying for government investment to support those solutions.

In 2017 under the project's instigation, Mali became a member of the Elephant Protection Initiative; it has revised the text and redrawn the boundaries for the elephant reserve so that it covers the whole of the elephant range, thereby increasing Mali's protected area coverage by around 26% raising the percentage of protected coverage from 7.27% to 9.21% of Mali's surface area. A biosphere reserve model was chosen and the MEP will be responsible for the community engagement required to agree the boundaries of core protected areas and develop participatory strategies for their implementation. This legislation will allow government foresters to support local communities in enforcing their conventions which, although enacted in law under decentralisation legislation, have no government enforcement body.

The project will accompany local communities across the elephant range and its immediate hinterland in establishing CBNRM systems until the benefits are evident and the practices become habitual. The EU funding agreement which has now been signed and is about to start will ensure support for the next 5 years, possibly longer.

6 Lessons learned

It is hoped that lessons learned are contained throughout this report. The only way the project has been able to survive is to continually monitor the relationship between its activities and the

context and modify activities to adapt to a changing context. While activities such as the collection of monitoring data have become more challenging, the development of the commune approach to delivering CBNRM is a potentially more efficient and represents a sustainable solution.

With hindsight, it would have been better to focus this project solely on the work with the women's associations, but in such an unpredictable environment it was completely unknown the degree to which this work was possible, and so other activities were included as part of the project in case the women's associations initiative didn't work. This has complicated the monitoring and financial management because we included many activities, co-funded with other donors and had to report on all of them, while dividing out which was funded by which donor. The project's approach is simple in concept but complex in terms of project administration given the uncertainties involved with an approach that is community-led and adapting to an environment where the security situation is ever changing; as, for example, the need to target activities in a new area of human-elephant conflict because elephants have changed their distribution to cope with changing security. Security also makes some areas suddenly inaccessible and communities in pastoral areas are much less populous than those in the agricultural areas of the south, making numbers of people targeted difficult to estimate.

An important lesson has been in trying to establish monitoring systems when it is not possible to deliver ongoing training in the field, in particular to ensure consistent data entry into monitoring datasheets, which has sometimes made it difficult to quantify the impact or success of certain activities. This is an aspect of the project that was prioritized for improvement to complement the field team's sound understanding of what actions benefit the elephants and the communities the most effectively. The project therefore recruited a monitoring officer to this effect whose task was to ensure that key databases are maintained and kept up to date. Unfortunately, the person employed did not perform as intended and the other personnel tried to take on these tasks, however it is clear that a full-time person is needed. The project is seeking a replacement, although it is proving difficult given that it requires someone who understands the milieu and is ready to work in an insecure environment.

The MEP's approach has to be holistic as the elephants need the whole of their range to survive. Acting in one area or on one aspect of the problem will not work as the problem comes from a nexus of issues. It is therefore necessarily complex and has to address multiple perspectives and disciplines (ecology, sociology, political ecology, economics, behavioural ecology of people and elephants! philosophy and values etc.), and design activities that are mutually supportive. It is always a challenge to fit an adaptive management approach into a conventional administrative framework.

One problem in trying to operate in such an unpredictable context is that opportunities and crises present themselves out of the blue. Big gains could be had if the project were able to respond but it is very difficult to obtain this kind of flexible funding that is not earmarked in advance.

The fact that the project is still in operation today and achieving results given what has happened in the elephant range is a testament to the power of adaptive management, and a superb field team, to help the elephants and people of the Gourma.

6.1   Monitoring and evaluation

The deterioration in security over the course of the project period and changeable circumstances in the Gourma region have posed a problem for data collection and monitoring as every activity requires additional resources of time, expense and logistics. Biodiversity monitoring became particularly difficult towards the end of year 2 as the road to the study area became dangerous. The project therefore had to review its logframe, the last version of which was approved in February 2019.

Major approved changes are listed below:

- The original outcome which included a "*focus on four critical zones in the Malian Gourma*" was changed to reflect changes to focus areas for interventions as a result of the security situation. The project had initially been thought to target four zones at high risk of poaching, however insecurity meant that some of these zones, in particular Kazey-Kazey, had

become inaccessible. It therefore became necessary to shift to a communes-approach that allowed for more rapid deployment of CBNRM simultaneously across the elephant range, and permitted greater sustainability, targeting communities that could be accessed.

- The changing nature of the security situation also affected some outcome and output indicators as original targets could not realistically be maintained. Not all of the 52 target communities identified for the original outcome indicator 1 could necessarily be accessed when required for reporting purposes, and the project had to work with communities that could be accessed. For instance, many of the original target communities are agriculturalists living in relatively larger communities, whereas many of the areas the project has been able to access are sparsely populated by pastoralist communities living in smaller communities. This also affected output indicator 2.1 and output 3 which originally also focused on particular areas for intervention.

- Outcome indicator 2 (*Pre-conflict situation re-established at Lake Banzena by April 2019*) could no longer be maintained. Deteriorating security in the Banzena area due to shifting alliances between clans and ethnic groups, together with the project team needing to focus effort on ensuring the correct functioning of the anti-poaching unit during its stabilization phase, meant that this activity has suffered severe delays. The construction of a well in the relocation area is a fundamental requirement before any of the Banzena communities can move there and as explained in section 3.1 the work is still in progress. These delays also meant that there wasn't going to be enough time to register the impact of reduced cattle numbers until after the project finishes, although the project continues to monitor the situation at the lake as measured by annual in-depth reports.

- The deteriorating security meant that outcome indicators 4 (*Forest degradation and loss halted, at four key zones by 2017*) and 7 (*Biodiversity monitoring established in 4 key zones and controls to measure impact of CBNRM systems*), and output 4 also had to be revised as 3 of the sites became inaccessible. Although the modification appears a reduction in ambition, it represents an equal amount of time, resources and effort, reflecting the impact of the insecurity and the resultant additional burden on project operations. The original means of measuring biodiversity was to look at insect diversity using sticky traps as these could be photographed and therefore used by people with no skill in taxonomy and who were illiterate. Unfortunately, these traps also trapped birds and so the only indicator of biodiversity became bird abundance.

Regarding the M&E system, these aspects have been covered in section 6 above.

The project performs continual internal evaluations as part of its modus operandi to enable it to correctly target its interventions and adapt activities to the context.

6.2 Actions taken in response to annual report reviews

The project has followed the reviewer's advice in updating the log-frame. Some of the issues raised in the last change request needed further clarification and were subsequently discussed over the phone when it became clear that the change requests made by the project were reasonable and only reflected a need to adapt to an unpredictable situation. The changes were all thought out carefully after in-depth discussions within the UK team and with the field manager regarding what activities could realistically be implemented or not.

Comments made in the last annual review and to be addressed in the final reports are addressed below:

1. *"It would be useful if the project could clearly attribute in its logframe where it has had to use additional funds to support activities covered under this DI programme (if at all), and if these were planned shared costs or if activities/ situations changed and the project acted to secure and attain funds for activities to continue".*

    See logframe.

2. *"It would be useful if the project could provide further evidence in the next report as to how the revised CBNRM approach is functioning on the ground".*

Evidence is provided under section 3.2 and Appendix X.

3. *'It would have been better to focus this project solely on the work with the women's associations, but in such an unpredictable environment it was completely unknown the degree to which this work was possible, and so other activities were included as part of the project in case the women's associations initiative didn't work' also 'this has complicated the monitoring and financial management'. This is an interesting observation that would be beneficial to explore in the project's final report.*

See section 6.

4. *Poverty alleviation - It would be useful if the project could report on the results of this [poverty perception survey], as well as the factors behind rolling out this trial survey or changing the approach etc. Also, the project has been able to demonstrate figures for household income increases, which is a notable achievement. Is the project able to identify indicators of poverty that match international standards (e.g. World Bank Multidimensional Poverty Indicators) to enhance reporting levels?*

Results from perception surveys are described in section 4.3. The poverty scorecard survey conducted in 2017 is based on a national survey (Schreiner, 2008, *A Simple Poverty Scorecard for Mali*) and aims to assess poverty according to the accepted national poverty line (it also enables comparison with two more measure including the USAID extreme poverty line). It includes two set of questions: the first set of questions is common to all participants and enables comparison at the national level while the second section can be adapted with questions that suit the local context. Based on the 2017 trials and input from the field team the project is now in the process of elaborating a standard scorecard survey to be repeated each year.

5. *The project has been testing the viability of drones and VHR imagery. The project should report on the outcome of these tests and the methods chosen for monitoring in its next AR.*

This activity was subsequently taken out of the logframe because the anti-poaching unit (who were due to be performing the camera drone surveys) were rotated out and a new inexperienced team rotated in at the very time the surveys needed to be done (when elephants were concentrated around just a few water-holes). The new unit did not have the expertise to perform these surveys, so the baselines were not done. The project is investigating remotely sensed ways of measuring this through 2 potential collaborations both of whom are working with satellite imagery to detect large mammals; however it will take some more time before results become available.

7 Darwin identity

The Darwin Initiative funding forms part of a larger programme but the alternative livelihoods initiative is the activity that has been particularly associated with the Darwin Initiative. The project uses the Darwin Initiative logo on all presentations, videos (https://www.oxfordsparks.ox.ac.uk/content/protecting-elephants-protecting-humans) and communications where relevant, next to the UK Aid logo (which is more recognizable in Mali), with a hyperlink to a page on the WILD Foundation website where it is listed as a major donor/partner. The project requests this acknowledgement in all media pieces although this is not always respected. The project also employs a part-time dedicated media person who is responsible for the project's online presence and the updating of its Twitter page (https://twitter.com/MaliEleProject) where support from the Darwin Initiative is acknowledged. An Instagram account has also just been created.

The Malian government and project partners are aware of the UK Government's contribution to the project, thanks to the support of the British Embassy in Mali.

8 Finance and administration

8.1 Project expenditure

Project spend (indicative) since last annual report	2018/19 Grant (£)	2018/19 Total actual Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)			0	
Consultancy costs			0	
Overhead Costs			0	
Travel and subsistence			0	
Operating Costs			0	
Capital items (see below)			0	
Others (see below)			0	
Monitoring & Evaluation			0	
TOTAL			**0**	

Staff employed (Name and position)	Cost (£)
Mali Field Manager	
Mali Bookkeeper & Facilitator	
Mali Administrator, IT & Facilitator	
Mali Project Extension Worker	
Mali Communication Officer	
Mali Driver	
Mali Office Guardian	
Special Advisor to the MEEAD	
TOTAL	

Capital items – description	Capital items – cost (£)
TOTAL	

Other items – description	Other items – cost (£)

TOTAL	

8.2 Additional funds or in-kind contributions secured

Source of funding for project lifetime	Total (£)
IWT Challenge Fund Round 3	
USFS	
African Elephant Fund	
USFWS	
UNICRI	
ECF	
ICFC	
MINUSMA	
TOTAL	

Note: This total funding was for all the activities conducted by the Mali Elephant Project, not just those related to this grant. It contributed to:
- *the support provided to the anti-poaching unit (in the forms of danger money, equipment, vehicles, motorbikes, fuel and maintenance costs associated to these and to 5 military armoured vehicles);*
- *the costs of anti-poaching training sessions for 95 men throughout the grant performance period;*
- *and the purchase and shipping of a surveillance aircraft with accessories.*

Source of funding for additional work after project lifetime	Total (£)
EU (EUR 3,000,000 to MEP for community work over 4 years plus to costs of APU trainers for 2 years)	
GEF-UNDP IWT grant MEP receives $695,733 for APU training and $900,000 for community work over 5 years (of a total of $4,316,055)	
International Conservation Fund of Canada (approx. $200,000/year for core-funding, support to the creation of a new protected area covering the entire elephant range and CBNRM)	
IWT Challenge Fund round 4 (grant remaining)	
TUSK	
TOTAL	

8.3 Value for Money

Because the MEP's methods are largely about the "soft technology" of stakeholder engagement and empowerment, whether it be local communities or the government, it means that most resources are invested in personnel and the costs of meetings, workshops, training sessions, their conception and organisation. These are all cost-effective high-impact solutions which make the project extremely good value for money. More specifically:

- The project's systemic approach and shared vision mean that every action has multiple impacts and contributes to several goals compared to a more sector-based vision. The links reinforce each other so that the combined impact is much greater than the sum of a series of individual impacts.

- The systemic vision allows for creative solutions through finding alternative pathways to tackle apparently intractable problems.

- The project has been able to engage many communities and help them find solutions by unifying their diverse clans and ethnicities around a common perspective. Through discussion and workshops, they arrive at a common understanding of how their challenges and those of the elephants are linked together and relate to social, political and environmental factors. Once this unified perception is arrived at, the communities are empowered to find solutions, rather than accept solutions and processes determined by the project. They therefore take ownership. This makes it difficult to predict exactly what will happen, and how, but it means that the end result is adapted to local conditions and more resilient to social and environmental impacts.

- The approach combines local bottom-up action with government top-down support and creates a mutually beneficial synergy between the two. Everyone gains. The communes approach also reinforces existing Malian decentralisation legislation, making it more sustainable.

- The approach is rooted in local systems that it helps develop further. This aids take-up.

- Elephants provide a key unifying factor on which to attach sustainable resource management (reconciliation and the rebuilding of social cohesion is another) because this aim provides a common vision that applies to all (rich and poor, powerful and powerless alike) and is agreed by all. CBNRM is then a tool to achieve this vision. It harnesses the power of all types of value, not just monetary.

Annex 1 Project's original (or most recently approved) logframe, including indicators, means of verification and assumptions.

Note: Insert your full logframe. If your logframe was changed since your Stage 2 application and was approved by a Change Request the newest approved version should be inserted here, otherwise insert the Stage 2 logframe.

Revised logframe approved February 2019

Project summary	Measurable Indicators	Means of verification	Important Assumptions
Impact: (Max 30 words) Social and environmental resilience is restored to the Gourma region, through wise resource management that protects elephants, habitats, biodiversity and human livelihoods, enabling peaceful co-existence with humans for mutual benefit.			
Outcome: Deeper deployment of locally adapted sustainable resource management that protects habitats, elephants and biodiversity, enhances local livelihoods and well-being.	1 The relative progress in CBNRM will be measured by the number of people (disaggregated by gender where these data are available) (baseline=0, target=1,500) and households (where data is available) engaged in CBNRM related activities across the elephant range, by end of project. 2 By the end of project 75% of 100 women engaged in income-generating activities (baseline = 0) that have been evaluated have seen their poverty reduced through the establishment of a model of revenue generation from wise use of natural resources from protected and sustainably managed forests and pasture reserves as measured by an increase in income generated by these activities. 3 By April 2019 natural resource degradation and loss halted as measured by the number of wild fires reported/season (baseline = 20; target = 10), number of community protected areas created throughout the elephant range (baseline =0; target = 10)Crop destruction at the human-elephant conflict hotspot of Wami-Masi reduced to zero from a baseline of 5 incidents/year at start of project 4 Reduced elephant poaching by 75% by end of project. Baseline = 76 killed/year	1 Project database, reports and maps showing the location of CBNRM activities in relation to the elephant migration route 2 Revenue records held by associations; brief household surveys. 3 Project reports on nb of wild fires and nb of protected areas created, local conventions, photos. Project reports based on data collected by community eco-guardians. 4 Number of elephants illegally killed as registered by community eco-guardians and DNEF records.	The security situation does not deteriorate and allows the free movement of project staff and local people as well as the use of cameras and GPS without fear of attack and robbery. The mayors and communities are responsive and demonstrate a willingness to engage in the new "communes approach", enabling the deployment of CBNRM activities despite a difficult security situation. Hypothesis to test: • Legislation provides added incentive for local communities to adopt NRM systems and embrace additional income generation activities demonstrated by the project with test communities, • Increased NRM improves the level of social cohesion and well-being in engaged communities. Anti-poaching operations are covered by a separate set of activities, but the community work ensures the grass-roots engagement that is crucial to the success of anti-poaching operations

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	(6.33±7.91 / month) from April 2015-March 2016		
Outputs: 1. Revision of existing "Partial Elephant Reserve" text and boundaries re-drawn to cover the whole of the elephant range with Lake Banzena as a core protection zone. Legislation gives government foresters the authority to help the people of the elephant range (population = 165,650) enforce existing CBNRM conventions throughout the elephant range.	1.1 Legislative text validated at local level through community meetings throughout the elephant range (draft text developed prior to the project start date). 1.2 Legislation passed and enters law by end of year 3. 1.3 Communities aware of provisions within the legislation through a series of meetings with government, DNEF, local community leaders (elected and traditional) in every commune.	1.1 Project reports, photographs of validation meetings 1.2 Legal designation documents 1.3 Project reports, photographs of information and awareness meetings	Progress of text development and community engagement occurs as foreseen, with no surprise obstacles
2. Training provided to improve capacity in habitat protection, natural resources management and benefit sharing	2.1 Workshops and training for 320 people from priority communities as selected during the commune engagement process result in CBNRM actions in 100% of participant communities, with each rising at least one level in implementation of resource management systems (baseline = 0). Such actions include management structures formed, rules of resource use identified and areas of protected forest and pasture identified, depending on the context of the community in question and the decisions it makes. 2.2 Workshops and training for representatives from 12 clans (at least 48 people) occupying Lake Banzena to assess the current situation, discuss the proposed protected core area and preparations required to re-establish pre-conflict NRM systems.	2.1- 2.2 Project reports on workshops and training courses, photos, and maps. Project database on CBNRM activities.	communities wish to improve their resource management

Project summary	Measurable Indicators	Means of verification	Important Assumptions
3. Women's associations created to manage and nurture NTFPs in the following key areas, thereby developing a model for sustainable revenue-generation from forest resources: • Daroma/Sartatane/Tinabou – supporting the solution to secure Lake Banzena for elephant use only. • N'gaw N'gaw – a key forest north of the Porte des Elephants, important for elephants at the end of the dry season • Kobou – close to the forest of Wami/Masi where human-elephant conflict is high • Tinarab – a community in the key "Gossi corridor" an important dry season refuge for elephants • Dioulouna/Niangassadiou – communities in the south near the Burkina border, representing an important corridor to complete the elephant migration	3.1 Number of women's associations created (baseline=0, target = 3), nb of women trained and engaged in income-generating activities (baseline=0, target, 100), nb of households impacted as a result (baseline=0, target=100). 3.2 Degree of spontaneous uptake measured by number of individuals copying existing initiatives. These will be individuals undertaking the activities for the first time because they have witnessed others engaging in project activities (there is no way this behaviour could have been caused by anything other than project activities). Baseline = 0. Target = > 0 3.3 Number of individuals engaged in natural resource protection. Baseline = 0. Target 50 by the end of the project.	3.1 Project reports, photos and database, nb of women's associations registered with the project. 3.2 Project reports, testimonies from participants, database. 3.3 Project reports, database.	Markets for NTFPs remain buoyant and continue to bring in between 67% and 88% more than cutting wood for charcoal. This is an unknown, but the products can also be easily transported to markets further afield (the river towns) where the prices are higher (reflecting the cost of transport). Willingness on the part of individual households to disclose revenue. If not, calculations can be made if quantities harvested can be determined, using local market rates. Demonstrated value of NTFPs reduces tree cutting from charcoal
4. Habitat, and biodiversity loss and degradation halted and reversed in 1 test site. Elephant loss reversed in the whole elephant range.	4.1 Tree cutting reduced in 1 test site (Inani) compared to 2017 baseline. 4.2 Bird abundance as indicator of biodiversity in 1 test site (Inani) carried out at same time as tree cutting surveys shows an increase compared to 2017 baseline. 4.3 Number of protected areas identified and demarcated throughout the elephant range (baseline=0; target = 10).	4.1 Report from tree-cutting survey conducted at the beginning (2017) and end of the project (2019). 4.2 Reports from bird abundance surveys conducted at the same time as tree cutting surveys. 4.3 Project reports on creation of protected areas, photos, local conventions.	Security situation allows free movement of project surveyors and/ or brigade members can be trained in field survey – anti-poaching activities are aimed at increasing security situation. Protected areas are enforced by communities.

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	4.4 Reduced elephant poaching by 75% by end of project. Baseline = 76 killed/year (6.33±7.91 / month) from April 2015-March 2016	4.4 Number of elephants illegally killed as registered by community eco-guardians and DNEF records, summarised in elephant poaching database.	
5. Research outputs developed and shared with target audiences: local and national stakeholders/ communities; DNEF foresters and officials; local, regional and national government; international conservation and development community.	5.1 Briefing reports about project progress presented orally at least three times per year at meetings with local, regional and national government representatives; and to project partners bi-annually.	5.1 Project reports, briefing papers and photos.	
	5.2 Newsletter (at least 4 times per year) and blog updates (via the Mali Elephant Project website) about project developments to reach the wider international community.	5.2 Web-links.	
	5.3 Two journal papers submitted by end year 3 (both open access).	5.3 Journal confirmation of receipt	
	5.4 Conference presentations and general talks (at least two per year).	5.4 Presentation/talks & conference agenda	

Activities (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)
1.1 Local community validation meetings
1.2 Text finalised
1.3 Text passed through Parliament and enters law
1.4 Community meetings in each commune to ensure that all are aware of the new protected area and its provisions
2.1 Workshops/training for target communities
3.1 Preliminary meetings held with interested women from key areas; associations formed; equipment provided
3.2 Meetings and training workshops for the women
3.3 Monitoring of revenue received from NTFPs
4.1 Tree-cutting and bird abundance surveys in 1 test site
4.2 Identify and demarcate protected areas
4.3 Maintenance of database recording elephant killings (MIKE data)
5.1 Briefing reports to government and partners
5.2 Newsletter, blog updates, articles, talks and conference presentations
5.3 Journal papers

Annex 2 Report of progress and achievements against final project logframe for the life of the project

Project summary	Measurable Indicators	Progress and Achievements
Impact: (Max 30 words) Social and environmental resilience is restored to the Gourma region, through wise resource management that protects elephants, habitats, biodiversity and human livelihoods, enabling peaceful co-existence with humans for mutual benefit.		The following demonstrate the contribution made by the project towards its intended impact: • An 83% reduction in poaching rate • A reduction in the prevalence of illegal tree-cutting coupled with an increase in bird abundance in one test-site where water is available. The presence of armed groups for a prolonged period of time in the second test test prevented effective monitoring by ecoguards resulting in a slight increase in tree-cutting. Both cases demonstrate the positive effect of CBRNM on habitat protection and biodiversity, and the crucial role of water in the area. • Large-scale habitat protection through firebreaks and the designation of protected zones recognised in commune-wide and local conventions • Community cohesion through activities that bring different clans and ethnicities together (firebreaks, monitoring, assemblies/meetings, etc.) • An increase in cash for participants to income-generating activities targeting women • The mobilisation of at-risk youths in activities that benefit their communities and prevents them from joining armed groups • A reduction in the rate of human-elephant conflict in Wami-Massi, hotspot of HEC at the start of the project, and other areas where ecoguards have been actively working to prevent conflicts by digging water points for elephants (e.g. Boni) and helping women plant chilis to deter elephants (e.g. in Korarou).
Outcome Deeper deployment of locally adapted sustainable resource management that protects habitats, elephants and biodiversity, enhances local livelihoods and well-being.	**1** The relative progress in CBNRM will be measured by the number of people (disaggregated by gender where these data are available) (baseline=0, target=1,500) and households (where data is available) engaged in CBNRM related activities across the elephant range, by end of project. **2** By the end of project 75% of 100 women engaged in income-generating activities (baseline = 0)	**1** <u>As described in section 2 a landscape approach is necessary in order for CBRNM to be most effective and requires co-funding for the establishment of CBNRM systems (including ecoguards). The activities covered by Darwin compared to those covered by other donors are indicated where appropriate at output level.</u> • At least 3,859 people (including 129 women in 2018) engaged in CBNRM activities including meetings, habitat monitoring/ protection, resource mapping, creation of local conventions, demarcation of protected areas. • 673 registered eco-guards engaged in elephant monitoring/ surveillance, awareness raising, training, support to CBNRM e.g. habitat, livestock and wildlife monitoring vegetation surveys, GPS readings, and firebreaks. 1,084

Project summary	Measurable Indicators	Progress and Achievements
	that have been evaluated have seen their poverty reduced through the establishment of a model of revenue generation from wise use of natural resources from protected and sustainably managed forests and pasture reserves as measured by an increase in income generated by these activities. 3 By April 2019 natural resource degradation and loss halted as measured by the number of wild fires reported/season (baseline = 20; target = 10), number of community protected areas created throughout the elephant range (baseline =0; target = 10). Crop destruction at the human-elephant conflict hotspot of Wami-Masi reduced to zero from a baseline of 5 incidents/year at start of project. 4 Reduced elephant poaching by 75% by end of project. Baseline = 76 killed/year (6.33±7.91 / month) from April 2015-March 2016	people (961 men + 123) created firebreaks in 2018 (women brought water and food). At least 1,201 people (including 798 women) engaged in income-generating activities including meetings, training workshops, implementation. 2 100 % of women engaged in IGA that have been assessed have benefitted from an increase in cash: 32 individual women engaged in livestock fattening saw the price of their livestock increase by 42% on average, equating to an average of \$76 return per person after loan repayment equivalent to a 458 % increase in cash on average. Respective profits were \$2,491 for the Tinarab women's association engaged in a livestock fattening scheme and \$1,125 for the shop in Tinabou. The Women's Association in N'Gaw-N'Gaw was not assessed due to insecurity. 3 1 wild fire reported in Inadiatafane during the 2018-2019 dry season compared to 10-20 wild fires/area reported in previous years. Following the launch of the new communes approach, 24 pasture perimeters created/ identified with a GPS in 2018 -2019and vegetation surveys conducted with 18 species of trees/plants identified (Annex 7.11 - Vegetation survey report). 20 waterholes/thickets identified as protected areas. No HEC reported in Wami-Massi during the entire reporting period. 4 44 elephants killed/year (3.66 ± 4.92/month) from April 2016 to March 2017; 0 from April 2017 to March 2018; and 13 (1.08 ± 2.46/month) from April 2018 to March 2019. This equates to an 83% reduction in poaching from the year April 2015-March 2016 to April 2018-March 2019.
Output 1. Revision of existing "Partial Elephant Reserve" text and boundaries re-drawn to cover the whole of the elephant range with Lake Banzena as a core protection zone. Legislation gives government foresters the authority to help the people of the elephant range (population = 165,650) enforce existing CBNRM conventions throughout the elephant range.	1.1 Legislative text validated at local level through community meetings throughout the elephant range (draft text developed prior to the project start date). 1.2 Legislation passed and enters law by end of year 3. 1.3 Communities aware of provisions within the legislation through a series of meetings with government, DNEF, local community leaders (elected and traditional) in every commune.	The draft legislative text has been validated at the local level through a number of community meetings (A1.1 below), with local communities agreeing to relocate outside of the Banzena core area once clean-water wells have been created. [This is providing additional support to the local conventions agreed pre-conflict.] The creation of these have been delayed due to delayed release of funding at first compounded by rising insecurity. The revision of the draft legislative text at national level has continued sporadically through Y2-3 and is waiting for signature in Parliament.

Project summary	Measurable Indicators	Progress and Achievements
Activity 1.1 Local community validation meetings		*Targeted actions funded by Darwin:* • Initial meetings were held in Y1 with 18 traditional community leaders of the 12 clans surrounding Lake Banzena (15 men and 3 women). Other communities in the area (Daroma, Sartatane, Tinhabou) were also engaged in CBNRM and additional income-generating initiatives to start the process of reducing pressure on key elephant habitats. • Additional meetings held in Y2 with the communities around Banzena (exact numbers unknown but >30participants), to assess water levels and livestock numbers, and continue discussions about pressures around the lake and possible solutions, including the need for the well to be created in the Mayfata relocation zone (~20 km to the north-east). • 3-day meeting of senior government officials and other stakeholders (including local community representatives) to discuss reserve re-designation and its relation to water management around Banzena and its hinterland. *Relevant actions in target areas not funded by Darwin but essential to the outcome:* • Emergency mission to Banzena facilitated by the project to demonstrate to government representatives the seriousness of the situation and afford local community members the opportunity to voice their concerns directly (Annex 7.4– photos of mission and report). • 278 community eco-guardians supported by the project in the creation of 264 km of fire-breaks to protect 98 km2 (9,800 ha) of pasture from bush fires in the areas surrounding Banzena. • The International Conservation Fund of Canada (ICFC), provided a loan to pay for the construction of the well to alleviate pressure on water availability at the end of dry season.
Activity 1.2 Text finalised		In progress. Text under review for signature.
Activity 1.3 Text passed through Parliament and enters law		In progress. Text under review for signature.
Activity 1.4 Community meetings in each commune to ensure that all are aware of the new protected area and its provisions		Awaiting completion of activities 1.2-1.3.
Output 2. Training provided to improve capacity in habitat protection, natural resources management and benefit sharing.	2.1 Workshops and training for 320 people from priority communities as selected during the commune engagement process result in CBNRM actions in 100% of participant communities, with each rising at least	Report general progress and appropriateness of indicator From a baseline of zero >10 days of CBNRM workshops were attended by >245 people in Y1 in the 8 worst performing communities in the north and centre of the elephant range in the Hombori, Gossi & Inadiatafane poaching/conflict hotspots.

Project summary	Measurable Indicators	Progress and Achievements
	one level in implementation of resource management systems (baseline = 0). Such actions include management structures formed, rules of resource use identified and areas of protected forest and pasture identified, depending on the context of the community in question and the decisions it makes. 2.2 Workshops and training for representatives from 12 clans (at least 48 people) occupying Lake Banzena to assess the current situation, discuss the proposed protected core area and preparations required to re-establish pre-conflict NRM systems.	In Year 2 CBNRM initiatives were launched across six core communes across the elephant range (Korarou, Mondoro, Gandamia, Hombori, Dallah, Haire; Annex – example convention). At least 851 directly funded by DI (the attendance at some meetings was not recorded) from 16 communities over 6 communes were engaged in establishing local conventions to protect natural resources. Y3 saw the deployment of the new communes approach on a wider scale, which included workshops attended with at least 654 people (funded by DI) to discuss the integration of the new communes approach with existing activities. One workshop took place in Douentza to avoid the field team having to travel to insecure areas. 2.2 Described under Activity 1.1
Activity 2.1 Workshops/training for target communities		*Targeted actions funded by Darwin:* *Year 1* • A 3-day meeting with 90 community leaders to discuss CBNRM and its relationship to current community challenges. • Training workshops for the communities of: Tara, Tinkaneye & Tintabakat (3 days, 46 participants); Daka Kouko, Douni, Kigna, Daribangui and Fargabangou (4 days, 109 participants); Douni, Bandja, Massi and Daka Kouko (days and participants TBD) • 46 eco-guardians from the vicinity of these communities were also trained in CBNRM and elephant monitoring, and 56 built 28km fire-breaks this year. *Year 2* • May: A local CBNRM convention awareness meeting / tour of villages in Hombori commune– number attending not recorded. • July: Darwin Initiative funds supported the participation of 778 (out of a total of 1,080) in a series of 2-3-day general assemblies • December: A 2-day general assembly meeting plus tour of the commune was held in Hombori commune to further develop the local convention rules and requirements, with 73 community participants Year 3 • 72 people from 17 communities in Gossi commune took part in workshops over a 2-day period to discuss the implementation of local conventions.

Project summary	Measurable Indicators	Progress and Achievements
		• 226 people attended 3-day workshops in Bambara-Maoude (55); Gossi (54) and Douentza (117) aimed at discussing integration of existing activities within the new communes approach framework.
		• 7 communities in communes engaged in Y1-2 received additional support (Oguy, Koyo in Haire; Diamaga Antoum, Torbani, Omga in Haire-Dallah; Kigna, Petten N'dotty in Hombori) for putting in place monitoring activities by ecoguards to prevent illegal tree-cutting, monitor elephants, and prevent HEC.
		• 2x 3-day workshops were organised in the commune of Ouinerden in the north of the range to discuss the implementation of a habitat monitoring in Tinarab and Takarkarat (65 people), and the implementation of a 10km long protected area from Intorchawène to Eférer (76 people).
		• 3x 3-day CBNRM introduction workshops organised in Kikara (Gandamia, 76 ppl incl. 13 women), Dallah (Dallah, 84 ppl incl. 17 women) and Diona (Korarou, 55 ppl incl. 4 women) to engage new communities in CBNRM.
Output 3. Women's associations created to manage and nurture NTFPs in the following key areas, thereby developing a model for sustainable revenue-generation from forest resources: • Daroma/Sartatane/Tinabou – supporting the solution to secure Lake Banzena for elephant use only. • N'gaw N'gaw – a key forest north of the Porte des Elephants, important for elephants at the end of the dry season • Kobou – close to the forest of Wami/Masi where human-elephant conflict is high • Tinarab – a community in the key "Gossi corridor" an important dry season refuge for elephants • Dioulouna/Niangassadiou – communities in the south near the Burkina border, representing an important	3.1 Number of women's associations created (baseline=0, target = 3), nb of women trained and engaged in income-generating activities (baseline=0, target, 100), nb of households impacted as a result (baseline=0, target=100). 3.2 Degree of spontaneous uptake measured by number of individuals copying existing initiatives. These will be individuals undertaking the activities for the first time because they have witnessed others engaging in project activities (there is no way this behaviour could have been caused by anything other than project activities). Baseline = 0. Target = > 0 3.3 Number of individuals engaged in natural resource protection. Baseline = 0. Target 50 by the end of the project.	At least 543 women representing 8 initiatives from 4 test sites attended preliminary meetings and training workshops in Y1. Some of these subsequently became inaccessible due to insecurity and some new sites had to be identified. Three women's associations (Tinabou, Tinarab, N'Gaw-N'Gaw) representing 128 households and 32 indiviudal women (Daroma, Sartatane, Kobou, Dioulouna/Niangassadjou) representing an undefined number of households were engaged in livestock fattening schemes, Vetiver plantations, and the establishment of a small shop for essentials. 376 women attended training workhops in Y1 and another 378 in Y3. All initiatives that could be assessed benefitted form an increase in cash (see Outcome Indicator 2), impacting a total of 633 households (505 for individual women and 128 for the women's associations). The promoters mobilised a total of 3,164 individuals to support their initiatives.

Project summary	Measurable Indicators	Progress and Achievements
corridor to complete the elephant migration		

Activity 3.1 Preliminary meetings held with interested women from key areas; associations formed; equipment provided	Year 1

Test zone	Communities involved	date of meetings	# women	Activity
Banzena	Daroma, Sartatane	April	32	Sustainable harvest zones for dry season livestock fodder
Forested zone north of Porte des Elephants	N'gaw N'gaw	May, August	280	Vetiver restoration and harvesting
Kazey-Kazey	Kerwal, Tassouawat	June	To check	Gum Arabic (Commiphora) harvesting; sustainable harvest zones dry season fodder
Wami-Massi	Douni, Bandja, Massi	February	231	sustainable harvest zones for dry season livestock fodder

Tools, enclosure materials and other items and training necessary for harvesting livestock fodder were provided in August and September.

Activity 3.2 Meetings and training workshops for the women	Year 1

Test zone	Communities involved	date of training	# trained	#days	# eco-guards
Banzena	Daroma, Sartatane				32
Forested zone north of Porte des Elephants	N'gaw N'gaw	Aug, Sept	102	6	30
Kazey-Kazey	Kerwal, Tassouawat	Sept	43	3	80
Wami-Massi	Douni, Bandja, Massi	Feb	231	3	85

Additional training workshops held in Y3 attended by 378 people from N'Gaw-N'Gaw in Korarou (88); Daka-Kouko women's association in Hombori (79); Sartatane in Bambara-Maoudé (68); Kazey-Kazey women's association in Inadiatafane (76) Boré women's association in Dangol-Boré. (67).

Project summary	Measurable Indicators	Progress and Achievements
Activity 3.3 Monitoring of revenue received from NTFPs		In May 2016 training was provided to surveyors responsible for evaluating the women's associations. The results are detailed under Output Indicator 2.
Output 4 Habitat, and biodiversity loss and degradation halted and reversed in 1 test site. Elephant loss reversed in the whole elephant range.	4.1 Tree cutting reduced in 1 test site (Inani) compared to 2017 baseline. 4.2 Bird abundance as indicator of biodiversity in 1 test site (Inani) carried out at same time as tree cutting surveys shows an increase compared to 2017 baseline. 4.3 Number of protected areas identified and demarcated throughout the elephant range (baseline=0; target = 10). 4.4 Reduced elephant poaching by 75% by end of project. Baseline = 76 killed/year (6.33±7.91 / month) from April 2015-March 2016	Tree-cutting and bird abundance surveys were conducted in the test site of Inani in 2017 and repeated in 2019 showing a reduction from 2,028 trees cut/km in 2017 to 0 in 2019 and an increase in bird abundance from 209 birds/km in 2017 to 310 in 2019. The increase in tree-cutting at N'Gaw-N'Gaw, which was inaccessible to ecoguards for a long period of time due to the presence of armed groups, demonstrates that, when it is taking place, monitoring by ecoguards is effective. 24 protection perimeters were created and identified with a GPS. Another 20 waterholes/forest were identified. Poaching has been reduced by 83% over the 3-year period.
Activity 4.1 Tree-cutting and bird abundance surveys in 1 test site		Completed (see above)
Activity 4.2 Identify and demarcate protected areas		Completed (see above)
Activity 4.3 Maintenance of database recording elephant killings (MIKE data)		The project maintains its own records of poached elephants based on monitoring by eco-guards.
Output 5 Research outputs developed and shared with target audiences: local and national stakeholders/ communities; DNEF foresters and officials; local, regional and national government; international conservation and development community.	5.1 Briefing reports about project progress presented orally at least three times per year at meetings with local, regional and national government representatives; and to project partners bi-annually. 5.2 Newsletter (at least 4 times per year) and blog updates (via the Mali Elephant Project website) about project developments to reach the wider international community. 5.3 Two journal papers submitted by end year 3 (both open access).	5.1 At least 18 report/briefings (Annex 7.8) 5.2 16 blog updates published on the project website and shared via quarterly newsletters; 3 newsletters on third party websites. 5.3 4 journal articles submitted and/or published

Project summary	Measurable Indicators	Progress and Achievements
	5.4 Conference presentations and general talks (at least two per year).	5.4 20 presentations in the UK, 5 in Mali In addition: • media articles, in addition to several newspaper articles in Mali • 1 educational video with Oxford Sparks • 2 book chapters
Activity 5.1 Briefing reports to government and partners		Completed (see Annex 7.8 for a full list)
Activity 5.2 Newsletters, blog updates, articles, talks and conference presentations		Completed (see Annex 7.8 for a full list)
Activity 5.3 Journal papers		Completed (see Annex 8.8 for a full list)

Annex 3 Standard Measures

We use these figures as part of our evaluation of the wider impact of the Darwin Initiative programme. Projects are not evaluated according to quantity. That is – projects that report few standard measures are not seen as being of poorer quality than those projects which can report against multiple standard measures.

Please quantify and briefly describe all project standard measures using the coding and format of the Darwin Initiative Standard Measures. Download the updated list explaining standard measures from http://darwin.defra.gov.uk/resources/reporting/. If any sections are not relevant, please leave blank.

Code	Description	Total	Nationality	Gender	Title or Focus	Language	Comments
Training Measures							
1a	Number of people to submit PhD thesis	NA					
1b	Number of PhD qualifications obtained	NA					
2	Number of Masters qualifications obtained	NA					
3	Number of other qualifications obtained	NA					
4a	Number of undergraduate students receiving training	NA					
4b	Number of training weeks provided to undergraduate students	NA					
4c	Number of postgraduate students receiving training (not 1-3 above)	NA					
4d	Number of training weeks for postgraduate students	NA					
5	Number of people receiving other forms of long-term (>1yr) training not leading to formal qualification (e.g., not categories 1-4 above)	NA					
6a	Number of people receiving other forms of short-term education/training (e.g., not categories 1-5 above)	2,359 people attended workshops	Malian	M/F	CBNRM implementation, income-generating activities, field survey, habitat protection	Local languages (Tamashek, Peulh,	245 community members trained in CBNRM implementation

		of 3-days or more.				Sonrhai, Dogon)	in Y1, and 376 women in income-generating. In Y2, 778 people attended workshops to elaborate local conventions. In Y3, 441 people attended workshop on CBNRM implementation within the new communes approach and 378 were trained in income-generating activities, 141 attended workshop on identification of protected areas
6b	Number of training weeks not leading to formal qualification	96 days of training equivalent to 14 weeks.	See above	See above	See above	See above	In Y1: 245 people over10 days; 376 women over 12 days. In Y2: 778 people over 33 days. In Y3: 226 people over 9 days; 378 people over 18 days; 141 people over 5

							days; 215 ppl over 9 days
7	Number of types of training materials produced for use by host country(s) (describe training materials)	1				French	Field manual for project monitoring surveys produced in French for the local field team and community eco-guardians (Annex. 7.13)

Research Measures		**Total**	**Nationality**	**Gender**	**Title**	**Language**	**Comments/ Weblink if available**
9	Number of species/habitat management plans (or action plans) produced for Governments, public authorities or other implementing agencies in the host country (-ies)						Participatory process?
10	Number of formal documents produced to assist work related to species identification, classification and recording.	1			5-year Elephant Action Plan for Government	French	
11a	Number of papers published or accepted for publication in peer reviewed journals	2			Brito et al., 2018, *Armed conflicts and wildlife decline: challenges and recommendations for effective conservation policy in the Sahara-Sahel.* Conservation Letters **https://doi.org/10.1111/conl.12446** "The Mali Elephant Project: protecting elephants amidst conflict and poverty", The International Zoo Yearbook 2018	English	Contributing author Accepted and in press.

								Location?
11b	Number of papers published or accepted for publication elsewhere							
12a	Number of computer-based databases established (containing species/generic information) and handed over to host country							
12b	Number of computer-based databases enhanced (containing species/genetic information) and handed over to host country							
13a	Number of species reference collections established and handed over to host country(s)							
13b	Number of species reference collections enhanced and handed over to host country(s)							

Dissemination Measures		Total	Nationality	Gender	Theme	Language	Comments
14a	Number of conferences/seminars/workshops organised to present/disseminate findings from Darwin project work	14 strategic planning meetings with DNEF, Ministry of Environment and other partners					
14b	Number of conferences/seminars/ workshops attended at which findings from Darwin project work will be presented/ disseminated.	20				English	

Physical Measures		Total	Comments
20	Estimated value (£s) of physical assets handed over to host country(s)		
21	Number of permanent educational, training, research facilities or organisation established		
22	Number of permanent field plots established		Please describe

Financial Measures		Total	Nationality	Gender	Theme	Language	Comments
23	Value of additional resources raised from other sources (e.g., in addition to Darwin funding) for project work	IWT Challenge Fund Round 3 £300,000 USFS £45,000 AEF £83,000 USFWS £101,250 UNICRI £44,900 ECF £208,300 ICFC £325,980 MINUSMA £900,000 **TOTAL £1,908,430**					

Annex 4 Aichi Targets

Please note which of the Aichi targets your project has contributed to.

Please record only the **main targets** to which your project has contributed. It is recognised that most Darwin projects make a smaller contribution to many other targets in their work. You will not be evaluated more favourably if you tick multiple boxes.

	Aichi Target	**Tick if applicable to your project**
1	People are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.	X
2	Biodiversity values have been integrated into national and local development and poverty reduction strategies and planning processes and are being incorporated into national accounting, as appropriate, and reporting systems.	x
3	Incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts, and positive incentives for the conservation and sustainable use of biodiversity are developed and applied, consistent and in harmony with the Convention and other relevant international obligations, taking into account national socio economic conditions.	
4	Governments, business and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits.	X
5	The rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.	X
6	All fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.	
7	Areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity.	X
8	Pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.	
9	Invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.	
10	The multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning.	
11	At least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.	X
12	The extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.	X

13	The genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.	
14	Ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.	X
15	Ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.	X
16	The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.	
17	Each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.	
18	The traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.	X
19	Knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.	
20	The mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties.	

Annex 5 Publications

Provide full details of all publications and material that can be publicly accessed, e.g. title, name of publisher, contact details. Mark (*) all publications and other material that you have included with this report

Type * (e.g. journals, manual, CDs)	Detail (title, author, year)	Nationality of lead author	Nationality of institution of lead author	Gender of lead author	Publishers (name, city)	Available from (e.g. web link, contact address etc)
THE WILD FOUNDATION BLOG						
Blog	Persisting so that Nature prevails: the Mali Elephant Project in 2018, Dr Susan Canney, 2018	UK	US	F	The Wild Foundation, Boulder, CO	[Persisting so that Nature Prevails: the Mali Elephant Project in 2018](#)
Blog	Yachak Organic fights Poaching in West Africa, announces official beverage sponsorship of the MEP, Amy Lewis, 2018	US	US	F	The Wild Foundation, Boulder, CO	[Yachak Organic fights Poaching in West Africa, announces official beverage sponsorship of the MEP](#)
Blog	This Stunning Victory for Elephants will make you believe in the Power of Collaboration, Amy Lewis, 2018	US	US	F	The Wild Foundation, Boulder, CO	[This Stunning Victory for Elephants will make you believe in the Power of Collaboration](#)

Blog	Working together brings the Impossible within reach in Mali, Dr Susan Canney, 2017	UK	US	F	The Wild Foundation, Boulder, CO	[Working together brings the Impossible within reach in Mali](#)
Blog	Remembering the Legacy of Corporal Souleymane, Nomba Ganame, 2017	Malian	US	M	The Wild Foundation, Boulder, CO	[Remembering the Legacy of Corporal Souleymane](#)
Blog	Mali's Elephants get a New Ally, Rory Young, 2017	Zimbabwe	US	M	The Wild Foundation, Boulder, CO	[Mali's Elephants get a New Ally](#)
Blog	A Response to "We need to talk about the militarisation of conservation", Dr Susan Canney, 2017	UK	US	F	The Wild Foundation, Boulder, CO	[A Response to "We need to talk about the militarisation of conservation"](#)
Blog	Promoting Community Solidarity and Improved Livelihoods in the Gourma, Dr Susan Canney, 2017	UK	US	F	The Wild Foundation, Boulder, CO	[Promoting Community Solidarity and Improved Livelihoods in the Gourma](#)
Blog	The Mali Elephant Project wins Big!, Melanie Hill, 2017	US	US	F	The Wild Foundation, Boulder, CO	[The Mali Elephant Project wins Big!](#)
Blog	Running for Elephants, Wiesje Ellferich, 2017	Dutch	US	F	The Wild Foundation, Boulder, CO	[Running for Elephants](#)

Blog	Tracking Mali's desert elephants near Timbuktu, Nigel Kuhn, 2017	Zimbabwe	US	M	The Wild Foundation, Boulder, CO	[Tracking Mali's desert elephants near Timbuktu](#)
Blog	To build the happiest communities in 2017, put the environment first, Amy Lewis, 2016	US	US	F	The Wild Foundation, Boulder, CO	[To Build the Happiest Communities in 2017, Put the Environment First](#)
Blog	Announcing our very own Disney Conservation Hero: Nomba Ganame!, Melanie Hill, 2016	US	US	F	The Wild Foundation, Boulder, CO	[Announcing our very own Disney Conservation Hero: Nomba Ganamé!](#)
Blog	The most challenging and dangerous elephant protection operation, Rory Young, 2016	Zimbabwe	US	M	The Wild Foundation, Boulder, CO	[The Most Challenging & Dangerous Elephant Protection Operation](#)
Blog	Be part of the solution on World Elephant Day, Melanie Hill, 2016	US	US	F	The Wild Foundation, Boulder, CO	[Be Part of the Solution on World Elephant Day](#)
Blog	Keeping the Elephant Alive, Susan Canney, 2016	UK	US	F	The Wild Foundation, Boulder, CO	[Keeping the Elephants Alive](#)
MEDIA ARTICLES						
Online article	Defending Wildlife: The Road to	US	US	F	Impakter	[Defending Wildlife: The Road to SDG16 in Mali,](#)

	SDG16 in Mali, Amy Lewis, 2017					
Article	Mali's Desert Elephants on the Edge of Annihilation get a fighting chance, Mark Rivett-Carnac, 2017	US	US	M	The New York Times	[Mali's Desert Elephants, on Edge of Annihilation, Get a Fighting Chance](#)
Article/blog	Ground-breaking initial success in protecting Mali's elephants, but it must be sustained, Dr Susan Canney, 2017	UK	US	F	National Geographic	["Ground-breaking initial success in protecting Mali's elephants, but it must be sustained"](#)
Article	"Turning the Tide in a Desert War", Oliver Tickell, January 2017	UK	UKM		Resurgence, issue 301 Manifesto for a Green Mind	https://www.resurgence.org/magazine/issue301-manifesto-for-a-green-mind.html
Article	A grass-roots battle to save Mali's elephants", Susan Canney & Vance Martin, 2016	UK/US			Africa R3 magazine: the planners guide to risk, resilience & reconstruction,	https://africar3.com/a-grassroots-battle-to-save-malis-elephants/
Article	"Elephant Protection – an interview with Susan Canney" by Ian Mowll in Green Spirit, October 2016	UK	UK	M	Green Spirit	https://www.greenspirit.org.uk/magazine-past-articles/
BOOK CHAPTERS/JOURNAL ARTICLES/VIDEOS						
Journal Article	Armed conflicts and wildlife	Portugal	Portugal	M	Conservation Letters	https://doi.org/10.1111/conl.12446

	decline: challenges and recommendations for effective conservation policy in the Sahara-Sahel, Brito et al. 2018					
Book chapter	The Desert Elephants of Mali, Vance Martin & Dr Susan Canney in The Last Elephants, Don Pinnock & Colin Bell (eds.), 2018	US/UK	US	M/F	Hardie Grant Books	https://www.waterstones.com/book/the-last-elephants/colin-bell/dr-don-pinnock/9781743795514
Video	Oxford Sparks video animation, Oxford University, 2018	UK	UK		Oxford Sparks, Oxford University	https://www.oxfordsparks.ox.ac.uk/content/protecting-elephants-protecting-humans
Book chapter	"The Desert Elephants of Mali" in Reflections of Elephants by Dave Blisset (ed.), 2016	UK	US	F	Melbourne Books	https://www.waterstones.com/book/reflections-of-elephants/bobby-jo-clow/david-blissett/9781922129970

Annex 6 Darwin Contacts

Ref No	23-022
Project Title	Developing Long-term Stakeholder Capacity for Elephant Conservation in Mali
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