

Darwin Initiative Main and Post 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 2019

Darwin Project Information

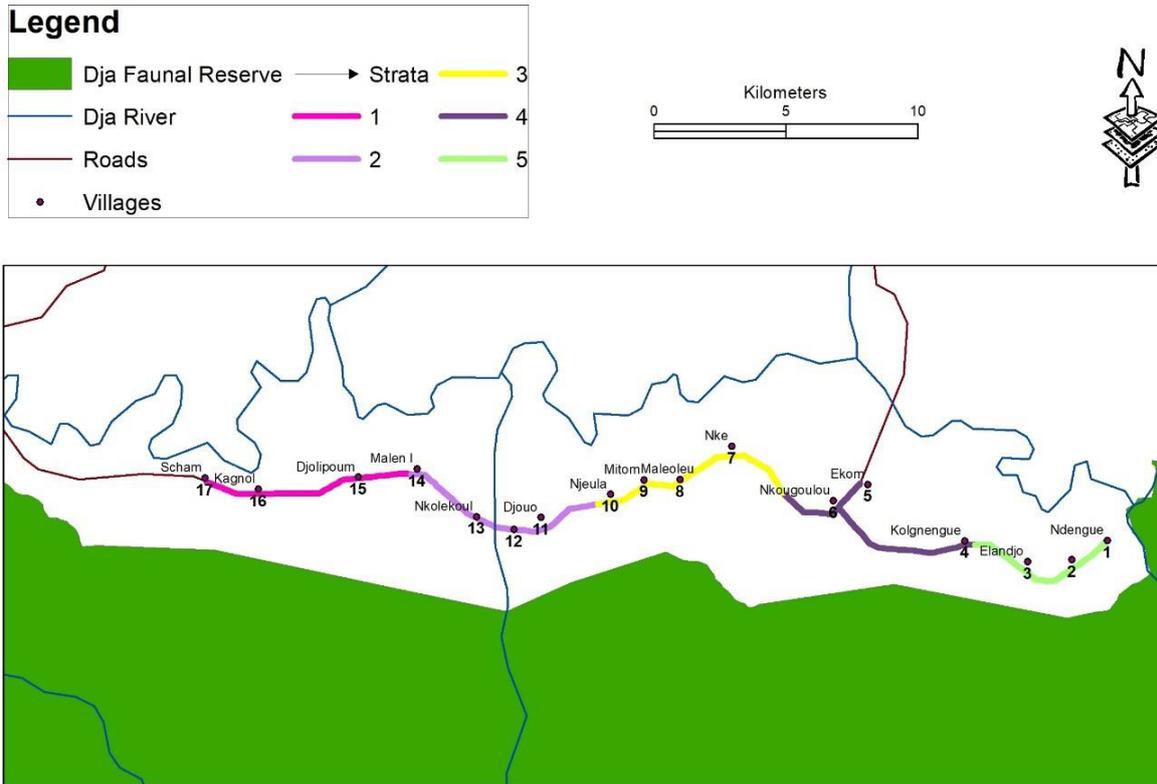
Project reference	24-005
Project title	Enabling rural poor to help protect biodiversity of Dja, Cameroon
Host country/ies	Cameroon
Contract holder institution	Antwerp Zoo Centre for Research & Conservation (CRC), Royal Zoological Society of Antwerp (RZSA)
Partner institution(s)	African Wildlife Foundation (AWF), Living Earth Limited (LEL), Association de la Protection de Grands Singes (APGS), Tropical Forest & Rural Development (TF-RD), Fondation Camerounaise de la Terre Vivante (FCTV)
Darwin grant value	273,678 GBP
Start/end dates of project	1/4/2017 – 31/3/2021
Reporting period (e.g., Apr 2018 – Mar 2019) and number (e.g., Annual Report 1, 2, 3)	1/4/2018 – 31/3/2019 Annual Report 2
Project Leader name	Nikki Tagg
Project website/blog/Twitter	http://www.landscapeconservation.org.uk/darwin-project
Report author(s) and date	Neil Maddison, Adi Nwafi, Donald Mbohli, Mama Mouamfon, Nikki Tagg, 30/4/2019

1. Project rationale

Working alongside law enforcement efforts, which are funded separately, we empower local communities to play an increased, critical role in natural resource management of the Dja landscape, Cameroon, and enable them to generate alternative protein sources and income, incentivising behavioural change, and delivering practical benefits to conservation and development in poor rural communities.

The northern Dja buffer zone is home to 17 main communities; the region’s poorest and first to be negatively-impacted by the decline in health of the Dja Faunal Reserve (DFR, map below). Hunting by men and bushmeat trading by women play important livelihood and cultural roles, providing income-generating opportunities and access to protein. Overhunting and illegal exploitation promotes unsustainable offtake, threatening long-term food security and ecosystem viability. As hunters are pushed further into DFR to source meat, and outsiders hunt/purchase in the area, biodiversity is lost, and the DFR’s UNESCO World Heritage Site status is severely threatened. People live in poverty, without the skills and support required to change from subsistence→trade, and with no affordable alternative source of animal protein other than unsustainable hunting.

NORTHERN PERIPHERY OF DJA FAUNAL RESERVE



We face a choice: cancel the DFR's status (decreasing law enforcement, and the food security for rural poor will plummet), or protect the Reserve so that it can act as a sustainable source for replenishing non-threatened species outside of the Reserve, thus providing wild-caught meat protein for local communities and preserving traditional ways of life. Hunting inside the Reserve is illegal, it is increasingly difficult to meet family demands and therefore a proportion of local communities respond to incentives. This project maximises on this desire to change to encourage cultural change (hunting→production/sustainable, legal access to protein). A locally-managed sustainable-trade model recently revealed positive attitude changes and increased community ownership through participatory learning (mid-term evaluation, Darwin 20-007). However, such models cannot address high wild-caught meat dependency alone: simultaneous livelihood alternatives (income/protein) are required to avoid a food security crisis. We collaborate with partners specialising in cocoa-farming to develop old fallow and seek certification for previously-established cocoa programmes and externally-funded new programmes to work as long-term financial-income alternatives. For intermediate, short-term protein, sustainable fishing in the nearby River Dja and its tributaries has arisen as a potential option from discussions with communities.

In the absence of conditionality/sanction mechanisms, alternatives can become additional rather than substitutional. To prevent additionality, and address those people not susceptible to behavioural change, simultaneous law enforcement/anti-poaching is underway (CAWHFI and ECOFAC: AWF, Zoological Society of London [ZSL], together with Services of Conservation of the Dja [SC-Dja]).

2. Project partnerships

CRC assumes overall responsibility for project leadership and management, reporting and administration, and data analysis. CRC has been supporting, financially and technically, the Cameroonian association APGS since 2001, a collaboration which has focussed on conservation research and small-scale development investments in the northern periphery of the DFR. Thus, both an expert team of conservation scientists at CRC, and an experienced and skilled team of technical and logistic staff in Cameroon, enables the provision of excellent technical leadership, mentoring and development support needed for local partners (APGS, FCTV and TF-RD) to excel in the design and delivery of community-focused outputs. Based on this structure, Y2 of the project has continued to build on the good progress made in Year 1.

Externally, CRC, AWF and LEF have held quarterly meetings in Antwerp to discuss all aspects of the project, including the remote management of in country partners, year planning and reviewing, etc. Each of these partners has a close collaboration with one of the in-country partners, respectively, therefore ensuring that all plans/decisions/discussions had in Antwerp are clearly communicated and translated to Cameroon and the project on the ground. Similarly, in country partners (APGS, TF-RD and FCTV) have held monthly meetings in Cameroon for all personnel involved in rolling out Darwin activities in the field. All meetings have been thoroughly minuted, and distributed to all partners, who are then invited to comment, respond, contribute to discussions, etc.

To some degree, all partners are involved in the decision-making processes, and all are also concerned with some aspects of M&E relating to the outputs towards which they are focused. For example, although the overall M&E programme is being overseen by CRC and carried out on the ground by APGS, both the other in country partners (TF-RD and FCTV) are also conducting additional, targeting M&E regarding specific baseline information or measurement of indicators related to outputs 1 and 2, respectively.

One area we are aware of, and is being analysed, is that there is the potential for conflict of interest between some of the partners activities, notably the establishment of a private sector organisation that could benefit preferentially from donor investment after public funding has finished. The involvement of the private sector to help ensure sustainability is welcomed, but it is recognised that the process of assigning benefit must be clear, transparent and implemented with donor agreement rather than being 'assumed' to be the case. During a mid-term review of the project by Darwin representatives, this issue was highlighted, recommendation given and is now being assessed by one of the project partners (Living Earth), with a report due back by mid-term Year 3.

3. Project progress

3.1 Progress in carrying out project Activities

Bushmeat Offtake

The aim of this survey is to investigate bushmeat off take and hunting efforts of hunters in the Dja reserve. The bushmeat offtake survey questionnaire (C 1.1) was written by project staff. Six local villages were chosen for data collection and georeferenced information (C 1.2) of each was recorded. Six meetings were organised by project staffs in each of the villages. Six local workers (anqueteurs) and six assistants who are all base in the villages were selected - two from each of the six villages. Selection criteria include availability in the village, good collaboration with other villagers, knowledge of the different animals and hunting methods used, and educational level (able to read and write). Local workers and assistants were trained on data collection. Hunters were sensitised to present all bushmeat brought from the forest to anqueteurs who recorded the data on sheets. Assistants continued to collect data in the absence of local workers. The first two sets of data have been collected, entered in excel and analysed. Bushmeat offtake data is collected as planned.

Wildlife Abundance Survey

The aim of this survey is to investigate the wildlife population density (encountered rate per kilometre) in the surrounding forest in the Dja reserve. It also allows an assessment of the spatial and temporal variations in wildlife abundance.

Six transect sites were selected in the 17 villages and six transects of 2.5km long, 500m apart (total 36 transects, 45km²) were opened (minimum vegetation cut) in each site. Three sites were selected to the north of the road from Somalomo to Ekom, between the road and river Dja. This river is closer to some villages (eg Schwam) consequently the choice of sites (in the north) depended on the possibility to place five transects of 2.5km long and 500m apart. All transects were parallel to the road. The first transect was opened in the forest in the villages and the 6th and last one 3km into the forest, and the rest were opened in between. Waypoints of transects are included in C 3.4.

A team of four researchers and six villagers were hired by project staff and the first set of data was collected on all the transects as planned and later entered in excel and analysed.

Household Socioeconomic Survey

The aim of this survey is to investigate the level of livelihoods of the local population in the target villages. Main aspects investigated include their main activities, level of education, main sources of income, expenditures and common health problems. The survey was focused in five key villages; however, some basic information such as village population, number of households, etc was collected in the rest of the villages. Socioeconomic survey was collected in three parts.

- Socioeconomic Survey with Close End Questionnaire; data was collected in households in five villages with the questionnaire in C 2.1 "A Questionnaire Demographics & Socioeconomics close end". Chiefs of households were identified and interviewed.
- Socioeconomic Survey with Open End Questionnaire; the same chiefs of households were interviewed, and data recorded in questionnaire C 2.1 "B Questionnaire Socioeconomics open end". However, fewer chiefs were interviewed (1 in a group of 10).
- Socioeconomic Survey Village Information; the target was the rest of the villages (excluding the five key villages). Each village chief was interviewed and basic information including total population, number of households, etc was recorded.

All household socioeconomic survey data is being entered in excel files for analysis and interpretation.

Restitution meetings were organised in all the 17 local villages in the Dja on the cultivation of cocoa. Focus was on the following activities:

1) Reciprocal environmental agreement (REA) on cocoa farming

These are individual and voluntary agreements setup by villagers and project staffs. Villagers benefit from improved expertise on cocoa, cocoa farming material and an organised cocoa farming and market, in exchange for wildlife and environmental conservation and sustainable management of cocoa farming. The draft of REA written by project staffs was presented to potential cocoa farmers. Local opinions were carefully considered and integrated. Indicators for these meetings include attendance lists and pictures (B2.4.1 – B2.4.4).

2) Planning of cocoa season activities

Project staffs presented all cocoa farming activities and timing within a cocoa cultivation season. Villagers could choose to create new cocoa plantations. Activities here included nursery setup and monitoring, preparation of the cocoa plantation, planting of young cocoa plants in plantation, monitoring of plantation, harvesting and drying of cocoa. Villagers could choose to rehabilitate old cocoa plantation that have been abandoned owing to insect attacks and reduced yields. Activities here included trimming, treatment against insects and monitoring.

3) Establishment of a workplan for the cocoa cultivation season

Project staffs presented a cocoa cultivation work plan that correspond to the season in the area. This included the appropriate time for nursery setup, preparation of plantation, planting of young plants in plantation, treatment against insects, harvesting of cocoa and drying.

4) Presentation and signature of REA to villagers

Prior to receiving any technical and material assistance for cocoa farming from the project, villagers had to go in for a voluntary and individual reciprocal agreement. The final copy of this document that was developed with the implication of villagers was presented to them and during other organised session in the villages, villagers signed the document (B3.5)

5) Practical initiation of cocoa farming in the target communities leading to income generating activity;

Identification of old and abandoned cocoa plantations for rehabilitation and practical training on rehabilitation. 59 cocoa farmers who signed REA went in for rehabilitation and a total of 84 hectares of farms were rehabilitated in the 17 villages. The rest of 27 who also signed plus 43

others who did not but have manifested the need to sign are also creating new cocoa farms. Each cocoa farmer is creating 0.5 hectare of cocoa farm, corresponding to about 35 hectares of new cocoa farms.

Training of cocoa farmers on best cocoa farming practices including creation and monitoring of nurseries, planting of young cocoa plants in new plantations, monitoring of cocoa plants in plantations, harvesting of mature cocoa beans and initial transformation to obtain good quality cocoa beans, rehabilitation of old cocoa plantations, etc. This training happened during organised sessions (B2.5.2) in the villages and in neighbouring villages where villagers have received same training. Villagers involved are currently creating new cocoa farms and rehabilitating old ones. Fruit trees are currently planted in the different plantations for a good cocoa agroforestry.

Project staffs are focusing on organising the cocoa market for commercialisation (B2.5.3) and also the cocoa farmers into a legalised entity such as a common initiative group that will take over full management of the cocoa project in the Dja at the end of the project.

Community engagement in fishing

17 workshops have been organised in the 17 villages by project staffs in the presence of the local population and community views on alternative proteins sources were discussed. The preferred choice for alternative proteins was identified and agreed by project staffs and the local population. This included improving sustainable fishing along the Dja river.

An organisational model to improve this activity was discussed and agreed by project staffs and local population. The executive bureau of the common initiative group made of representatives from the 17 villages was elected by villagers. Internal rules and regulations and the status of the common initiative group were written by project staff and the local population and legalised at the divisional officers in Abong Mbang in the east region of Cameroon. Bureau members are assisted technically by project staffs in the management of the CIG. Leadership will be passed on to them at the end of year 4 of the project.

Improve fishing in the Dja river and tributaries

Fish farmers – villagers who signed the reciprocal environmental agreement (detail below) have received fish farming material. Four modern fish smoking sites have been constructed in the forest and are used by villagers to improve fish conservation. Fish farmers were trained on the production of local life jackets for security during fishing. These are quite affordable to them. They are currently receiving training on sustainable fishing in the Dja river. Project staffs are carrying on studies on constrains link to fish conservation in the villages, inventory on the different species of fish in the Dja river, on community management of fishing and on setting up a community fishing zone for sustainability.

Organise communities in Fishing valorisation groups

Reciprocal environmental agreements were written by project staffs and the local population. This document contains rules and regulations to encourage wildlife and environmental conservation and on sustainable fishing for livelihood amelioration. This individual and voluntary agreements were signed by xx fish farmers confirming their full implication in the project. Few villagers who did not sign have manifested their willingness to sign to project staffs.

Outreach on fishing and marketing of fishing products regulations

Fishing rules and regulation have been discussed with villagers in the 17 villages and their views were considered. Booklets and postal containing these rules and regulation have been produced and distributed and again explained to them. They are currently applying them in fishing.

3.2 Progress towards project Outputs

Output 1 Alternative income (TF-RD)

Baseline condition;

Poaching of wildlife was the main income generating activities for villagers in the 17 communities. They hunt unsustainably killing endangered species including gorillas, chimpanzees, elephants, etc for commercialisation. Middle men from urban towns visit the villages on a regular bases and provide poaching material and intern buys bushmeat and transport mostly on moto bikes to the nearby towns for commercialisation.

Change recorded to date;

1. 84 villagers signed REA to conserve wildlife and the environment, to benefit from sustainable income sources
2. Capacities of more than 130 local villagers reinforced on cocoa cultivation and rehabilitation of old cocoa plantation
3. 84 hectares of old cocoa plantations have been rehabilitated in the 17 villages
4. 35 hectares of new cocoa plantations have been created in the 17 villages

Source of evidence;

Evidence of signed REAs on cocoa farming include documents signed by villagers and pictures in folder A 3.1

Evidence of capacity building include attendance lists and pictures taken during workshops, included in folder B 2.5.2

Evidence of hectares of new cocoa farms and rehabilitated farms are GPS points, list of owners and pictures, yet to be taken.

Rehabilitated and new cocoa farms will mature to yield income to villagers in a couple of years (rehabilitated farms first). Measures put in place to confirm the resulting increase in household income will include a survey on the cocoa yield of cocoa and the selling price. This is a good measure as it focuses directly on cocoa. Other related increase in income from cocoa plantation will include sales of food crops such as plantains, bananas, etc that are also cultivated in plantations. Evidence of their increase will be confirmed by a household socioeconomic survey.

Output 2 Alternative Protein (FCTV)

Baseline condition;

The initial source of proteins to the local population in the 17 villages was bush meat hunted in the surrounding forest. They hunt unsustainably for income and proteins and endangered species were threatened. They also fish in the Dja river with no measures put in place for sustainability owing to limited expertise in fishing. The local fishing method was used - fishing nets with very small holes caught all fish including the young fish that should be allowed for future generation. The none-fishing season was not respected and fish was caught during the reproduction season. The local smoking method was detrimental to the environment. Forest was cut for fire wood. The method was not effective and fish could not be conserved for long to consume during no take periods. Many human lives were also lost during the local fishing method.

Change recorded to date;

1. *Improve and sustainable fishing by villagers*
2. *Increase fish in households for local consumption*
3. *Improve conservation of fish and availability during no take periods of fishing*

Source of evidence

Evidence for improve and sustainable fishing is the increase expertise of villagers in fishing - the use of recommended fishing material and fishing during fishing seasons. This evidence will come from household socioeconomic questionnaires in the villages. Fish farmers recently received fishing material and are using them now. Measures are going on to collect household socioeconomic data to confirm changes.

Evidence for increase fish in households for local consumption is the increase in the amount of fish in local households. Evidence will also include an increase in the amount of fish in households and most importantly smoked fish during no take periods. Household socioeconomic data on this is yet to be collected.

Evidence for improve conservation of fish and availability during no take periods of fishing will be confirmed by the presence of smoked fish in households during no take periods of fishing for local consumption. The presence of smoked fish during this period will confirm the effectiveness of smokers and their use by fishermen. Again, household socioeconomic data on this is yet to be collected.

Output 3 Reciprocal Environmental Agreement (All)

At this early stage of the project, only baseline information has been recorded. Changes in bushmeat offtake, livelihoods and wildlife population will be visible later in the project when alternative proteins and income sources are matured. Baseline information to date include the following:

Bushmeat offtake data set 1 (two months of data collection);

- Hunting time; mean number of hours spent in the forest by hunters for hunting (all hunting methods) activities = 41.01. That is 1 day 17 hours 3 minutes.
- Hunting methods; hunters spent more time in forest when hunting with local guns. Mean time spent = 45.79 hours ie 2 days 12 hours 34 minutes. For traps, mean time spent buy hunters was 36.56 hours
- Biomass hunted; a total of 6299.51 kg of bushmeat was hunted. These species belong to the following orders Ceratiodactylia, Artiodactylia, Raodents and Primates. 52 % (3333.59 Kg) was hunted with local guns, 44% with traps and only 4% with other methods (dogs,).

Bushmeat offtake data set 2 (two months of data collection);

- Hunting time; mean number of hours spent in the forest by hunters for hunting (all hunting methods) activities = 55.72. That is 2 days 7 hours 44 minutes.
- Hunting methods; hunters spent more time in forest when hunting with local guns. Mean time spent = 80.23 hours ie 3 days 8 hours and 14 minutes. For traps, mean time spent buy hunters was 51.45 hours. ie 2 days 3 hours and 25 minutes
- Biomass hunted; a total of 4213 Kg of bushmeat was hunted. The main order to which this belong is Ceratiodactylia. In this order, Peter's duiker, Bay duiker and blue duiker represents 67% (2829.81 Kg) of all recording. 36 % (1554.5 Kg) was hunted with local guns and 63 % (2657 Kg) with traps.

Evidence for this bushmeat offtake is data recorded from hunters each time they returned from the forest with or without bush meat. This method is providing the best indicator of human pressure on wildlife in the surrounding forest since the least increase or decrease in the amount of offtake is seen in the offtake biomass. The total biomass killed in the first set of data is more than that in the second set, indicating that human pressure on wildlife is reducing.

Output 4 Policy and best practice (All)

Some of the best practices expected from villagers in this project are to actively involve in the fight against wildlife poaching. They are expected to joint efforts to conserve natural resources, denounce any case of poaching and to stop all visiting hunters. These joint efforts have started yielding positive results. The chief of one of the villages – Nemeyong II and his population recently reported a case of local hunters who were involved in hunting to the conservation service. Bushmeat was confiscated and sold at auction prices. The second case of joint efforts was the confiscation of poaching material from some villagers. The cartridges were handed to the brigade of Somalomo. Joint efforts of villagers at this early stage of the project to conserve resources in the surrounding forest is evidence of success of the project.

3.3 Progress towards the project Outcome

Indicators are adequate for measuring outcome. An increase in household proteins will be confirmed by the household socioeconomic survey. Prior to this survey, the common initiative group of fish farmers will be organised by project staffs to record data on fish consumed in households. This ongoing data together with the survey will constitute adequate indicators. Similarly, an increase in household income will be confirmed by the household socioeconomic survey. Also, cocoa farmers cooperative will record data on their yields and sales to improve on indicators.

The project will achieve its outcome by the end end of funding. Alternative proteins source will be installed and functioning. The alternative income source will equally be setup and functioning. However, cocoa plantations will not all be matured to yield income. This means income will come in after this funding. Measures taken now to improve this situation include the setup of a cooperative of cocoa farmers that will continue to manage cocoa farming after funding. Same with fish farming that will be managed by the common initiative group.

3.4 Monitoring of assumptions

Assumption 1: External pressure continues to create sustainable use concern for local hunters and wildlife traders.

Comments: This assumption still holds. External pressure will come from the conservation service (MINFOF) responsible for maintaining the biodiversity of the DFR. This assumption continues to be applicable and will be enforced through support via the ECOFAC 6 project (law enforcement component)

Assumption 2: Improved enforcement of wildlife laws and sanctions in Dja landscape address hunters and wildlife traders who refuse to participate in the scheme.

Comments: This assumption still holds. Conservation partners – ZSL, AWF, PGS, FCTV, TF-RD, etc will continue to sensitise villagers on wildlife laws, notably the illegality of hunting in the DFR, and limits of the quantity of meat that can be taken for local consumption. The Conservation Service will continue to ensure sanctions; this has the potential to create conflict between the buffer zone village residents and those they view as ‘putting wildlife before people’. For this reason, the Darwin project team members work independently from the staff of the Conservation Service in day to day activities, but nevertheless keep the local head of post fully informed of activities, through one of the partners (AWF) maintaining an office in Somalomo (adjacent to the head of operations for the Conservation Service).

Assumption 3: National government remains amenable to policy dialogue and reform.

Comments: This assumption still holds; the national government remains open to policy dialogue. This was illustrated by the interest shown in the ‘signing of REA ceremony’, which was attended by local government officials and is regarded as a major achievement of the project in Year 2.

Assumption 4; 75% of population of 22 communities are present in locality/healthy/available and are thus able to attend the workshops.

Comments: for both Outputs 1 and 2, 22 communities in the northern buffer zone (17 main villages and 5 satellite villages) are involved. As anticipated, there was some reluctance by a small (less than 25%) number of villagers, but as benefits have accrued in Year 2 there is a demand from those who did not originally join the project to become involved. The terms and conditions for these ‘late joiners’ are still being finalised, as there is some reluctance from the ‘early movers’ to extend trhe scheme to the same level of benefit. Year 3 will see these T&C being agreed.

Assumption 5: Registered members of the scheme do not abandon the activity within the first year.

Comments: As noted above, the reverse is proving the case, as more people are looking to be included (and will be, once T&C are agreed).

Assumption 6: That the registration fee remains low enough to be accessible to rural poor, but high enough to ensure dedication to the scheme and to prevent abandonment of the activity within the first year.

Comments: This is the same position as last year i.e. there is no registration fee, so all rural poor living in the buffer zone. REA ensure commitment to the scheme.

Assumption 7; That the government remains open to submission and discussion of such schemes.

Comments: This assumption holds. The government is open to suggestions and modifications if appropriate. Local government officials are informed each time team members go to the field and have never challenged activities, although the request for 'motivation' i.e. an *ex-gratia* payment is often the case (not available from the project and hence not made)

Assumption 8; Full participation of community members enlisted.

Comments: As noted above, the buffer zone residents are now fully engaged and state that they were waiting for support project for a long period of time. Their participation continues.

Assumption 9; That the government accepts and approves of the REA scheme.

Comments: The local project team have presented REA scheme to the government (mostly local government authorities in Somalomo) for 'approval'; it was originally assumed that a legal process would be needed to ratify REA, but the project team are assured that this is not necessary, and that agreements at the individual and GIC level are adequate.

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

Please see below – contribution to SDG

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

Sustainable Development Goal 1: End poverty in all its forms everywhere

The communities in the project intervention area are now organised into working groups and committees ('GIC') in order to perform effectively to grow and sell cocoa; this will bring in sustainable sources of income by EOP.

Sustainable Development Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture

The identification of a potential model to enable poor people to access sustainable sources of legal animal protein has been achieved by the community, assisted by the project team

Sustainable Development Goal 5: Achieve gender equality and empower all women and girls

Engagement processes have targeted women and girls to ensure that their opinion and requirements help shape interventions. Specifically, women are going to be the principal actors in a more effective fishing system in the tributaries of the Dja river, as well as being main traders of smoked and frozen fish for trade or consumption over an extended time-period (more than currently). The need to ensure increased involvement by women in the project was given as one of the recommendations of the MTR, carried out by LTS in February 2019, and is supported by all of the partners. During Years 3 and 4 the project will enable increased trading of products; strategically this will enable the project to increase the emphasis on gender equality, by ensuring that women have the dominant role in newly-traded products – building on traditional practices

Sustainable Development Goal 12: Ensure sustainable consumption and production patterns

One of the main outputs of the project will be the establishment of a sustainable fishery to benefit the poor people living in the project intervention area

Sustainable Development Goal 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

The pressure on threatened species living in and around the DFR will be reduced due to the provision of alternative income sources (helping to counteract the illegal bushmeat trade), and the availability of legal sources of protein (helping to counteract hunting of threatened species for local consumption).

5. Project support to the Conventions, Treaties or Agreements

The project is supporting Cameroon to meet its commitments to the CBD, principally by addressing pressures on threatened species from hunting for food and trade. Notable species that will benefit from additional protection include *Gorilla gorilla gorilla*, *Pan troglodytes troglodytes*, *Loxodonta cyclotis*, *Smutsia gigantea*, *Phataginus tricuspis*.

The project is still on course to give additional support as laid out in the final application i.e. the project contributes to the first two objectives of the Convention on Biological Diversity, particularly the conservation of biological diversity and the sustainable use of its components. The project contributes to the implementation of the following articles of the CBD: 8c, 8d, 8i, 8j, 10a, 10c, 17.1, 17.2. It will also contribute to the implementation of Cameroon's National Biodiversity Strategy and Action Plan revised in 2012 which highlights the threat of illegal exploitation of wildlife for food and commercial purposes and calls for changes in behaviour (Goal A) from local to national level and the generation of wealth from biodiversity to incentivise conservation and sustainable use (Goal C).

The project enables Cameroon to deliver on Aichi Goals B by reducing the direct pressure on protected species in Dja from hunting, C improving the status of biodiversity by safeguarding the ecosystems and species of the Dja landscape, and E by enhancing implementation through participation, planning, knowledge management and capacity building among the reserve managers and communities and specifically Aichi Targets 12 (longer-term goal: extinction of known threatened species prevented and conservation status improved) and 18 (indigenous knowledge and innovative practices of local communities are respected and integrated into implementation of the convention).

Within Cameroon, the project contributes the following programmes of work:

- National Millennium Village Framework: The framework builds on the strategic approaches expounded within the Action Plan of Strategy for Growth and Employment (SGE/PRSP II)
- Country programme (CP) Outputs:
 - 3. Community based organisation financial self-capacity is empowered
 - 4. Capacity of local community strengthened in terms of poverty reduction

6. Project support to poverty alleviation

There is evidence that the project is working to alleviate poverty: after completion of the first phase of village consultations in Year 1, the project has supported improvements in fishing practices so as to enable both an increase in availability and longevity of animal protein, villagers will have enough fish for local consumption and will be able to sell surplus (legally). Cocoa plantations being setup are income sources for poor people. Villagers will be helped to meet their needs with income raised from cocoa.

The expected beneficiaries of this work are: the local population in the project area will benefit from alternative income sources and eventual livelihood amelioration. Wildlife populations in the surrounding forest will benefit from reduced human pressure on them. The government will benefit from improved anti-poaching systems and local capacity for self-determination is being supported. The latter is noteworthy as discussions on future activities and sustainability continue through the project timeframe.

We expect direct impacts from this project: there will be reduced human pressure (conservation) on wildlife population in the surrounding forest, as well as improved local knowledge on cocoa cultivation and sustainable fishing. This will result in ameliorated local livelihoods

We have had some notable achievements this year: the process of engaging with local communities such that there was a significant REA signing event must rank as an important milestone (full details on <https://www.landscapeconservation.org.uk/reciprocal-environmental-agreements> local capacities on cocoa farming has been improved from many training sessions organised, cocoa nurseries with many young cocoa plants have been setup in the villages, , fishing material has been distributed, baseline data on bushmeat offtake, household socioeconomic survey have been collected. The Darwin Initiative has produced a Learning Note on Poverty which may help projects understand the multi-dimensional aspects of poverty that can be reported on.

7. Project support to gender equality issues

There is evidence that the project is working to address gender equality: cocoa and improved fishing are both for men and women. Men and women are free to be involved and benefit. Also, all training sessions, meetings, etc organised by project partners are attained by men and women, see pictures (entitled “gender equality” of one of the exchange visits on cocoa farming.

As noted above, the role of women in trading food products has been identified previously through research undertaken by several of the partners. As such, we are focussed in Year 3 on building the ability of women to trade in three main animal protein products: fresh fish (which is fundamentally already established from traditional ways of working); preserved fish produced from the use of smokeries; frozen fish through the provision and training in the maintenance of solar powered freezers

8. Monitoring and evaluation

A proper internal monitoring and evaluation of the project requires that each cocoa farmer be visited to find out if he/she received the knowledge and skills required, and the material, cocoa and eventually setup a cocoa plantation that is properly followed up and yielding income. The same approach applies for fish farmers. However, this is tedious and requires time and funds. Internal monitoring and evaluation will be simplified by randomly choosing some villages and few cocoa and fish farmers and investigating all the above mentioned with them. The result recorded can therefore be considered for the rest of farmers in the rest of villages.

The first indicator which is considered fundamental is the villagers voluntary and individual commitment to the agreement – REA. By signing this agreement, they confirmed that they will sustainably manage wildlife and natural resources in the surrounding forest in return to benefiting sustainable alternative income and protein. Initial activities to confirm this commitment include the joint fight against poaching in the villages. I mean villagers collaborating with the conservation service and the brigade in Somalomo on cases of poaching in the villages as detailed in point 3.2 above. 81 and 86 villagers signed REA on fishing and cocoa farming respectively. Since it was voluntary, some villagers did not sign but are requesting project staffs for another organised signing for them. This is confirmed by letters in E7.4

Improve skills and knowledge of villagers in cocoa and fish farming is another indicator of achievement. It is difficult to measure at this early stage of the project however, a regular local participation in theory and practical training are elements of improve knowledge. This is confirmed by attendance lists and content of training.

Material distributed to villagers and training on production of local material by villagers are other indicators of achievement. Villagers received working material and actively participated in the production of local life jackets. This is confirmed by pictures in A2.1 and A2.4

Cocoa farms created/rehabilitated and smoking sites constructed in the forest are indicators of achievement. These are measured by a random visiting of some farmers as detailed in point 8 above. Pictures and attendance list also confirm this.

Above all, an increase in household income, increase in alternative proteins in households and a reduce human pressure on wildlife population in the surrounding forest are all indicators of achievement. Household income and protein are measures by collecting socioeconomic survey in households and by recordings of yields and income raised by villagers. Reduce pressure on wildlife is measured by bushmeat offtake survey

No change has been made in the M&E plan.

9. Lessons learnt

All of the activities leading towards the outputs worked well, but notably basing the project around Reciprocal Environmental Agreements means that villagers understand that commitments need to be made, but also that there are immediate benefits rather than promises and/or expectations, which have impacted negatively in other 'behavioural change projects'. The success of the REA approach is indicated by the fact that at the end of year 2, many of those that hadn't signed REA initially were requesting that they could do so.

The increase in river catch, and the construction of smokeries to increase the longevity of the catch can be considered to be a success. It is noted however that the sustainability of the fishery is still being processed and there is a risk of over-fishing (this is, however, considered small as the pressures

One of the areas that the partners noted as requiring improvement was the need to ensure that the Conservation Service were kept up to date on activities and that game guards understood and kept to the law. The issue of game guards confiscating legally obtained fish was identified and was resolved by the project team through discussions with the MINFOF Chef d'Poste (Head of local Conservation Service). As a consequence of recognising the gap, the decision was made to hold monthly management meetings in the field for at least 50% of the time.

The project is always at risk of the Conservation Service 'insisting' that eco guards must accompany the project team, and pay accordingly. This is due to the fact that historically MINFOF staff have always taken interventions funded by international donors as a potential source of money.

Ensure that training in safety procedures and construction of lifejackets was done before supporting increased fishing through the provision of equipment e.g. all recipients of fishing equipment must have attended a health and safety course prior to be eligible for equipment.

We would also budget for a project coordinator to be based part time alongside the Conservation Service (Somalomo).

When working with a number of partners, the use of project team regular meetings has proved very useful to ensure coordination of activities, sharing of lessons and ensuring a joint approach to managing challenges such as the demand of 'motivation' (i.e. bribes) from government staff.

Having immediate benefits (fishing equipment) is considered to be important, as cocoa farm plantations/amelioration of fallow plantations do not give immediate benefit and unless expectations can be managed there is a risk of disengagement.

We will build a field project coordinator into the budget and ensuring regular meetings between partners continues (monthly recommended).

We recognise the importance of having commitments from project partners and local stakeholders and ideally have formal agreements such as REA, where all parties understand these commitments.

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

The project has responded to questions raised at the end of Year 1, through a written Year 2, half-year report (available if required). The Year 1 report was highly favourable, and the partners were appreciative of the efforts of the Reviewer and the opportunity to respond to specific points in the Year 2, half-year report.

In addition, the project was selected for an additional review by Darwin, with a visit to the project made by Darwin representatives in February 2019; subsequently an Aide Memoir was produced to support project activities. Seven draft recommendations were made and these were taken into consideration for Year 3 planning, and are proving extremely useful to the project team.

11. Other comments on progress not covered elsewhere

Yes, the project has been refined, notably by moving from fish farm construction (not practical given the locality of the project, close to a major river that is a source of sustainable fishing).

Health and safety due to a change in strategy (fish-farming to sustainable fishery) has been introduced as a major piece of work, including the construction and distribution of locally made lifejackets (see <https://www.landscapeconservation.org.uk/single-post/2018/08/02/Safety-First>)

The death of two villagers whilst fishing in the River Dja (albeit due to excessive drunkenness) resulted in a rumour that the project had 'cursed' the river. A ceremony to lift the curse was undertaken, introduction of training and mandatory use of lifejackets introduced and the difficulty was resolved.

There is a risk that the local Conservation Service will insist on being 'motivated' and accompany the project team when they are in village meetings (in expectation of payment). This risk is addressed by positioning the project as a co-funder of the ECOFAC 6 project for the conservation of the DFR, which generates significant funding in support of MINFOF Conservation Service. AWF have the responsibility of reporting any illegal demands (such as the insistence of 'mandatory payments' to game guards) to ECOFAC, who would pursue the matter directly with MINFOF

12. Sustainability and legacy

The project team have maintained dialogue with other principal actors working to help conserve the biodiversity living within the Dja Faunal Reserve, notably through the Dja Actors' Forum, and informal meetings with MINFOF and ZSL.

The project website (www.landscapeconservation.org.uk/darwin-project) is the depository of key information accrued from the project. It is intended that all of the project reports and findings will be accessible through either the website referred to above, or one of the other project partners' websites in due course.

The outcome of the project is to provide *sustainable* sources of income and animal protein such that the pressure from illegal trade in, and consumption of, threatened species and their habitat is reduced. As such environmental sustainability is inherent in the project design. Social changes will be maintained by adoption of new paradigms of livelihood in the project intervention area. Training in cocoa production, trading, improved technologies (e.g. ability to build solar-powered freezers) will also ensure that the action is sustained beyond the life of the project. Changes in government policy (that may occur outside of the project timescale) will also have considerable positive impact on sustainability of action e.g. designation of a sustainable, community fishing zone (CFZ), and the establishment of the parameters for a CFZ is a focus for years 3 & 4.

The planned exit strategy still holds, but it is likely that during Years 3 and 4, as well as information arising from a complementary Darwin Initiative project (25-015, IIED lead partner), that the project will identify ways to improve ongoing interventions. This is envisaged as being the importance of developing protein alternatives to wild-caught meat from *animal meat* sources rather than *animal fish*, as the preference for eating meat has been confirmed through pair-wise comparisons undertaken in Year 1; it is 'only' the availability and access to legal sources of meat that focussed project efforts on fishing to obtain animal protein. Outouts from Darwin project 25-015 will help in the design of ongoing efforts.

Capacity building is an inherent part of the project (see above), with an emphasis on ensuring that the capacity of women to take part, take forward and manage elements of the project being a focus for years 3 & 4.

13. Darwin identity

The UK Government's contribution to our project's work been recognised via the project website www.landscapeconservation.org.uk/darwin-project , where the Darwin Initiative funding has been recognised as a distinct project with a clear identity.

We are in close contact with the British High Commission in Yaoundé (regional office for west central Africa) and attended an event to highlight the issues of the illegal wildlife trade on species (June 2018), therefore demonstrating the extent to which there is an understanding of the Darwin Initiative within in the host country.

Blogs are posted on the website (www.landscapeconservation.org.uk), which connects to social media through Facebook. Increased media profile is an (informal) objective for Years 3, and 4, including via other partner websites, news articles, press releases, etc.

In addition, during Year 2 the project produced two articles for the Darwin Newsletter, one of which was published (construction of buoyancy aids from recycled materials).

14. Project expenditure

Table 1: Project expenditure during the reporting period (1 April 2018 – 31 March 2019)

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

Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2018-2019

Project summary	Measurable Indicators	Progress and Achievements April 2018 - March 2019	Actions required/planned for next period
<p>Impact</p> <p>A biodiversity benefit for Dja landscape, Cameroon, through addressing the main pressures on the ecosystem and species by an improvement in livelihoods, welfare and food security for forest-dependent rural poor.</p>		See below (activities)	
<p>Outcome</p> <p>Rural-living people in 22 northern-Dja communities generate protein and income through non-hunting means, contributing to food security and poverty alleviation, enabling less hunting and leading to protection of threatened biodiversity</p>	<p>0.1 Up to 5000 people in 22 communities in northern Dja periphery exhibit an increase in food security: a 20% increase in grams of meat consumed by household (baseline to be established in 2017)</p> <p>0.2 Up to 5000 people/500 households in 22 communities exhibit a reduction in degree of poverty: net monthly financial income increases by 20% from baseline (to be established in 2017)</p> <p>0.3 Up to 5000 people in 22 communities report % lower proportion of net monthly income coming from sale of bushmeat (baseline to be established in 2017)</p> <p>0.4 Abundance of small mammals in surrounding forest shows an annual 5% increase from baseline and that of large mammals shows</p>	See below (activities)	See below (activities)

	<p>stabilisation of baseline (to be established in 2017)</p> <p>0.5 Up to 5000 people in 22 communities exhibit a 10% decrease in hunting effort in hunting zones from baseline (to be established in 2017) and no hunting reported in no-take zones</p>																					
<p>Output 1.</p> <p>New livelihood paradigms established in 22 rural poor communities for the provision of sustainable non-wild meat protein sources for the short- to long-term</p>	<p>1.1 Up to 3000 adults with families (40% women) attend 2-day workshops (7 workshops held across northern periphery in year 1) by year 2</p> <p>1.2 75% of trainees (>30% women) register for the activity by year 3</p> <p>1.3 80% of registered adults report spending >25% of their 'working' time working towards the protein-generating activity by end of year 4</p>	Evidence reported in Annex 4																				
<p>Activity 1</p> <table border="1"> <tr> <td>1 1</td> <td>Community engagement</td> </tr> <tr> <td>1 1.1</td> <td>Interview Questions for determining community views on alternative protein sources</td> </tr> <tr> <td>1 1.2</td> <td>Meetings to discuss preferred choice of the communities</td> </tr> <tr> <td>1 1.3</td> <td>Meetings to discuss organization model for fishermen</td> </tr> <tr> <td>1 1.4</td> <td>Writing of various internal regulations and status</td> </tr> <tr> <td>1 1.5</td> <td>Formal registration of the fishing organisations</td> </tr> <tr> <td>1 2</td> <td>Improve fishing in the Dja river and tributaries</td> </tr> <tr> <td>1 2.1</td> <td>Purchase and distribute fishing material</td> </tr> </table>	1 1	Community engagement	1 1.1	Interview Questions for determining community views on alternative protein sources	1 1.2	Meetings to discuss preferred choice of the communities	1 1.3	Meetings to discuss organization model for fishermen	1 1.4	Writing of various internal regulations and status	1 1.5	Formal registration of the fishing organisations	1 2	Improve fishing in the Dja river and tributaries	1 2.1	Purchase and distribute fishing material	<table border="1"> <tr> <td>1 1</td> <td>Community engagement</td> </tr> <tr> <td>1 1.1</td> <td>17 workshops have been organised in the 17 villages by project staffs in the presence of the local population and community views on alternative proteins sources were discussed. The preferred choice for alternative proteins was identified and agreed by project staffs and the local population. This included</td> </tr> </table>	1 1	Community engagement	1 1.1	17 workshops have been organised in the 17 villages by project staffs in the presence of the local population and community views on alternative proteins sources were discussed. The preferred choice for alternative proteins was identified and agreed by project staffs and the local population. This included	<p>Activities will focus on the fish market. Fishing is an alternative protein source to villagers, but excess will be sold to raise household income. This commercialisation requires a good market. Activities will mostly focus on legal market studies for the common initiative group to continue to implement after funding.</p> <p>These activities will be followed by a continuous follow-up of fish farmers to ensure that fishing is done properly.</p>
1 1	Community engagement																					
1 1.1	Interview Questions for determining community views on alternative protein sources																					
1 1.2	Meetings to discuss preferred choice of the communities																					
1 1.3	Meetings to discuss organization model for fishermen																					
1 1.4	Writing of various internal regulations and status																					
1 1.5	Formal registration of the fishing organisations																					
1 2	Improve fishing in the Dja river and tributaries																					
1 2.1	Purchase and distribute fishing material																					
1 1	Community engagement																					
1 1.1	17 workshops have been organised in the 17 villages by project staffs in the presence of the local population and community views on alternative proteins sources were discussed. The preferred choice for alternative proteins was identified and agreed by project staffs and the local population. This included																					

<p>1 2.2 1 2.3 1 2.4 1 2.5 1 2.6 1 2.7 1 2.8 1 2.9</p>	<p>Improve conservation of fish using smoking stove Study to improve conservation of fish using freeze Training on sustainable fishing Study on constrains link to fish conservation in the Dja area Inventory and measurement of fish species in the Dja river Study on community management of fishing in the boucle du Dja: challenges and perspectives for better resource valorisation Legalities aspects of setting up a 'community fishing zone Follow-up, gathering and analysis of information on fishing activity</p>	<p>1 2</p>	<p>improving sustainable fishing along the Dja river.</p> <p>An organisational model to improve this activity was discussed and agreed by project staffs and local population. The executive bureau of the common initiative group made of representatives from the 17 villages was elected by villagers. Internal rules and regulations and the status of the common initiative group were written by project staff and the local population and legalised at the divisional officers in Abong Mbang in the east region of Cameroon. Bureau members are assisted technically by project staffs in the management of the CIG. Leadership will be passed on to them at the end of year 4 of the project.</p> <p>1 2 Improve fishing in the Dja river and tributaries</p> <p>Fish farmers – villagers who signed the reciprocal environmental agreement (detail below) have received fish farming material. Four modern fish smoking sites have been constructed in the forest and are used by villagers to improve fish conservation. Fish farmers were trained on the production of local life jackets for security during fishing. These are quite affordable to them. They are currently receiving training on sustainable fishing in the Dja</p>	<p>Studies will also focus on creating a fishing community zone for sustainable fishing along the Dja river.</p>
<p>1 3 1 3.1 1 3.2 1 3.3 1 3.4</p>	<p>Organise communities in Fishing valorisation groups Development of environmental agreement Training on marketing chain Coaching to capture new opportunities for investment Coaching to develop ability for community benefit sharing</p>			
<p>1 4 1 4.1 1 4.2 1 4.3</p>	<p>Outreach on fishing and marketing of fishing products regulations Produce booklet on fishing regulation Produce posters and leaflets Information campaigns in the Dja</p>			
<p>1 5 1 5.1 1 5.2 1 5.3</p>	<p>Promote a fishing product business model of "boucle d'Ekom" based on "Reserve Biosphere du Dja" label Research to develop business model Promotion of "Dja fish" label Link community group of fish valorisation to national and international network for sustainable market</p>			

		river. Project staffs are carrying on studies on constrains link to fish conservation in the villages, inventory on the different species of fish in the Dja river, on community management of fishing and on setting up a community fishing zone for sustainability.	
	1 3	Organise communities in Fishing valorisation groups Reciprocal environmental agreements were written by project staffs and the local population. This document contains rules and regulations to encourage wildlife and environmental conservation and on sustainable fishing for livelihood amelioration. This individual and voluntary agreements were signed by xx fish farmers confirming their full implication in the project. Few villagers who did not sign have manifested their willingness to sign to project staffs.	
	1 3.1		
	1 4	Outreach on fishing and marketing of fishing products regulations Fishing rules and regulation have been discussed with villagers in the 17 villages and their views were considered. Booklets and postal containing these rules and regulation have been produced and distributed and again explained to them. They are currently applying them in fishing.	
	1 4.1		
	1 5	Promote a fishing product business model of " boucle	

		d'Ekom" based on "Reserve Biosphere du Dja" label	
		Pending	
1 5.1			
Output 2. 2. A participatory process for training and capacity building made available to 22 rural poor communities, to establish sustainable sources of non-hunting financial income	<p>2.1 Up to 3000 adults with families (40% women) attend 3-day workshops (7 workshops held annually across northern periphery in years 1 and 2) by year 3</p> <p>2.2 50% of trainees (>30% women) apply to participate in scheme and pay small registration fee by year 3; and an additional 25% by year 4</p> <p>2.3 75% of registered adults report launch of income-generating activity by end of year 4</p>	See below in activities	
Activity 2			
<p>2.2.4 Discussions with cocoa farming technicians for planning for cocoa farming (previously emerged as the desired income-generating activity in the region)</p> <p>2 2.4.1 Restitution meetings organised in the 17 villages to present the draft of quid pro quo, discussions and validation.</p> <p>2 2.4.2 Restitution meetings -Preparatory meeting for planning of cocoa season activities with the farmers</p> <p>2 2.4.3 Restitution meetings -Establishment of a work plan with the farmers, for the cocoa growing season</p> <p>2 2.4.4 Restitution meetings - Organise sessions for Presentation of REA document to the farmers in the 17 villages farmers</p>		<p>2.2.4 Discussions with cocoa farming technicians for planning for cocoa farming (previously emerged as the desired income-generating activity in the region)</p> <p>2 2.4.1 Restitution meetings were orga Dja on the cultivation of cocoa.</p> <p>1)Reciprocal environmental a</p> <p>These are individual and volu and project staffs. Villagers cocoa, cocoa farming material</p>	<p>Next activities will focus on setting up a legalised cooperative of cocoa farmers and training them to function after funding. This is the recognised entity that will take over management of cocoa farming from project staffs after funding for sustainability of the project.</p> <p>Commercialisation of cocoa is another focus point in the next period. Project staffs will setup a network of partners including the agricultural delegate in Somalomo cocoa farmers (cooperative) and buyers. This system will continue</p>

<p>2.2.5</p> <p>2 2.5.1</p> <p>2 2.5.2</p> <p>2 2.5.3</p>	<p>Cocoa farming initiated in target communities (planting, growing, harvesting, etc) leading to launch of income-generating activity in up to 17 communities by end of year 4</p> <p>Identification of old fallow areas for development and setting up of new cocoa farms</p> <p>Training of farmers on best cocoa farming practices and technics for planting, farm maintenance, harvesting fermentation of good quality cocoa,</p> <p>Organising the cocoa farmers groups for group sales to market their cocoa</p>		<p>market, in exchange for wildlife and sustainable management of cocoa farming. The draft of REA written by project staffs was presented to potential cocoa farmers. Local opinions were carefully considered and integrated. Indicators for these meetings include attendance lists and pictures (B2.4.1 – B2.4.4).</p> <p>2) Planning of cocoa season activities</p> <p>Project staffs presented all cocoa farming activities and timing within a cocoa cultivation season. Villagers could choose to create new cocoa plantations. Activities here included nursery setup and monitoring, preparation of the cocoa plantation, planting of young cocoa plants in plantation, monitoring of plantation, harvesting and drying of cocoa. Villagers could choose to rehabilitate old cocoa plantation that have been abandoned owing to insect attacks and reduced yields. Activities here included trimming, treatment against insects and monitoring.</p> <p>3) Establishment of a workplan for the cocoa cultivation season</p> <p>Project staffs presented a cocoa cultivation work plan that correspond to the season in the area. This included the appropriate time for nursery setup, preparation of plantation, planting of young plants in plantation, treatment against insects, harvesting of cocoa and drying.</p> <p>4) Presentation and signature of REA to villagers</p> <p>Prior to receiving any technical and material assistance for cocoa farming from the project, villagers had to go in for a voluntary and individual reciprocal agreement. The final copy of this document that was developed with the implication of villagers was presented to them and during other organised session in the villages, villagers signed the document (B3.5)</p>	<p>and operate after funding for cocoa farming. The draft of REA written by project staffs was presented to potential cocoa farmers. Local opinions were carefully considered and integrated. Indicators for these meetings include attendance lists and pictures (B2.4.1 – B2.4.4).</p> <p>Similarly, follow-up of cocoa farmers will continue for more technical assistance to ensure success.</p>
<p>2.2.6</p> <p>2 2.6.1</p> <p>2 2.6.2</p>	<p>Workshops and groups meetings, as well as on the ground demonstrations, one-to-one sessions and ongoing support by technicians available for individuals and village associations in 17 communities for training and capacity building for cocoa farming</p> <p>Organise tree planting campaigns with resources persons to plant fruit trees species associated with cocoa</p> <p>Rehabilitate plantations (clearing of plantations, adjustments of shade, standardization of planting densities, maintenance and renovation size, control of pests, black pods, replanting, diversification);</p>			
<p>2 2.7</p> <p>2 2.7.1</p> <p>2 2.7.2</p>	<p>Monitoring and maintenance of cocoa farms (with cocoa farming technicians) for productivity, control of pests/disease, marketing, (building of management</p> <p>Regular follow up of farmers to inspect their farms and provide technical advice and possible solutions to problem encountered,</p> <p>Proximity monitoring of farmers and capitalization of failures and successes to establish good practices that can be disseminated in the other peripheral areas,</p>			
<p>2.3.4</p> <p>2 3.4</p>	<p>Joint village (up to 22 participating villages represented) meeting for signing REAs</p> <p>Organise meeting (03 sessions in the 17 villages) to sign the REA</p>	<p>2 2.4.2</p> <p>2 2.4.3</p>		
<p>2.3.5</p> <p>2 3.5</p>	<p>One-day workshop for relevant government agencies for final agreement and signing of REAs (7x1-day)</p> <p>Organise meeting (03 sessions in the 17 villages) to sign the REA</p>	<p>2 2.4.4</p>		

	2.2.5 2.2.5.1	<p>Cocoa farming initiated in target communities (planting, growing, harvesting, etc) leading to launch of income-generating activity in up to 17 communities by end of year 4</p> <p>Identification of old and abandoned cocoa plantations for rehabilitation and practical training on rehabilitation. 59 cocoa farmers who signed REA went in for rehabilitation and a total of 84 hectares of farms were rehabilitated in the 17 villages. The rest of 27 who also signed plus 43 others who did not but have manifested the need to sign are also creating new cocoa farms. Each cocoa farmer is creating 0.5 hectare of cocoa farm, corresponding to about 35 hectares of new cocoa farms.</p>	
	2.2.6 2.2.6.1	<p>Workshops and groups meetings, as well as on the ground demonstrations, one-to-one sessions and ongoing support by technicians available for individuals and village associations in 17 communities for training and capacity building for cocoa farming</p> <p>Training of cocoa farmers on best cocoa farming practices including creation and monitoring of nurseries, planting of young cocoa plants in new plantations, monitoring of cocoa plants in plantations, harvesting of mature cocoa beans and</p>	

		initial transformation to obtain good quality cocoa beans, rehabilitation of old cocoa plantations, etc. This training happened during organised sessions (B2.5.2) in the villages and in neighbouring villages where villagers have received same training. Villagers involved are currently creating new cocoa farms and rehabilitating old ones. Fruit trees are currently planted in the different plantations for a good cocoa agroforestry.	
	2 2.7	Monitoring and maintenance of cocoa farms (with cocoa farming technicians) for productivity, control of pests/disease, marketing, (building of management	
	2 2.7.1	Project staffs are focusing on organising the cocoa market for commercialisation (B2.5.3) and also the cocoa farmers into a legalised entity such as a common initiative group that will take over full management of the cocoa project in the Dja at the end of the project.	
	2 2.7.2		
	2.3.4	Joint village (up to 22 participating villages represented) meeting for signing REAs	
	2 3.4	Reported in 2.2.4 above	

	2.3.5	One-day workshop for relevant government agencies for final agreement and signing of REAs (7x1-day)	
			<p>Output 3. 3. Official programmes for behavioural modification (REAs) established, accepted and respected by hunters and meat traders in 22 communities (covering an area of 2500km²)</p> <p>3.1 Model of REA officially submitted to national and local government bodies and specific REAs for each of 22 communities presented in year 1</p> <p>3.2 Representatives of 22 communities (40% of number of households of 80% of number of communities represented at each stage) attend series of workshops (21 workshops in 7 locations over first 3 years) in which local authorities attend</p> <p>3.3 Greater understanding of cultural barriers that need to be overcome to shift from hunting based to sustainably-managed resource communities</p> <p>3.4 Communities achieve REA completion</p> <p>Evidence reported in Annex 4</p>

	(signed, launched) by end of year 4 (up to 6 by end year 2, up to 7 by end year 3, up to 7 by end year 4)		
Activity 3			
3 1 Bush Meat offtake Survey 3 1.1 Write up the questionnaire 3 1.2 Chose five key villages to work in Organise five meetings - one in each village, sensitise hunters to present bushmeat to local workers 3 1.3 3 1.4 Chose five local workers and assistants Train local workers and assistants on data collection, give them data collection material 3 1.5 3 1.6 Bushmeat off take data collection in the villages 3 1.7 Monitor bushmeat offtake data collection 3 1.8 Data entry in computer 3 1.9 Motivation of hunters for collaboration 3 1.10 Data analysis and interpretation 3 1.11		3 1 Bush Meat offtake Survey <i>Bushmeat Offtake</i> The aim of this survey is to investigate bushmeat off take and hunting efforts of hunters in the Dja reserve. The bushmeat offtake survey questionnaire (C 1.1) was written by project staff. Six local villages were chosen for data collection and georeferenced information (C 1.2) of each was recorded. Six meetings were organised by project staffs in each of the villages. Six local workers (anqueteurs) and six assistants who are all base in the villages were selected - two from each of the six villages. Selection criteria include availability in the village, good collaboration with other villagers, knowledge of the different animals and hunting methods used, and educational level (able to read and write). Local workers and assistants were trained on data collection. Hunters were sensitised to present all bushmeat brought from the forest to anqueteurs who recorded the data on sheets. Assistants continued	Bushmeat offtake data collection will continue in the next period, to be used to indicate the trend in human pressure on wildlife and human efforts in hunting from the beginning to the end of the project. A similar plan will apply for household socioeconomic survey and mammalian inventory on wildlife. This data will be use to present the positive impact of this project on the local population and wildlife in the surrounding forest.
3 2 Household Socioeconomic Survey 3 2.1 Write up the three questionnaires Organise five meetings with villagers - one in each village and sensitise them on the need to cooperate 3 2.2 3 2.3 Identify all chiefs of households in five key villages Data collection - Socioeconomic Survey with Close End Questionnaire 3 2.4 3 2.5 Socioeconomic Survey with Open End Questionnaire 3 2.6 Socioeconomic Survey Village Information 3 2.7 Data entry in computer 3 2.8 Motivation of chiefs of households 3 2.9 Data analysis and interpretation			
3 3 Wildlife Survey 3 3.1 Selection of sites, drawing of map, writing of protocol		3 1.1	

		<p>identified and interviewed.</p> <ul style="list-style-type: none"> - Socioeconomic Survey with Open End Questionnaire; the same chiefs of households were interviewed, and data recorded in questionnaire C 2.1 “B Questionnaire Socioeconomics open end”. However, fewer chiefs were interviewed (1 in a group of 10). - Socioeconomic Survey Village Information; the target was the rest of the villages (excluding the five key villages). Each village chief was interviewed and basic information including total population, number of households, etc was recorded. <p>All household socioeconomic survey data is being entered in excel files for analysis and interpretation.</p>	
	<p>3 3</p> <p>3 3.1</p>	<p>Wildlife Survey <i>Wildlife Abundance Survey</i></p> <p>The aim of this survey is to investigate the wildlife</p>	

	<p>population density (encountered rate per kilometre) in the surrounding forest in the Dja reserve. It also allows an assessment of the spatial and temporal variations in wildlife abundance.</p> <p>Six transect sites were selected in the 17 villages and six transects of 2.5km long, 500m apart (total 36 transects, 45km²) were opened (minimum vegetation cut) in each site. Three sites were selected to the north of the road from Somalomo to Ekom, between the road and river Dja. This river is closer to some villages (eg Schwam) consequently the choice of sites (in the north) depended on the possibility to place five transects of 2.5km long and 500m apart. All transects were parallel to the road. The first transect was opened in the forest in the villages and the 6th and last one 3km into the forest, and the rest were opened in between. Waypoints of transects are included in C 3.4.</p> <p>A team of four researchers and six villagers were hired by project staff and the first set of data was collected on all the transects and later entered in excel and analysed.</p>	
--	--	--

<p>Output 4</p> <p>4. Project learning influencing regional/national level policy formation leading to integration of identified best practice and activities into Dja Management Plan and national policy</p>	<p>4.1 Integration of REA model and project lessons learnt in Dja Management Plan, revised National Biodiversity Strategy and Action Plan</p> <p>4.2 >10 media, popular science and peer-reviewed publications of data and results arising from project</p> <p>4.3 >10 references to critical project findings in third party publications, media reports and policy papers</p>	<p>See below in activities</p>	
<p>Activity 4</p> <p>4.1 Bimonthly reports of local partners published on project partner webpages and disseminated through project partner newsletters/soundbites, etc At least 4 issue-based webinars and e-newsletters to feedback and receive inputs from Community of Practice (CoP) and project partner network members</p> <p>4.2 Drafting of technical paper for review by CoP (CoP will primarily peer review emerging REA data and design, help identify impact pathways, promote learning and facilitate the dissemination of project learning to national and subnational policy makers)</p> <p>4.3 Dissemination of final project reports and technical paper amongst project partner networks, on project partner websites, and in at least 6 appropriate news/popular science bulletins/articles or reports</p> <p>4.4 Publication in peer-reviewed and popular science journals of main evidence-based project results (at least 4 publications).</p>		<p>4.1 Year 4</p> <p>4.2</p> <p>4.3</p> <p>4.4</p> <p>4.5</p>	<p>Preparation/data collection for use in Year 4</p>

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

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>Impact: A biodiversity benefit for Dja landscape, Cameroon, through addressing the main pressures on the ecosystem and species by an improvement in livelihoods, welfare and food security for forest-dependent rural poor.</p>			
<p>Outcome: (Max 30 words) Rural-living people in 22 northern-Dja communities generate protein and income through non-hunting means, contributing to food security and poverty alleviation, enabling less hunting and leading to protection of threatened biodiversity.</p>	<p>0.6 Up to 5000 people in 22 communities in northern Dja periphery exhibit an increase in food security: a 20% increase in grams of meat consumed by household (baseline to be established in 2017)</p> <p>0.7 Up to 5000 people/500 households in 22 communities exhibit a reduction in degree of poverty: net monthly financial income increases by 20% from baseline (to be established in 2017)</p> <p>0.8 Up to 5000 people in 22 communities report % lower proportion of net monthly income coming from sale of bushmeat (baseline to be established in 2017)</p> <p>0.9 Abundance of small mammals in surrounding forest shows an annual 5% increase from baseline and that of large mammals shows stabilisation of baseline (to be established in 2017)</p> <p>0.5 Up to 5000 people in 22 communities exhibit a 10% decrease in hunting effort in hunting zones from baseline (to be established in 2017) and no hunting reported in no-take zones</p>	<p>0.1a Consumption surveys 2017, 2019 and 2021</p> <p>0.1b Annual estimates of total household incomes and food prices, 2017-2021</p> <p>0.1c Comparison with least-cost diets that meet energy and nutrient needs</p> <p>0.1d A series of questions to assess perceptions, past experiences, and food acquisition and allocation behaviour within the household, 2017, 2019 and 2021</p> <p>0.2 Empirical household socio-economic surveys (primary and secondary income and expenditure), 2017, 2019 and 2021</p> <p>0.3 Empirical household socio-economic surveys (primary and secondary income and expenditure), 2017, 2019 and 2021</p> <p>0.4 Bi-annual (rainy & dry season) small and large mammal abundance surveys, 2017-2021</p> <p>0.5a Annual hunting effort surveys (trap and gun hunting follows; hunter time-logging), 2017-2021</p> <p>0.5b Annual bushmeat offtake surveys, 2017-2021</p>	<p>External pressure continues to create sustainable use concern for local hunters and wildlife traders</p> <p>Improved enforcement of wildlife laws and sanctions in Dja landscape address hunters and wildlife traders who refuse to participate in the scheme</p> <p>National government remains amenable to policy dialogue and reform</p>

		0.5c Reports from anti-poaching committees facilitated by NGO facilitators	
<p>Outputs:</p> <p>1. New livelihood paradigms established in 22 rural poor communities for the provision of sustainable non-wild meat protein sources for the short- to long-term</p>	<p>1.1 Up to 3000 adults with families (40% women) attend 2-day workshops (7 workshops held across northern periphery in year 1) by year 2</p> <p>1.2 75% of trainees (>30% women) register for the activity by year 3</p> <p>1.3 80% of registered adults report spending >25% of their 'working' time working towards the protein-generating activity by end of year 4</p>	<p>1.1 Workshop attendance registers; surveys before and after on understanding of conservation benefits, purpose of training, capacities for activities, etc</p> <p>1.2 Signed agreements</p> <p>1.3 Survey data; interviews; field reports, etc...</p>	<p>75% of population of 22 communities are present in locality/healthy/available and are thus able to attend the workshops</p> <p>Registered members of the scheme do not abandon the activity within the first year</p>
<p>2. A participatory process for training and capacity building made available to 22 rural poor communities, to establish sustainable sources of non-hunting financial income</p>	<p>2.1 Up to 3000 adults with families (40% women) attend 3-day workshops (7 workshops held annually across northern periphery in years 1 and 2) by year 3</p> <p>2.2 50% of trainees (>30% women) apply to participate in scheme and pay small registration fee by year 3; and an additional 25% by year 4</p> <p>2.3 75% of registered adults report launch of income-generating activity by end of year 4</p>	<p>2.1 Workshop attendance registers; surveys before and after on understanding of conservation benefits, purpose of training, capacities for activities, etc</p> <p>2.2 Signed agreements</p> <p>2.3 Knowledge, attitude and practice surveys (KAP), using semi-structured interviews</p>	<p>75% of population of 22 communities are present in locality/healthy/available and are thus able to attend the workshops</p> <p>That the registration fee remains low enough to be accessible to rural poor, but high enough to ensure dedication to the scheme and to prevent abandonment of the activity within the first year</p>
<p>3. Official programmes for behavioural modification (REAs) established, accepted and respected by hunters and meat traders in 22 communities (covering an area of 2500km²)</p>	<p>3.1 Model of REA officially submitted to national and local government bodies and specific REAs for each of 22 communities presented in year 1</p> <p>3.2 Representatives of 22 communities (40% of number of households of 80% of number of communities represented at each stage) attend series of workshops (21 workshops</p>	<p>3.1 Receipt from MINFOF of official submission of model</p> <p>3.2 Attendance registers; and Knowledge, attitude and practice surveys (KAP), using semi-structured interviews</p> <p>3.3 Knowledge, attitude and practice surveys (KAP), using semi-structured interviews</p>	<p>That the government remains open to submission and discussion of such schemes</p> <p>Full participation of community members enlisted</p>

	<p>in 7 locations over first 3 years) in which local authorities attend</p> <p>3.3 Greater understanding of cultural barriers that need to be overcome to shift from hunting based to sustainably-managed resource communities</p> <p>3.4 Communities achieve REA completion (signed, launched) by end of year 4 (up to 6 by end year 2, up to 7 by end year 3, up to 7 by end year 4)</p>	3.4 Completed and signed REAs (20 by end year 4)	
4. Project learning influencing regional/national level policy formation leading to integration of identified best practice and activities into Dja Management Plan and national policy	<p>4.1 Integration of REA model and project lessons learnt in Dja Management Plan, revised National Biodiversity Strategy and Action Plan</p> <p>4.2 >10 media, popular science and peer-reviewed publications of data and results arising from project</p> <p>4.3 >10 references to critical project findings in third party publications, media reports and policy papers</p>	<p>4.1 Excerpts of management plan, strategies and action plan</p> <p>4.2 Journal confirmation emails; published articles; DOIs</p> <p>4.3 Google scholar citation statistics</p>	That the government accepts and approves of the REA scheme
<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> <p>0.1 Partner inception planning meeting and project launch meeting with key partners and stakeholder groups (Somalamo - Dja)</p> <p>0.2 Verification of selection of target 22 villages (self-selection process) through follow up dialogues by community facilitators with villages previously engaged in sustainable development activities in the Dja periphery</p> <p>0.3 Baseline review for socio-economic and biological indicators (baseline socioeconomic survey/faunal survey of target zone)</p> <p>1.1 Organisation and running of 7 2-day workshops across the northern periphery – to include open-ended interviews/discussions with communities to agree to participate in the scheme to achieve practical protein alternatives, to address food security issue</p> <p>1.2 Individuals and village associations encouraged to register for new scheme; process put in place for registration; regular review of registration statistics</p> <p>1.3 Agreements defined, agreed and written up for individuals and village associations registering for new scheme</p> <p>1.4 Discussions with pisciculture technicians for planning for fish-farming (previously emerged as the desired protein-generating activity in the region)</p> <p>1.5 Construction (building and stocking) of fish farms in target communities (leading to launch of protein-generating activity in up to 22 communities by end of year 4)</p> <p>1.6 Workshops and groups meetings, as well as on the ground demonstrations, one-to-one sessions and ongoing support by technicians available for individuals and village associations in 22 communities (in years 2 and 3) for training and capacity building for fish farming</p>			

1.7 Monitoring and maintenance of fish farms (with pisciculture technicians) for productivity, husbandry, control of pests/disease, marketing, (building of management skills), etc

1.8 Technical support at all stages

1.9 Regular monitoring surveys and data analysis of socio-economic and biological indicators to assess progress against indicators including how much time adults spend working towards protein-generating activity by end of year 4

2.1 Organisation and running of 7 3-day workshops in across the northern periphery (in years 1 and 2) – to include open-ended interviews/discussions with communities to agree to participate in desired income alternatives, to address poverty issue.

2.2 Individuals and village associations encouraged to register for scheme; process put in place for registration; regular review of registration statistics

2.3 Agreements defined, agreed and written up for individuals and village associations registering for scheme

2.4 Discussions with cocoa farming technicians for planning for cocoa farming (previously emerged as the desired income-generating activity in the region)

2.5 Cocoa farming initiated in target communities (planting, growing, harvesting, etc) leading to launch of income-generating activity in up to 22 communities by end of year 4

2.6 Workshops and groups meetings, as well as on the ground demonstrations, one-to-one sessions and ongoing support by technicians available for individuals and village associations in 22 communities (in years 2 and 3) for training and capacity building for cocoa farming (previously emerged as the desired income-generating activity in the region)

2.7 Monitoring and maintenance of cocoa farms (with cocoa farming technicians) for productivity, control of pests/disease, marketing, (building of management skills), etc

2.8 Technical support at all stages

2.9 Regular monitoring surveys and data analysis of socio-economic and biological indicators to assess progress against indicators including how many adults report launch of income-generating activity by end of year 4

3.1 Review, verification and/or adjustment of agreed parameters for the sustainable wildlife-harvesting model established under Darwin 20-007 (community consultation; MINFOF consultation; review of literature and best practice)

3.2 Focus group discussions with representatives from 22 villages joining the scheme to verify and establish parameters (agree equitable/transparent management structure/system, information sharing mechanisms/monitoring system) – increase understanding of benefits/roles, impacts of cultural changes

3.3 Drafting/translation of sample REA (Consolidation of findings from village discussions on desired scheme parameters; Review and feedback from community representatives)

3.4 Joint village (up to 22 participating villages represented) meeting for signing REAs

3.5 One-day workshop for relevant government agencies for final agreement and signing of REAs (7x1-day)

3.6 Monitoring of implementation of REAs (data collection and local partner reports)

3.7 Regular monitoring surveys and data analysis of socio-economic and biological indicators to assess progress against indicators including measures of knowledge and attitude to assess understanding of the barriers to cultural change

4.1 Bimonthly reports of local partners published on project partner webpages and disseminated through project partner newsletters/soundbites, etc

4.2 At least 4 issue-based webinars and e-newsletters to feedback and receive inputs from Community of Practice (CoP) and project partner network members

4.3 Drafting of technical paper for review by CoP (CoP will primarily peer review emerging REA data and design, help identify impact pathways, promote learning and facilitate the dissemination of project learning to national and subnational policy makers)

4.4 Dissemination of final project reports and technical paper amongst project partner networks, on project partner websites, and in at least 6 appropriate news/popular science bulletins/articles or reports.

4.5 Publication in peer-reviewed and popular science journals of main evidence-based project results (at least 4 publications).

Annex 3: Standard Measures

Date still being collected.

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
Established codes								

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)
Necessity is the mother of invention	Darwin Newsletter	Neil Maddison, Mama Mouamfon (2018)	Male	UK	Darwin Initiative	http://www.darwininitiative.org.uk/assets/uploads/Darwin-Newsletter-November-18-Unexpected-Achievements-FINAL.pdf

Annex 4 Onwards – supplementary material (optional but encouraged as evidence of project achievement)

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.	
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. However, we would expect that most material will now be electronic.	
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.	