



Darwin Initiative Main Project Annual 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)

Submission Deadline: 30th April 2018

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
Contract holder institution	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
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Reporting period (e.g., Apr 2017 – Mar 2018) and number (e.g., Annual Report 1, 2, 3)	Apr 017 – Mar 2018 Annual Report 2
Project Leader name	Dr Susan Canney
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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 (see map in annexe). 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 (see map in annexe). 85% of the 233,000 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, 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 Elephants. The advent of conflict and absence of government required that communities be engaged throughout the range in elephant-based CBNRM to stand together against the insecurity and elephant poaching. 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 (see map in annexe). This project is designed to:

- Address the urgent problem of Lake Banzena
- Spread CBNRM across as many communities as possible, particularly in the areas highest poaching risk. 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 as they are not part of the armed groups and are a good way to target insecure areas of high poaching risk. As these are new activities, detailed monitoring of impact is included.

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 is 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 works also 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 that 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 have begun to execute 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; and (2) increasing the national capacity to combat poaching. The project negotiated with the government to designate funds to sink a well in the Banzena relocation area (Tinsabara-Mayfata) as a first step to relieve the water crisis at Banzena and allow the Banzena population to leave Banzena and return to the relocation area. None of this would have happened without the project's close government engagement. Due to the delay in liberating the funds, the project secured a loan from its partner, ICFC, to allow the works to take place before the end of the dry season.

The United Nations Multidimensional Integrated Stabilization Mission in Mali (MINUSMA) has been a staunch ally and partner in securing a second grant from the UN Trust Fund together with the British Embassy of which \$125,000 are to support local community work, and identifying ways in which they can support project activities. The head of the mission to Mali is personally engaged.

The British Embassy has been active in identifying useful contacts, potential avenues of support, met with key government personnel, and attended significant meetings to demonstrate international interest. The US Embassy has donated equipment and secured the funds for additional women's associations (see output 3)

3. Project progress

3.1 Progress in carrying out project Activities

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.

Activity 1.1. Local community validation meetings.

- Meetings were held with the communities around Banzena in April-May (exact numbers unknown but >30 participants), 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).
- December: 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.

Activities 1.2 – 1.4. Text finalised; passed through Parliament and enters law; community meetings to ensure all are aware of new legislation.

The revision of the legal text and boundaries of the existing partial reserve (whose text prohibits nothing but elephant hunting) has continued throughout Year 2 to establish a new Biosphere Reserve including the whole elephant range, with the Mali Elephant Project as the implementing partner for the community engagement and identification of core area boundaries in consultation with local communities. To be completed Q3-4 of Year 3.

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

Activity 2.1. Community workshops for least performing communities.

- May: A local CBNRM convention awareness meeting / tour of villages in Hombori commune was completed as a call for participation in the planning and implementation of local natural resource use laws.
- July: Darwin Initiative funds supported the participation of 778 community members in a series of 2-3 day general assembly meetings involving communities from the communes of Gandamia (Banikane (45 people); Boula (79); Bounti (67); Kikara (95)) and Hombori-Mondoro (Wamdé-Rabéré (92); Dougoussa (86); Boumboum (69); Kelma (59); Kelmi (61); Garawal (68); Tondibongo (57)). These meetings were held to facilitate open dialogue within and between communities towards planning universally accepted local laws on

natural resource use and the prevention of habitat degradation. [*Total participation across the elephant range (including 320 additional community members from Dallah and Gandamia communes not funded by Darwin) = 1,098 people*]

- December: A 2-day general assembly meeting was held in Hombori commune to further develop the local convention rules and requirements, with 73 community participants. This was followed by a tour of the accessible/secure villages to increase awareness of the pending implementation of the convention and to allow any concerns to be raised.

Activity 2.2. Workshops for Banzena communities.

The role of CBNRM in resolving the problems at Lake Banzena was central to the meetings described in activity 1.1 and resulted in 268 members from multiple clans forgetting their differences to come together to build 264 km of firebreaks to protect 98km² (9,800 has) of pasture. See Output 1 for additional details.

Output 3: Women's associations created to manage and nurture non-timber forest products (NTFPs) in four test zones, thereby developing a model for sustainable revenue-generation from forest resources.

Activities 3.1. Preliminary meetings. *Completed in Year 1 – refer to AR1.*

Activity 3.2. Meetings and training workshops. *Completed in Year 1 – refer to AR1.*

Activity 3.3. Monitoring of revenue received.

The field report from the revenue-generating initiatives conducted in year 1 was completed in Y2. It targeted 3 women's associations and 64 individual participants.

Three women's associations representing 128 households and 64 individuals (50% women) were engaged. One of the women's associations chose a livestock fattening scheme (64 households), one chose to replant Vetiver (25 households), a useful plant that has been over-exploited and is scarce, and one chose to establish a small shop for essentials (228 households).

For the 64 individual participants (50% women) from the livestock fattening initiative, their livestock increased in price by 51%, equating to an average of \$60 return per person after loan repayment (\$76 average per woman and \$44 average per man), equivalent to a 451% increase in cash.

For the women's association conducting livestock fattening the return per household was \$39 per household, and \$29 for the shop.

The 64 "promoters" mobilised 830 of their family members and 1,874 of villagers to conduct natural resource protection and 274 others copied by initiating their own schemes.

For the women's associations a total of 585 additional villagers were mobilised for natural resource protection representing 128 households.

Output 4: Habitat, elephant and biodiversity loss and degradation are halted and reversed at four test sites.

Activity 4.1. Livestock and people surveys at Lake Banzena.

Targeted action funded by Darwin:

- April-May: Community eco-guardians surveying livestock at Banzena; brief household surveys completed at Daroma and Sartatane to serve as a baseline.
- June: APU completed drone survey of livestock on SW shore of Banzena, images analysed by UK project team to test feasibility of livestock monitoring through remote sensing (Annex – comparison of VHR and drone imagery).
- The results of the drone survey (see annex – drone and VHR comparison) estimated that a total of 2649 cattle (1318/km) and 1051 goats (523/km) were present along the 2.01 km stretch of SW shoreline alone. Low rainfall levels in 2017 are likely to increase livestock numbers around Banzena at the end of the dry season (April-June).

Relevant actions in target areas not funded by Darwin:

- November: Following the emergency mission to Banzena, 12 eco-guardians were engaged to provide regular field reports of livestock numbers around Banzena and Inani (to the south), the key areas likely to contain late dry-season water for elephants in 2018.

Activity 4.2. Tree-cutting and biodiversity surveys.

April: Bird and tree cutting “W” transect surveys completed at one protected site (N’gaw-N’gaw) and one unprotected site (Inani) (see annexe). A repeat survey is planned for Year 3 following the introduction of CBNRM at Inani, but may have to be performed by eco-guardians that have been trained by the project team.

Activity 4.3. Maintenance of database recording elephant killings (MIKE data).

The elephant poaching and natural mortality databases are maintained as new incidents are reported from the field and monthly reports provided (together with monthly reports on elephant locations and numbers where known). This information is shared with the DNEF. No poaching incidents have been recorded in Year 2, down from 44 in year 1 (see annex for summary of elephant poaching data).

Output 5: Research outputs developed and shared with target audiences.

Activity 5.1. Frequent briefing reports and updates have been produced for government and partners, most notably

- In August concerning the review of the elephant reserve legislation
- In November concerning the forthcoming GEF project
- In October (for regional authorities) concerning the situation at Banzena
- In November for high-level authorities raising the alarm concerning Banzena
- In December as a prelude to the meeting in Douentza between high level government and local communities to discuss the reserve in relation to the situation at Banzena

Activity 5.2. Newsletter, blog updates, articles, talks and conference presentations.

- 9 blog/newsletter updates in Year 2 (target = 4 times per year) MoV: <http://www.wild.org/category/blog/mali-elephants-blog/> See annexe for details.
- Entry in National Geographic Elephant blog on 7th April 2017 <https://blog.nationalgeographic.org/2017/04/07/ground-breaking-initial-success-in-protecting-malis-elephants-but-it-must-be-sustained/>
- 8 talks and conference presentations

Activity 5.3. Journal papers due in Y3

- One book chapter on “The Desert Elephants of Mali”

3.2 Progress towards project 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. Legislation gives government foresters the authority to help the people of the elephant range enforce existing CBNRM conventions throughout the elephant range.

In April-May 2017 additional meetings were held with clans living in the vicinity of Lake Banzena during missions to assess water levels and livestock numbers, accompanied by the APU who completed drone surveys of the SW shore (see annexe – drone surveys and photos). 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.

The revision of the legal text and boundaries of the partial reserve has continued sporadically throughout Year 2 to establish a new Biosphere Reserve across the whole elephant range, with the Mali Elephant Project as the implementing partner for negotiating the core area boundaries as part of a water management strategy for Banzena and hinterland.

Following the 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 to government.

On the basis of this report an emergency mission to Banzena at the beginning of November was facilitated by the project in November to demonstrate to government representatives the seriousness of the situation and afford local community members the opportunity to voice their concerns directly (See annex – 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 of 264 km of fire-breaks to protect 98 km² (9,800 ha) of 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 (Annex – meeting minutes). 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. This well is the first step in the water management strategy.

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

In Year 2 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 for commune-level leaders 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. The first step is a general assembly of community leaders at which a draft communal convention is drafted. There is then 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. Korarou is the most advanced with a signed communal convention (see annexe). 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 Year 1 (Output 3).

The target communities in Hombori commune targeted in Year 1 (Tara, Tintakaneye, Tintabakat, Daka Kouko, Douni, Kigna, Daribangui, Fargabangou) were included in all relevant commune-wide and community-level meetings and CBNRM activities described under Activity 1.1. The lack of poaching in Year 2 compared to the elevated levels in the south-east of the range in Year 1 can be at least partially attributed to the communities' (particularly the eco-guardians) level of commitment to elephant monitoring, protection and collective CBNRM. See evidence presented in section 10.

Output 3: Women's associations created to manage and nurture NTFPs in four test zones, thereby developing a model for sustainable revenue-generation from forest resources.

This was largely achieved in year 1 but the results were analysed in year 2.

The results reported under activities suggest a significant increase in income (an average of 451% increase in cash for individuals and \$29-\$39 return on investment per household for the women's associations).

Although livestock fattening was the most chosen activity (largely due to the depressed market for NTFPs as a result of the decrease in security) the promoters engaged a total of 2,704 additional people in forest protection to ensure plentiful forage, while 274 others copied by initiating their own schemes, thereby having the same desired impact on natural resource protection as activities focused directly on NTFPs. The women's associations engaged an additional 585 villagers representing 128 households.

The difference in results between men and women is also striking.

Output 4: Habitat, elephant and biodiversity loss and degradation halted and reversed at four test sites.

Zero elephants have been poached in Year 2, compared to 44 in Year 1. This is a remarkable achievement given the increasing insecurity across central Mali, and represents the longest period without poaching since the 2012 conflict. This is due not only to the effective operations of the anti-poaching unit (APU) since February 2017 but also to the intensive work conducted with communities in key poaching hotspots, particularly under Output 2 in the south-east of the range where poaching escalated in 2016. Community support for elephant protection is crucial to ensure the success of the anti-poaching operations.

In Q4 of Year 2 the project employed a full time monitoring officer in Mali who will coordinate local communities in participatory monitoring activities. The monitoring manual (see AR1) will continue to be used as a basis for field survey methods but the feasibility of activities and suitability of locations will be regularly reviewed to account for the ever-changing security situation (as reflected in the monthly security reports). The main methods used for biodiversity-related monitoring in the field will be "W" transects for tree cutting and bird abundance surveys. In 2017 we tested the viability of drone and VHR imagery for monitoring livestock (see annex) and similar methods could be suitable for monitoring tree cover at key locations (depending on time and financial resources).

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.

See report on activities under output 5 above

3.3 Progress towards the project Outcome

Outcome: Deeper deployment of locally adapted sustainable resource management that protects habitats, elephants and biodiversity, enhances local livelihoods and well-being, with a focus on four critical zones in the Malian Gourma.

Indicator 1: The project has revised its approach to delivering CBNRM. This is an adaptation to the worsening security situation which requires a much more rapid delivery of these activities to act as a counter to 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. Thus once the Mayor's office has demonstrated its engagement, it convenes the general assemblies, commune tours, selects the target communities and organises the process of establishing CBNRM. The project team supports the process with close guidance, mentoring, monitoring and training. Six communes were engaged in this process during 2017-18 and one has produced a finalised convention (see annex). The target for the Darwin project is to engage 320 people and in year 1 at least 245 people were engaged. In year 2 at least 881 people were engaged in CBNRM meetings issuing from the commune process (some meetings did not record an attendance count)

Indicator 2: The 12 resident clans have agreed and ratified a strategy for the removal of human impact from Lake Banzena and surrounds (including a water management strategy) which are to be left for elephant use only by April 2019.

The 2017-18 crisis of low water levels coupled with an influx of cattle has provided a focus for engagement with the 12 resident clans to develop a strategy for the future management of Banzena and its surrounds combining CBNRM, a water-management strategy and its designation as a core protected area within the new Biosphere Reserve. Legislation scheduled to be in place before the end of Y3 (see previous discussion under outputs)

This year it became clear that the huge numbers of cattle made it impossible to adequately estimate cattle numbers from the ground using the local eco-guardians and so the project trialled the use of drones and satellite imagery for this purpose. The use of drones shows promise but will depend on the drone manipulators (either from the monitoring team or from the anti-poaching unit) being able to access Banzena or to be able to access it the times and dates required for a repeated sample count. The results of the drone survey in May 2017 estimated that a total of 2649 cattle (1318/km) and 1051 goats (523/km) were present along the 2.01 km stretch of SW shoreline alone. (See annexe for the comparison between the two methods).

Indicator 3: Poverty of women reduced in four key test-zones by establishing a model of revenue generation from wise use of natural resources.

The 32 individual women conducting livestock fattening saw an average return of \$76 per person, equivalent to a 571% increase in cash. For the women's associations the return per household was \$29-\$39.

Brief household/poverty scorecard surveys were trialled in April-May 2017. Of the 38 households interviewed, 52% were assessed to have a likelihood score of 94-98% (i.e. the likelihood of being above the poverty line), while 21% of households had likelihood scores of <81% and as low as 21% (Annex – example of analysis of poverty scorecard surveys).

During these surveys there was doubt as to the degree they were adapted to local perceptions and so a poverty perception survey was conducted in 9 core communes of elephant range to enable their calibration. The data have yet to be analysed.

Indicator 4: Forest degradation and loss halted, as measured at one key zone.

W transects to survey tree cutting conducted in one test zone and a control showed the dramatic impact of CBNRM. with 2,028.00 cut trees / km in the unprotected Inani forest compared to 1.25 cut trees / km in the N'gaw-N'gaw forest (see annex). This will be repeated in Y3 following CBNRM work in Inani to test the impact of CBNRM.

Indicator 5: Crop destruction at the human-elephant conflict hotspot of Wami-Masi reduced to zero by April 2019.

Zero incidents of HEC were reported in the Wami-Masi area of Hombori commune despite elephants being present throughout the year (information from monthly reports of elephant locations, movements, poaching and conflict incidents). Community information suggests that this is due to the intensive work conducted with local communities in year 1 (see AR1) and under Output 2 in Year 2. However, 6 incidents were reported elsewhere in Year 2, mainly in Korarou commune in the west of the range where communities are still not used to the presence of elephants since they shifted their movements in response to poaching (see AR1). In response the field team have been working closely with Korarou community leaders to create CBNRM conventions to create space for people and elephants.

Indicator 6: Reduced elephant poaching from a baseline of 76 killed/year (6.33±7.91 / month) from April 2015-March 2016 to 6 killed/year in 2019.

Zero elephants have been poached in Year 2, compared to 44 in Year 1. This is a remarkable achievement given the increasing insecurity across central Mali, and represents the longest period without poaching since the 2012 conflict. This is due to the effective operations of the anti-poaching unit (APU) since February 2017 and the intensive work conducted with communities in key poaching hotspots, particularly under Output 2 in the south-east of the range where poaching escalated in 2016.

Indicator 7: Biodiversity monitoring established in 1 key zone and control to measure impact of CBNRM systems.

Monitoring insect abundance using sticky traps had to be abandoned because they caught birds and an easy alternative monitoring method that can be conducted by the field team or eco-guards has yet to be identified. Bird abundance was recorded during the W transects described under indicator 4. Encounter rate of 152 birds/km were registered at the protected N'gaw N'gaw forest and 209/km at the unprotected Inani forest which the surveyors thought this was due to the presence of water in the unprotected forest, but not in the protected forest.

In Q4 of Year 2 the project employed a full time monitoring officer in Mali who will coordinate local communities in participatory monitoring activities. The monitoring manual (see AR1) will continue to be used as a basis for field survey methods but the feasibility of activities and suitability of locations will be regularly reviewed to account for the ever-changing security situation. The main methods used for biodiversity-related monitoring in the field will be "W" transects for tree cutting and bird abundance surveys.

3.4 Monitoring of assumptions

Assumption 1: 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. Comments: This is still the key assumption as decreasing security makes conducting project activities much more difficult and expensive. The project's network of eco-guards keeps the team updated on security risk. The team has developed a modus operandi to minimise danger and is continually adapting its approach accordingly, as for example in conducting CBNRM through the commune administration to minimize the need for travel.

Assumption 2: Funds/in-kind support are found to sink a well with manual pump to allow the Banzena population to relocate without fear of sabotage of water resources; plus the dam/bridge at Gossi is repaired to relieve livestock pressure on Lake Banzena. Comments: This is a key assumption for being able to restore the pre-conflict situation at Banzena. The government promised the funds for this if the project was able to cover the costs associated with the community consultation and engagement, however as the security situation has deteriorated it is likely that more funds for water infrastructure are required to compensate for turbulent social relations and the project is actively looking for these as the time of project staff allows.

Assumption 3: Progress of Lake Banzena legislation text development and community engagement occurs as foreseen, with no surprise obstacles. Comments: This is still a key assumption and is linked to 1

Assumption 4: Least performing communities wish to improve their resource management. Comments: This also a key assumption although it could perhaps be rephrased as "Least performing communities wish to improve their resource management more than continue focusing their efforts on inter-clan rivalry". It is also very much linked to 1, however with the shift to delivering CBNRM through the commune approach in response to the decrease in security, the project is working with the commune to identify the communities to be targeted. In this scenario it is likely to be the most socially cohesive communities that are selected as these will deliver more rapid results and act as a demonstration to others as to the benefits that can be achieved.

Assumption 5: Markets for NTFPs remain buoyant and continue to bring in between 67% and 88% more than cutting wood for charcoal. Comments: 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). Comments: This assumption still stands. As the security situation has decreased markets have been affected as travel becomes more dangerous. Markets for NTFPs seem to have dipped as demonstrated by the number of women opting for intensive livestock rearing.

Assumption 6: 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.

Comments: This assumption still stands and so far households have been willing to disclose revenue

Assumption 7: Demonstrated value of NTFPs reduces tree cutting for charcoal. Comments: This assumption is valid although with the depression in markets for NTFPs plus the increased danger in travel (particularly by vehicle) means that it is impossible to separate out causes and effects.

Assumption 8: Security situation allows free movement of project surveyors and/or eco-guardians can be trained in field survey – anti-poaching activities are aimed at increasing security situation. Comments: This assumption still stands. See comments on assumption 1. The reduced and patchy security situation has reduced the ability of the field team to travel.

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

Impact statement: 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.

Despite a worsening security situation there has been no elephant poaching in year 2, their movements have been monitored continually and summarised in monthly reports (see summary in annexe). This is clearly due to the impact of the anti-poaching unit's presence coupled with the perceived local benefit from elephant protection and conservation but it is difficult to separate out quantitatively the impact of the elephant-based CBNRM. Community leaders labelling elephant poachers as thieves and deploying the eco-guards to uncover their identities clearly has a strong deterrent effect for the vast majority, and worked for 3 years (MoV poaching database) until security deteriorated further and banditry, traffickers and extremist groups flourished (MoV see annexe).

Preliminary results (see photos in annexe) demonstrate that wise resource management strongly prevents forest and pasture degradation. The data from the test site, N'gaw N'gaw with CBNRM compared to that of Inani (without CBNRM) is shown below:

	Date	Time of survey	Length of W transect (km)	Cut trees (number)	Cut trees / km	Birds (number)	Birds / km	Notes
Inani	Apr-17	10.00-11.00	0.8	1,622	2,028	167	209	Very high levels of tree cutting
N'gaw N'gaw	Apr-17	9.35-10.40	0.69	1	1.45	105	152	Relatively high bird abundance at Inani compared to N'gaw-N'gaw (counter to expectation) thought to be due to the presence of water at Inani

Sticky traps were trialled as a way to measure invertebrates but they tended to trap birds and so were discontinued. They were checked every two hours by local guardians (who freed the birds) over a period of three days.

Data from the alternative livelihoods initiative shows that an additional 2,942 people were engaged in forest protection to ensure a good supply of forage for these initiatives.

The project has also impacted attitudes about keeping large flocks:

It is too early to judge results for those choosing to restore Vetiver.

Impact on poverty alleviation is covered in section 6 below

4. Contribution to the Global Goals for Sustainable Development (SDGs)

The project's work in promoting sustainable resource management and revenue generation based on that management 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 security, 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.

5. Project support to the Conventions, Treaties or Agreements

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. By increasing the capacity for the national government and local communities to prevent further illegal elephant killings it addresses the CITES Appendix I listing.

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.

6. Project support to poverty alleviation

Data from the alternative livelihoods initiative with women's associations is reported previously and demonstrated that their livestock increased in price by 51% equating to an average of \$60 return per person after loan repayment and equivalent to a 451% increase in cash reserves for the surveyed participants and \$29-\$39 return on investment per household for the women's associations.

Poverty surveys: Brief household/poverty scorecard surveys were trialled in April-May 2017 with the aim of putting these and other project results in context. Of the 38 households interviewed, 52% were assessed to have a likelihood score of 94-98% (i.e. the likelihood of being above the poverty line), while 21% of households had likelihood scores of <81% and as low as 21% (Annex – example of analysis of poverty scorecard surveys).

During these surveys there was doubt as to the degree they were adapted to local perceptions and so a poverty perception survey was conducted in 9 core communes of elephant range. The data are to be analysed in year 3.

7. Project support to gender equality issues

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." A 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." A participant from Dioulouna

8. Monitoring and evaluation

There are two “types” of data collected: (1) data on activities undertaken, where, to whom etc. (2) data on social and environmental impact of those activities, and specific instances for monitoring are discussed under activities.

The deterioration in security over the past year, and changeable circumstances in the Gourma region has posed a problem for data collection and monitoring as every activity requires additional resources of time, expense and logistics. The biodiversity monitoring became particularly difficult towards the end of year 2 as the road to the study area became dangerous.

The Project Director monitors overall progress and plans the implementation of project initiatives through daily reports and discussions with the Field Manager. The Field Manager is supported by an all-Malian field team who conduct and organize field surveys for monitoring project activities including tree-cutting and biodiversity surveys in the project test zones; livestock counts at Lake Banzena; recording human-elephant conflict incidents; and, before the anti-poaching unit was operational, recording poaching incidents. Towards the end of year 2 a monitoring officer was recruited because it was clear that with the increased complications associated with the insecurity, the team were unable to both conduct the activities and keep a track of the data required for monitoring. Activity reports, for example often missed the number of participants.

An example of a security related complication is when the team needed to know the exact location of an incident in an area that had recently become insecure. The eco-guard came to the office, was taught how to press the button on the GPS unit, went to the site of the incident and then took a photo of the GPS reading to give to the team member.

The vast area of operation means that regular reports to the field team from community members are essential and the community eco-guardians form an extensive monitoring network and often assist with field surveys. A “manual for field monitoring” (see AR year 1) has been drafted by the UK project team and surveys (tree-cutting; bird and insect surveys; brief household surveys) were successfully completed at the test site of N’gaw-N’gaw and its control, Inani. Three other test sites and controls were planned but the difficulty of travel makes this currently impossible, although the situation is ever changing. If N’gaw-N’gaw and its control become difficult to access, the field team will train eco-guardians to conduct a repeat survey.

The field data are collated by the field team and sent by email or online data storage to the project assistant in the UK who is responsible for verifying and analysing the data and creating reports for the Project Director on a monthly basis. This regular flow of information through the chain of communication from the communities and the field team back to the UK project team enables regular assessments of project initiatives and informs short- and long-term strategic planning.

It is sometimes difficult to quantify the impact or success of certain activities. This is an aspect of the project that has been prioritized for improvement to complement the field team’s sound understanding of what actions benefit the elephants and the communities the most effectively. This understanding is based on a knowledge of the history of the area and its people’s in conjunction with focused studies to understand particular aspects in depth - as the socio-economic household survey around Lake Banzena - to help guide the project’s strategy. The elephant range covers a vast area and solutions need to be tailored to local circumstances. As the decrease in security has meant that activities require more planning, effort, logistics and expense, it has become more of a burden to collect monitoring data, as demonstrated by missing key data in reports (such as the number of attendees at meetings). The gulf between doing the actions that are required rather than actions that can be measured has increased. The project is, however, keen to demonstrate impact and has recruited a monitoring officer whose task is to ensure that key databases are maintained and kept up to date. These include: GPS locations of places; a database to keep track of activities performed by the project; elephant poaching; elephant distribution; security incidents; data related to particular surveys such as the attitudes survey, economic impact of alternative livelihoods, perceptions of poverty, household livelihoods surveys, and impact on biodiversity.

With the new commune approach to delivering CBNRM activities, certain data related to the progress of CBNRM will be collected by the Mayor's office and by trusted eco-guards, trained and overseen by the monitoring officer.

9. Lessons learnt

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 sustainable solution (described elsewhere).

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.

The MEP 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.

5 years ago I would never have dreamed that the project could still be in operation and achieving results given what has happened in the elephant range, however it is a testament to the power of adaptive management, and a superb field team, that it has got this far and is still able to help the elephants and people of the Gourma.

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

The project has followed the reviewer's advice in updating the log-frame to reflect the changing situation and changed data collection methods and data that is un-attainable through change requests in October and March.

The reviewer also requested evidence of the DI project's contribution to the statistics showing the reduction in poaching. It is difficult to gather quantitative data that demonstrates the impact of the DI project.

11. Other comments on progress not covered elsewhere

The project is proud to have been one of the 15 winners of the 2017 UNDP Equator Prize for "outstanding community and indigenous initiatives that are advancing nature-based solutions for local sustainable development the Equator Initiative received a 806 nominations from 120 countries around the world. An extensive review process guided by our Technical Advisory Committee of international experts was undertaken over several months each winner demonstrates community-based, grassroots action to address environment, poverty and climate change challenges head-on. ". See

<https://www.equatorinitiative.org/2017/06/27/ep-2017-meet-the-winners/> and <https://www.equatorinitiative.org/2017/06/28/the-mali-elephant-project/>

The project is continually refining its approach and strategy to cope with the multiple crises. The decrease in security has prompted the design of a new method to deliver the CBNRM activities by engaging the Mayor's office at commune level to organise the meetings, village tours and engagement, closely supported and monitored by the project team. This has the advantage of

being able to cover several areas at once, embed the CBNRM process in a government structure and enable the results to enter directly into the commune’s economic and social plan. It also has the advantage of placing the responsibility for tasks such as data collection with local actors, thereby engaging them directly in the impact of their efforts.

The project has also attracted 6 year GEF funding to support the government anti-poaching unit, the creation of the new reserve, and community work; and five year EU funding. Both of these suggest that if all goes well there would be another similar tranche of funding which would really help entrench these systems throughout the elephant range.

The significant difficulties were the decrease in security due to the creeping insurgency and the crisis of water for elephants due to the pattern of rainfall across the elephant range. These have been described elsewhere together with the project’s response. Despite the difficult situation, the project is still able to operate as the local people are still there and the project provides a focus (in as much as funds allow),

The project faces risks from the security situation, which is ever-changing and the way it will develop is unknown. It has managed to adapt so far as the elephants and the local people are still there. The Project Director discusses this at length with the Field Director to ensure that it is the field team strong desire to continue and that measures are in place to mitigate the risk as much as possible.

12. Sustainability and legacy

The project enjoys high profile in Mali, within the government, MINUSMA (“everybody is talking about it in the mission”), 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 they are enacted in law under decentralisation legislation, there is no government enforcement body.

The planned exit strategy is still the same, and if anything has been strengthened (as described above).

13. Darwin identity

The Darwin Initiative funding formed 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 and communications where relevant, next to the UK Aid logo (which is more recognizable in Mali).

If the DNEF were more intellectually engaged with the project, they would have become familiar with it by now.

The Malian government and project partners (such as MINUSMA, American, Dutch and Canadian Embassies, the GEF) are aware of the UK Government’s contribution to the project, thanks to the support of the British Embassy in Mali.

14. Project expenditure

Table 1: Project expenditure during the reporting period (1 April 2017 – 31 March 2018)

Project spend (indicative) since last annual report	2017/18 Grant	2017/18 Total	Variance %	Comments (please explain)
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	(£)	Darwin Costs (£)		significant variances)
Staff costs (see below)			0	
Consultancy costs			0	
Overhead Costs			0	
Travel and subsistence			-0.16%	
Operating Costs			+0.20%	
Capital items (see below)			0	
Monitoring & Evaluation (M&E)			+0.13%	
Others (see below)				
TOTAL				

Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2017-2018

Project summary	Measurable Indicators	Progress and Achievements April 2017 - March 2018	Actions required/planned for next period
<p>Impact</p> <p>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.</p>		<ul style="list-style-type: none"> • Being one of the 15 winners of the 2017 UNDP Equator Prize <p>Biodiversity :</p> <ul style="list-style-type: none"> • No elephants poached between February 2017 and March 31st 2018, down from 44 in year 1. • No incidents of human-elephant conflict in the conflict hotspot of Wami-Masi • Data suggests strong impact of CBNRM on preventing forest destruction • Advances in the creation of the new Biosphere Reserve that covers the whole elephant range, with strictly protected core areas, one of which is Lake Banzena, the key to elephant survival. <p>Poverty/livelihoods</p> <ul style="list-style-type: none"> • Launch of commune-wide convention process to protect habitats enables more rapid progress and more sustainability. • Commune-wide conventions reduce conflict over natural resources, improve food security and improve social cohesion. • Income generating activities demonstrate financial benefits, improved food security, empowerment of women, and 	

Project summary	Measurable Indicators	Progress and Achievements April 2017 - March 2018	Actions required/planned for next period
		<p>improved social cohesion between youth and women</p> <ul style="list-style-type: none"> Action at Banzena empowers locals to manage water resources, and prevent water-borne disease 	
<p>Outcome</p> <p>Deeper deployment of locally adapted sustainable resource management that protects habitats, elephants and biodiversity, enhances local livelihoods and well-being, with a focus on four critical zones in the Malian Gourma.</p>	<ol style="list-style-type: none"> The relative progress in CBNRM will be measured by a series of indicators that includes the number of communes, villages/settlements, people (disaggregated by gender where these data are available), households (where data is available). Baseline = 245 people (from Y1.) The 12 resident clans have agreed and ratified a strategy for the removal of human impact from Lake Banzena and surrounds (including a water management strategy) which are to be left for elephant use only by April 2019 as indicated by the text of the strategy and signed convention. Poverty of women reduced in one test-zone by establishing a model of revenue generation from wise use of natural resources from protected and sustainably managed forests and pasture reserves. Forest degradation and loss halted, at one key zone by 2019 (baseline tbd at beginning of project) Crop destruction at the human-elephant conflict hotspot of Wami-Masi reduced to zero by April 2019 from a baseline of 5 incidents/year Reduced elephant poaching from a 	<ol style="list-style-type: none"> At least 881 people (the attendance at one meeting was not recorded) from 16 communities over 6 communes were engaged in establishing local conventions to protect natural resources. [An additional 302 people were funded by other donors] The 12 resident clans have been engaged to develop a water-management strategy for Banzena linked to its designation as a core protected area within the wider reserve. Legislation scheduled to be in place before the end of Y3 (see details in narrative and below) Income-generating activities established in Year 1 results: The 32 women conducting livestock fattening saw an average return of \$76 per person, equivalent to a 571% increase in cash. For the women's associations the return per household was \$29-\$39. <p>Poverty surveys were trialed in 38 households to put these results into context. 52% were assessed to have a likelihood score of 94-98% A poverty perception survey was conducted in 9 core communes to enable calibration of the survey. The data are still to be analysed.</p> <ol style="list-style-type: none"> W transects to survey tree cutting 	<ol style="list-style-type: none"> Continue with the commune-based approach to delivering CBNRM across the elephant range Continue with the process to redraft the reserve text, redefine the reserve boundaries, define the boundaries of core-areas in a participative process with local communities and devise a water-management strategy for the 12 clans of the Banzena area Conduct follow-up surveys to evaluate sustainability of alternative income generation activities; and degree to which poverty has been alleviated. Analysis of suitability of poverty perception surveys to monitor improvements. Repeat the W transect survey in the test zone to quantitatively assess impact of CBNRM activities on the Inani forest, which began in year 2 Continue to monitor human-elephant conflict across the elephant range and work with the affected communities to resolve conflict Continue to support the government in the management of the anti-poaching unit at the same time as provide community benefit. Conduct an attitude survey to try to evaluate the

Project summary	Measurable Indicators	Progress and Achievements April 2017 - March 2018	Actions required/planned for next period
	<p>baseline of 76 killed/year (6.33±7.91 / month) from April 2015-March 2016 to 6 killed/year in 2019.</p> <p>7. Biodiversity monitoring established in 1 key zone and control to measure impact of CBNRM systems</p>	<p>conducted in one test zone and a control showed the dramatic impact of CBNRM. showed 2,028.00 cut trees / km in the unprotected Inani forest compared to 1.25 cut trees / km in the N'gaw-N'gaw forest protected under a local convention.</p> <p>5. Zero incidents of HEC were reported in the Wami-Masi area of Hombori commune despite elephants being present throughout the year</p> <p>6 incidents were reported elsewhere in Year 2 in Korarou where communities are still not used to the presence of elephants since they shifted their movements in response to poaching (see AR1).</p> <p>6. Zero elephants have been poached in Year 2, compared to 44 in Year 1.</p> <p>7. Bird abundance was recorded during the W transects described under indicator 4. Encounter rate of 152 birds/km were registered at the protected N'gaw N'gaw forest and 209/km at the unprotected Inani forest which the surveyors thought this was due to the presence of water in the unprotected forest, but not in the protected forest</p> <p>Livestock surveys at Lake Banzena were unable to collect adequately quantitative data due to the numbers of cattle. Drone photography and imagery were trialled as a potential tool.</p>	<p>impact of CBNRM on the reduction of poaching</p> <p>7. Repeat the W transect survey in the test zone to quantitatively assess impact of CBNRM activities on bird abundance.</p>
<p>Output 1. Revision of existing “Partial Elephant Reserve” text and boundaries re-drawn to cover the whole of the elephant range with</p>	<p>1.1. Legislative text validated at local level through community meetings throughout the elephant range (draft text developed prior to the project start date).</p>	<p><i>Progress:</i> Output 1 has been delayed to Q4 of Y3 due to the need to concentrate the DNEF towards maintaining the operations of the APU to deter poachers. Despite the delays, significant progress has been made in Year 2, as described in</p>	

Project summary	Measurable Indicators	Progress and Achievements April 2017 - March 2018	Actions required/planned for next period
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.	<p>1.2. Legislation passed and enters law by end of year 3.</p> <p>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.</p> <p>1.4. Radio emissions to inform population and transhumants of the zone.</p>	<p>under the activities below:</p> <p><i>Action required:</i> Facilitate voluntary relocation of clans; work with the government to expedite progress with reserve legislation.</p>	
Activity 1.1. Local community validation meetings.	<p><i>Targeted actions funded by Darwin:</i></p> <ul style="list-style-type: none"> • Meetings were held with the communities around Banzena in April-May (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). • December: 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. <p><i>Relevant actions in target areas not funded by Darwin but essential to the outcome:</i></p> <ul style="list-style-type: none"> • November: 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 • November: 278 community eco-guardians were 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. • December: 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.	<p>The revision of the legal text and boundaries of the partial reserve has continued throughout Year 2 with the decision to establish a new Biosphere Reserve across the whole elephant range, with the Mali Elephant Project as the implementing partner for liaison with local communities.</p>		

Project summary	Measurable Indicators	Progress and Achievements April 2017 - March 2018	Actions required/planned for next period
Activity 1.3. Text passed through Parliament and enters law.		To be completed Q4 of Year 3 – change approved November 2017.	
Activity 1.4. Community meetings in each commune to ensure that all are aware of the new protected area and its provisions.		To be completed Q4 of Year 3 – change approved November 2017.	
Activity 1.5. Radio emissions support community meetings and reach transhumant herders.		To be completed Q4 of Year 3 – change approved November 2017.	
Output 2. Training provided to improve capacity in habitat protection, natural resources management and benefit sharing.	<p>2.1. Workshops and training for 320 people from target communities.</p> <p>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.</p>	<p><i>Progress:</i>>245 people attended workshops and training in year 1. 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 881 people (the attendance at some meetings was not recorded) from 16 communities over 6 communes were engaged in establishing local conventions to protect natural resources.</p> <p>Information relating to Indicator 2.2 is provided in output 1 and under Activity 2.2 below.</p> <p><i>Action:</i> Continue to promote commune-level adoption and implementation of CBNRM conventions and provide training to communities in potential hotspots of poaching and/or insecurity (these locations may change depending on ground conditions).</p>	
Activity 2.1. Workshops for target communities.		<p><i>Targeted actions funded by Darwin:</i></p> <ul style="list-style-type: none"> • 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 	
Activity 2.2. Workshops for Banzena communities.		Refer to Output 1 for additional details.	
<p>Output 3. Women’s associations created to manage and nurture NTFPs in key area, thereby developing a model for sustainable revenue-generation from forest resources. The zones are:</p> <ul style="list-style-type: none"> • Daroma/Sartatane/Tinabou – supporting the solution to secure Lake Banzena for 	<p>3.1. Number of women and/or households represented by the participants. 20% households engaged in year 1 rising to 50% by year 3. Area covered to be determined participatively at the beginning of the project.</p> <p>3.2. Number individuals spontaneously copying these initiatives. Baseline = 0</p>	<p>3.1. & 3.2. <i>Progress:</i> Refer to AR1 for additional information.</p> <p>Three women’s associations representing 128 households and 64 individuals representing an undefined number of households (50% women) were engaged. One of the women’s associations chose a livestock fattening scheme (64 households), one chose to replant Vetiver (25 households), a useful plant that has been over-exploited and is scarce, and one chose to establish a small shop for essentials (228 households).</p> <p>For the 64 participants (50% women) from the livestock fattening initiative, their</p>	

Project summary	Measurable Indicators	Progress and Achievements April 2017 - March 2018	Actions required/planned for next period
<p>elephant use only.</p> <ul style="list-style-type: none"> • 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 wher 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 	<p>3.3. Number of individuals engaged in natural resource protection as a result. Baseline = 0</p>	<p>livestock increased in price by 51%, equating to an average of \$60 return per person after loan repayment (\$76 average per woman and \$44 average per man), equivalent to a 451% increase in cash.</p> <p>For the women’s association conducting livestock fattening the return per household was \$39 per household, and \$29 for the shop.</p> <p>The 64 “promoters” mobilised 830 of their family members and 1,874 of villagers to conduct natural resource protection and 274 others copied by initiating their own schemes.</p> <p>For the women’s associations a total of 585 additional villagers were mobilised for natural resource protection representing 128 households.</p> <p><i>Action:</i> Follow up survey to assess sustainability of the initiative and if it continued and spread without project investment. Calibration of a household poverty survey using results from the Gourma wide poverty perception survey</p>	
<p>Activity 3.1. Preliminary meetings held with interested women from four test-zones; associations formed.</p>		<p><i>Completed in Year 1 – refer to AR1.</i></p>	
<p>Activity 3.2. Meetings and training workshops for the women’s associations.</p>		<p><i>Completed in Year 1 – refer to AR1.</i></p>	
<p>Activity 3.3. Monitoring of revenue received from NTFPs.</p>		<p>It is too soon to evaluate the impact of NTFP activities. This will need to be done in Q4 of Y3.</p>	
<p>Output 4. Habitat, elephant and biodiversity loss and degradation halted and reversed (including test and control sites).</p>	<p>4.1. Livestock pressure monitored at Lake Banzena.</p> <p>4.2. Tree cutting in one test zone reduced compared to adjacent control zone. (Baseline areas to be determined participatively at beginning of project, and baseline level of tree cutting also to be determined at beginning of project.)</p> <p>4.3. Bird abundance as indicator of biodiversity in one test-zones and control sites carried out at same time as tree cutting surveys (baseline tbd at beginning</p>	<p><i>Progress:</i></p> <p>4.1. <i>Progress:</i> There has been progress in advancing a multi-faceted strategy for Lake Banzena (see outputs 1, 2 and 3) however this has not yet been implemented as it is awaiting support to renovating water infrastructure and progress with the redesignation of the elephant reserve.</p> <p>Obtaining quantitative estimates of livestock numbers has proved impossible from the ground. A drone survey was trialled in May 2017 and compared with VHR imagery (Annex – drone and VHR comparison) It estimated that a total of 2649 cattle (1318/km) and 1051 goats (523/km) were present along the 2.01 km stretch of SW shoreline alone. <i>Action:</i> Investigate feasibility of conducting drone surveys</p> <p>4.2. <i>Progress:</i> Only one test zone could be evaluated due to difficulties in travel resulting from a decrease in security. Results showed 1,028.00 cut trees / km in the unprotected Inani forest compared to 1.25 cut trees / km in the N’gaw-N’gaw</p>	

Project summary	Measurable Indicators	Progress and Achievements April 2017 - March 2018	Actions required/planned for next period
	<p>of project).</p> <p>4.4 Reduced elephant poaching from a baseline of 76 killed/year (6.33±7.91 / month) from April 2015-March 2016 to 6 killed/year in 2019.</p>	<p>forest protected under a local convention.</p> <p><i>Action:</i> Repeat the W transect survey in the test zone to quantitatively assess impact of CBNRM activities on the Inani forest, which began in year 2</p> <p>4.3. <i>Progress:</i> Encounter rate of 152 birds/km were registered at the protected N'gaw N'gaw forest and 209/km at the unprotected Inani forest which the surveyors thought this was due to the presence of water in the unprotected forest, but not in the protected forest</p> <p><i>Action:</i> Repeat the W transect survey in the test zone to quantitatively assess impact of CBNRM activities on the Inani forest, which began in year 2.</p> <p>4.4. <i>Progress:</i> Refer to Outcome indicator 6. <i>Action:</i> Continue to engage communities in elephant-centred CBNRM.</p>	
Activity 4.1. Livestock and people surveys at Lake Banzena.		<p><i>Targeted action funded by Darwin:</i></p> <ul style="list-style-type: none"> • April-May: Community eco-guardians surveying livestock at Banzena; brief household surveys completed at Daroma and Sartatane • June: APU completed drone survey of livestock on SW shore of Banzena, images analysed by UK project team (Annex – comparison of VHR and drone imagery). <p><i>Future action:</i> Continue to investigate feasibility of remotely sensed methods for livestock survey in Q4 Year 3, and repeat the livelihood survey in Y3 if action has occurred to improve the situation at Banzena.</p>	
Activity 4.2. Tree-cutting and biodiversity surveys at test-and control sites.		See above under output 4	
Activity 4.3. Maintenance of database recording elephant killings (MIKE data).		<p><i>Progress:</i> The elephant poaching and natural mortality databases are maintained from monthly reports from the field (together with information on elephant distribution from eco-guardians (Annex – elephant locations maps). No poaching incidents have been recorded in Year 2.</p>	
<p>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.</p>	<p>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.</p> <p>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</p>	<p><i>Progress:</i> See below under activities</p> <p><i>Action:</i> to continue actively communicating the project's experience</p>	

Project summary	Measurable Indicators	Progress and Achievements April 2017 - March 2018	Actions required/planned for next period
	international community. 5.3. Two journal papers submitted by end year 3 (both open access). 5.4. Conference presentations and general talks (at least two per year).		
Activity 5.1. Briefing reports to government and partners.		Frequent briefing reports and updates have been produced for government and partners, most notably <ul style="list-style-type: none"> • In August concerning the review of the elephant reserve legislation • In November concerning the forthcoming GEF project • In October (for regional authorities) concerning the situation at Banzena • In November for high-level authorities raising the alarm concerning Banzena • In December as a prelude to the meeting in Douentza between high level government and local communities to discuss the reserve in relation to the situation at Banzena 	
Activity 5.2. Newsletter, blog updates, articles, talks and conference presentations		<ul style="list-style-type: none"> • 9 blog/newsletter updates in Year 2 (target = 4 times per year) MoV: http://www.wild.org/category/blog/mali-elephants-blog/ See annexe for details. • Entry in National Geographic Elephant blog April 7th, 2017 https://blog.nationalgeographic.org/2017/04/07/ground-breaking-initial-success-in-protecting-malis-elephants-but-it-must-be-sustained/ • 8 talks and conference presentations 	
Activity 5.3. Journal papers (2 submitted by project end).		<ul style="list-style-type: none"> • One book chapter <i>Action:</i> Journal papers due in Y3	

Project implementation timetable that shows the key milestones in project activities. Q1 Year 1 = April-June 2016; grey = original timetable; green = complete; blue = modified timetable

Activity	No of months	Year 1				Year 2				Year 3			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 1. Revision of reserve legislation; Banzena designated core area													
1.1 Local community validation meetings	3												
1.2 Text finalised	2												
1.3 Text passed through Parliament and enters law	3												
1.4 Community meetings in each commune to ensure that all are aware of the new protected area and its provisions	3												
1.5 Radio emissions support community meetings and reach transhumant herders	3												
Output 2. CBNRM training for target communities identified by commune													
2.1 Workshops for target communities	27												
2.2 Workshops for Banzena communities	9												
Output 3. Alternative livelihood generation projects with women													
3.1 Preliminary meetings held with interested women from four test-zones; associations formed													
3.2 Meetings and training workshops for the women													
3.3 Monitoring of revenue received from NTFPs													
Output 4. Habitat, elephant and biodiversity loss/degradation halted – test site													
4.1 Livestock and people surveys at Lake Banzena	18												
4.2 Tree-cutting and bird surveys at test- control sites	3												
4.3 Maintenance of database recording elephant killings (MIKE data)	36												
Output 5. Research outputs developed and shared with target audiences													
5.1 Briefing reports to government and partners	12												
5.2 Newsletter, blog updates, articles, talks and conference presentations	12												
5.3 Journal papers	12												

Annex 2: Project's full current logframe

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>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.</p>			
<p>Outcome: Deeper deployment of locally adapted sustainable resource management that protects habitats, elephants and biodiversity, enhances local livelihoods and well-being</p>	<ol style="list-style-type: none"> 1. The relative progress in CBNRM will be measured by a series of indicators that includes the number of communes, villages/settlements, people (disaggregated by gender where these data are available), households (where data is available). Baseline = 0 (as this is a new approach) 2. The 12 resident clans have agreed and ratified a strategy for the removal of human impact from Lake Banzena and surrounds (including a water management strategy) which are to be left for elephant use only by April 2019 as indicated by the text of the strategy and signed convention. 3. Poverty of women reduced in four key test-zones by establishing a model of revenue generation from wise use of natural resources from protected and sustainably managed forests and pasture reserves. 4. Forest degradation and loss halted, at one key zone by 2019 (baseline tbd at beginning of project) 5. Crop destruction at the human-elephant conflict hotspot of Wami-Masi reduced to zero by April 2019 from a baseline of 5 incidents/year 6. Reduced elephant poaching from a baseline of 76 killed/year (6.33±7.91 / month) from April 2015-March 2016 to 6 killed/year in 2019. 7. Biodiversity monitoring established in 1 key zone and control to measure impact of CBNRM systems 	<ol style="list-style-type: none"> 1 Project database and maps showing the location and recording relative level of CBNRM quality in relation to the elephant migration route as measured by quantifiable indicators e.g. number of brigade members, existence of management committee, local conventions, maps, protected zones and features, resource management activity such as firebreak construction. 2 Project reports and field surveys (annual), photos and databases 3 Revenue records held by associations; brief household surveys. 4 Two tree-cutting surveys at the beginning and end of the project 5 Project reports based on data collected by community eco-guardians. 6 Number of elephant illegally killed as registered by community eco-guardians and DNEF records. 7 Analysis of bird abundance surveys at same time as forest-cutting surveys (biannually) 	<p>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.</p> <p>Hypothesis to test:</p> <ul style="list-style-type: none"> • Legislation provides added incentive for local communities to adopt NRM systems and embrace additional income generation activities demonstrated by the project with test communities, particularly by the least cohesive societies. • Increased NRM improves the level of social cohesion in the least cohesive communities <p>Funds/in-kind support are found to sink a well with manual pump to allow the Banzena population to relocate without fear of sabotage of water resources; plus the dam/bridge at Gossi is repaired to relieve livestock pressure on Lake Banzena (negotiations are underway with USAID and AFRICOM).</p> <p>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</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>Outputs:</p> <p>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.</p>	<p>1.1. Legislative text validated at local level through community meetings throughout the elephant range (draft text developed prior to the project start date).</p> <p>1.2 Legislation passed and enters law by end of year 3.</p> <p>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.</p> <p>1.4 Radio emissions to inform population and transhumants of the zone.</p>	<p>1.1 Project reports, photographs of validation meetings</p> <p>1.2 Legal designation documents</p> <p>1.3 Project reports, photographs of information and awareness meetings</p> <p>1.4 Text and recordings</p>	<p>Progress of text development and community engagement occurs as foreseen, with no surprise obstacles</p>
<p>2. Training provided to improve capacity in habitat protection, natural resources management and benefit sharing</p>	<p>2.1. Workshops and training for 320 people from priority communities as selected during the commune engagement process.</p> <p>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.</p>	<p>2.1- 2.2 Project reports on workshops and training courses, photos, and maps</p>	<p>Target communities wish to improve their resource management</p>
<p>3. Women’s associations created to manage and nurture NTFPs in the four test zones, thereby developing a model for sustainable revenue-generation from forest resources. The zones are:</p> <ul style="list-style-type: none"> • 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 	<p>3.1. Number of women and/or households represented by the participants. 20% households engaged in year 1 rising to 50% by year 3. Area covered to be determined participatively at the beginning of the project.</p> <p>3.2. Number individuals spontaneously copying these initiatives. Baseline = 0</p> <p>3.3. Number of individuals engaged in natural resource protection as a result. Baseline = 0</p>	<p>3.1 Project reports, photos and database.</p> <p>3.2. Number of women’s associations registered with the project</p>	<p>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).</p> <p>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.</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>Wami/Masi where human-elephant conflict is high</p> <ul style="list-style-type: none"> • 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 			<p>Demonstrated value of NTFPs reduces tree cutting from charcoal</p>
<p>4. Habitat, elephant and biodiversity loss and degradation halted and reversed at four test sites</p>	<p>4.1. Livestock pressure monitored at Lake Banzena.</p> <p>4.2. Tree cutting in four test zones reduced compared to 4 adjacent control zones. Control zones will also determine the degree to which wood cutting has been displaced to adjacent areas. (Baseline areas to be determined participatively at beginning of project, and baseline level of tree cutting also to be determined at beginning of project.)</p> <p>4.3. Bird abundance as indicator of biodiversity in four test-zones and control sites carried out at same time as tree cutting surveys (baseline tbd at beginning of project). [modified from original through approved request]</p> <p>4.4 Reduced elephant poaching from a baseline of 76 killed/year (6.33±7.91 / month) from April 2015-March 2016 to 6 killed/year in 2019.</p>	<p>4.1 Annual surveys</p> <p>4.2. Two tree-cutting surveys at the beginning and end of the project</p> <p>4.3 Bird abundance surveys conducted at the same time as tree cutting surveys.</p> <p>4.4. Number of elephant illegally killed as registered by community eco-guardians and DNEF records, summarised in elephant poaching database.</p>	<p>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</p>
<p>5. Research outputs developed and shared with target audiences: local and national stakeholders/ communities; DNEF foresters and officials; local, regional and national government; international</p>	<p>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.</p>	<p>5.1. Project reports, briefing papers and photos.</p>	

Project summary	Measurable Indicators	Means of verification	Important Assumptions
conservation and development community.	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). 5.4. Conference presentations and general talks (at least two per year).	5.2 Web-links. 5.3 Journal confirmation of receipt 5.4 Presentation/talks & conference agenda	
<p>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)</p> <ul style="list-style-type: none"> 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 1.5 Radio emissions support community meetings and reach transhumant herders 2.1 Workshops for target communities 2.2 Workshops for Banzena communities 3.1 Preliminary meetings held with interested women from four test-zones; associations formed 3.2 Meetings and training workshops for the women 3.3 Monitoring of revenue received from NTFPs 4.1 Livestock and people surveys at Lake Banzena 4.2 Tree-cutting and bird surveys at test- control sites 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 			

Please refer to the modified timetable below Annex 1 for an updated timeline of project activities.

Annex 3: Standard Measures

Table 1 Project Standard Output Measures

Code No.	Description	Gender of people (if relevant)	Nationality of people (if relevant)	Year 1 Total	Year 2 Total	Year 3 Total	Total to date	Total planned during the project
6A – Number of people receiving other forms of training	<p>Y1 - 667 community members received training in CBNRM implementation and activities related to women’s associations for generating additional income based on wise resource use; 2 surveyors received training to monitor the income generating projects; 2 members of the field team received training in field survey methods.</p> <p>Y2 - Workshop and training to improve capacity in habitat protection, NRM, benefit sharing: In Year 2, at least 881 people (the attendance at some meetings was not recorded) from 16 communities over 6 communes were engaged in establishing local conventions to protect natural resources; 268 members from multiple clans around Lake Banzena worked together to build 264 km of firebreaks to protect 98km² (9,800 has) of pasture.</p> <p>Y2 - Although workshops for the women’s associations and income generating initiatives took place in Year 1, women and men are now mobilising their family members and promoting NRM to others: the 64 “promoters” (32 women) mobilised 830 of their family members and 1,874 of villagers to conduct natural resource protection and 274 others copied by initiating their own schemes. For the women’s associations 238 villagers were mobilised for natural resource protection related to livestock fattening and 119 for the Vetiver restoration.</p>	<p>71% of community members receiving training were women.</p> <p>Gender of people attending meetings unknown</p> <p>83% of the promoters are women</p>	Malian	671	1,149 (direct training)	3,335 (indirect training)	1,820 (direct) 5,155 (total)	1,071
6B – number of	Based on training above – 31 days of training	As above	Malian	4				12

training weeks provided	were provided ~4 weeks. Year 2: Appr. 4 weeks based on 17x2-3 days				4		8	
7 – number of training materials produced to be used by host country.	Field manual for project monitoring surveys produced in French for the local field team and community eco-guardians (vast majority of trainees are illiterate)			1			1	2
14A – number of workshops organised to disseminate findings	6 strategic planning meetings with DNEF, Ministry of Environment and other partners 1x3-day meeting of senior government officials and other stakeholders (including local community representatives)			6	1		7	18
14B – number of conferences/ seminars attended at which findings from Darwin project were disseminated	11 presentations / talks were attended to disseminate project findings and future plans involving Darwin activities			11			11	24
23 – value of resources raised from other sources	£125,000 from the International Conservation Fund of Canada \$120,000 from USFS \$30,000 from MINUSMA \$60,000 from UNICRI \$80,000 from Tusk			£75,000 \$60,000 \$30,000 \$40,000	£50,000 \$60,000 \$60,000 \$40,000		£75,000 \$120,000 \$30,000 \$60,000 \$80,000	£125,000 \$290,000

Table 2 Publications

Title	Type (e.g. journals, manual, CDs)	Detail (authors, year)	Gender of Lead Author	Nationality of Lead Author	Publishers (name, city)	Available from (e.g. weblink or publisher if not available online)
Running for Elephants	Blog	Wiesje Ellferich, 2017	F	Dutch	The Wild Foundation	https://www.wild.org/category/blog/mali-elephants-blog/
The Mali Elephant Project wins Big!	Blog	Melanie Hill, 2017	F	USA	The Wild Foundation	Same as above
Promoting Community Solidarity and Improved Livelihoods in the Gourma	Blog	Dr Susan Canney, 2017	F	UK	The Wild Foundation	Same as above
A Response to "We need to talk about the militarisation of conservation"	Blog	Dr Susan Canney, 2017	F	UK	The Wild Foundation	Same as above
Mali's Elephants get a New Ally	Blog	Rory Young, 2017	M	Zimbabwe	The Wild Foundation	Same as above
Remembering the Legacy of Corporal Souleymane	Blog	Nomba Ganame, 2017	M	Malian	The Wild Foundation	Same as above
Working together brings the Impossible within reach in Mali	Blog	Dr Susan Canney, 2017	F	UK	The Wild Foundation	Same as above
This Stunning Victory for Elephants will make you believe in the Power of Collaboration	Blog	Amy Lewis, 2018	F	USA	The Wild Foundation	Same as above

Yachak Organic fights Poaching in West Africa, announces official beverage sponsorship of the MEP	Blog	Amy Lewis, 2018	F	USA	The Wild Foundation	Same as above
Ground-breaking initial success in protecting Mali's elephants, but it must be sustained	Article	Dr Susan Canney, 2017	F	UK	National Geographic	https://blog.nationalgeographic.org/2017/04/07/ground-breaking-initial-success-in-protecting-malis-elephants-but-it-must-be-sustained/
The Desert Elephants of Mali	Book Chapter	Vance Martin & Dr Susan Canney	M F	USA UK		Book edited by Don Pinnock and Colin Bell
Defending Wildlife: The Road to SDG16 in Mali	Article	Amy Lewis, 2017	F	USA		https://impakter.com/defending-wildlife-road-sdg-16-mali/

Checklist for submission

	Check
Is the report less than 10MB? If so, please email to Darwin-Projects@ltsi.co.uk putting the project number in the Subject line.	X
Is your report more than 10MB? If so, please discuss with Darwin-Projects@ltsi.co.uk about the best way to deliver the report, putting the project number in the Subject line.	
Have you included means of verification? You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	X
Do you have hard copies of material you want to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number.	X
Have you involved your partners in preparation of the report and named the main contributors	X
Have you completed the Project Expenditure table fully?	X
Do not include claim forms or other communications with this report.	