

## 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: 30<sup>th</sup> April 2018**

### Darwin Project Information

Project reference	24-004
Project title	Conserving critical forest biodiversity in Guinea through sustainable agricultural livelihoods
Host country/ies	Guinea
Contract holder institution	Fauna & Flora International
Partner institution(s)	Centre Forestier de N'Zérékoré (CFZ) and L'Institut de Recherche Agronomique de Guinée (IRAG)
Darwin grant value	£396,869
Start/end dates of project	1 June 2017 / 31 March 2021
Reporting period (e.g., Apr 2017 – Mar 2018) and number (e.g., Annual Report 1, 2, 3)	June 2017 – March 2018 AR 1
Project Leader name	Laura Fox
Project website/blog/Twitter	<a href="http://www.fauna-flora.org">www.fauna-flora.org</a>
Report author(s) and date	Laura Fox, Laura Sandberger-Loua, Mory Haba, Jonas Siba Dopavogui, 30 March 2018



**L'institut de Recherche Agronomique de Guinée (IRAG) (The Agronomic Research Institute of Guinea)** is a public scientific institution with autonomous management under the aegis of the Ministry of Agriculture and Livestock, Guinea. Within the project IRAG have been responsible for setting up the farmer training sites, community nurseries, conducting farmer training on seed selection, supply and distribution, on soil health and maintenance, supporting the irrigation system selection and training, and supply of seeds and seedlings for agroforestry. In year 1 IRAG has more involved in project planning, monitoring and evaluation and decision making. The relationship is based on professional respect between the two partner institutions.

The three main implementing partners organised and were present at the inception meetings to officially launch project activities in the four towns that are the focus of project activities. IRAG set up the farmer field schools in close cooperation with the communities. Due to communication problems with CFZ, their work was slower to start. More frequent meetings with and without the additional cooperation of IRAG are now set up. We expect that this will increase the effectiveness of the project, particularly in those areas where cooperation between CFZ and another partner is necessary.

### **3. Project progress**

#### **3.1 Progress in carrying out project Activities**

##### **Outputs 1: Bas-fond farmers and current transition zone farmers in 4 villages are trained in improved agricultural practices and apply them to farmland in transition zones**

*1.1. Inception workshops and participatory design of agricultural extension package with beneficiary farmers including soil and weed mapping to match annual and perennial crops to best locations according to available lands*

Inception meetings took place from the 5 December 2017 over four consecutive days in the four focus villages. Inception meetings formally launched the project and project activities with the communities. Activities were not permitted to start in the villages until these workshops had taken place. The meetings took place as designed and as cultural protocol dictates. Questions raised during the meetings highlighted that there is concern within the communities over loss of access to the bas fonds. Appendix 1 is a report on the Inception meetings showing numbers attending from each village, photos of the meetings and partners present. Each village had between 160 and 260 attendees.

The Inception meetings were originally scheduled for Q1. This was delayed for a number of reasons. Rains in July and August exclude any field work at this time. We needed formal approval from CFZ before starting any work with the communities. There was a change in Director within CFZ which was officially announced on the 21 September. CFZ also wished to discuss a review to the MoU between FFI and CFZ as they require more funds to operate. Despite much effort from local FFI and CFZ staff and the interim project support from FFI in October and November, and due to cultural protocols, a face to face meeting between our Africa regional director and the new Director of CFZ was requested and required. Our permanent project manager could only take up the role living in Guinea from the 1 February.

All activities have taken place around four months later than planned as a result.

Our target beneficiary farmer groups of bas fond farmers were identified through discussions between IRAG and communities. The participants self-identified as bas fond farmers and this list still needs verifying by CFZ and by registered bas fond users. Appendix 2 *Liste Exploitants\_Beneficiaries\_FFI* lists the names of all the participants by village.

As planned, plots were reviewed by IRAG and village members, and selected for Farmer Field Schools and Participatory Variety Selection (PVS). With support from IRAG, the beneficiary farmers selected the following crops to work on: Manioc for multiplication and PVS, Agroforestry nurseries (Coffee, black pepper and shade trees), Rice for multiplication and PVS, Nibe for multiplication and PVS, and Agro-ecology with the use of Mucuna for soil regeneration. Appendix 3 is a summary of agricultural activity to date including number of participants per village, topics selected, training given to date and size of plots secured.

An agricultural extension package has been drafted by IRAG and needs developing further prior to sharing with Darwin. The write up of the draft package was originally planned for the end of Q3.

### *1.2 Coordinate and implement joint training for efficiency and synergies with the Sainte Ursule de Guinee Order and Plan International including composting training*

As planned a training programme was agreed with the SUGO on composting this will start early in Year 2.

Plan International activities proceed faster than planned and remained focus on their environmental education work. Their youth drama group called Club d'ecoute (the Listening Club) was identified as an immediate opportunity that would have impact. PI supports the club to develop short theatre plays and songs of social interest. They wrote two songs on protecting Ziama and illegal hunting, and the benefits of ecosystem services provided by the forest, and two theatre plays on negative effects for the communities of deforestation and poaching, respectively. It had been performed in Sibata 2 and Irié by end Y1 and is being performed in the other villages in Q1 Y2. Their performance was very well received and a large percentage of the communities reached. The village chief of Irié highlighted that a father not listening to his children cannot be saved. As part of the project's communication plan, they will take their production to other villages surrounding Ziama. Additionally, the performances will be filmed in the three local languages and broadcasted by video clubs in other villages in the Ziama MAB.

*1.4 Targeted training sessions and ongoing mentoring for agricultural extension package on topics such as soil management, planting techniques, seed management, green manure, integrated pest management, tree crop improvement, conservation agriculture, weed management, herbicide and pesticide management, alley cropping, agroforestry and improved irrigation techniques for direct beneficiary farmers. Sessions offered as both single and mixed-sex groups to encourage participation by all.*

Training started in Q3 and Q4 as planned and evidenced in Appendix 3.

For agroforestry due to the delay in the projects start and that trees take on average 4 years to reach productivity, a seedling nursery was established Irié to provide all farmers in all four villages. Due to time constraints, this work was mainly done with trained staff. On the 16.03.2018 a meeting was organised in this central nursery with representatives of all four villages, to view the seedlings and discuss methods used. In two other villages (Boo and Sibata II) smaller nurseries have been set up with three accompanied training sessions (Boo: 27. & 28.02.2018, 46 participants, 41.3% women, Sibata 2: 18 participants, 33.3% women).

For cowpeas/niebe, cultivating techniques were explained on private fields and FFS plots in three villages (Boo: 29.3.2018, 8 participants, 100% women; Irié: 26.03.2018, 19 participants, 95% women; Sibata 2: 21.03.2018, 9 participants, 100% women). The participants formed 'Solidarity' seed associations and received seeds in all three villages. The farmers will refund the association with the same amount received at the next harvest for others to benefit. Feedback from two participants: "This training allows us to understand how to plant cowpeas, but above all to understand the need for certain varieties of cowpea introduced for experimentation in our area". "The introduction of new varieties of cowpea will allow us to compare them with the one we usually grow."

Four training sessions have taken place on market vegetables with a total of 35 participants. Participants expressed their gratitude for long term technical support and support to help organise into groups.

For agroecology, 35 experimental farmers have been identified in the three villages and Mucuna seeds are being distributed in Q4 Y1 and Q1 Y2. Each farmer will receive 10kg of seed to sow between 1500 to 2000m<sup>2</sup>. One plot has been cleared and planted as a training site.

**Outputs 2:** The incentives and wellbeing (food security, physical security, time, income, yield) from farming in the transition zone are equal or greater than farming in the illegal bas-fonds in the core and buffer zones

*2.1 Identify with village councils and CFZ land in the transition zone for those direct beneficiary farmers that need it, ensure harmonisation of the process within community and establish culturally appropriate agreements for long term use of the land (Y1)*

Due to the late start of field activities, it has not been possible or culturally appropriate to start the discussions with the communities on the availability of and long term / permanent access to land for marginalised bas fond farmers that don't have other land to go to. This will now happen towards the end of year 2 as we build our relationship and trust with the both the bas fond farmers and the governance institutions in the four villages. We have to deal with this situation with great care and sensitivity as it could put additional pressure on CFZ and set a precedent of the expectation that CFZ should facilitate negotiations between villages to find land if you don't have enough farmland elsewhere. There are already existing tensions between different tribes in certain villages over land, such as Avilissou.

*2.2 Review condition of land provided, identify appropriate annual and perennial crops, select appropriate farming methods with beneficiary farmers and prepare the land including managing weeds and increasing fertility through planting of 'mucuna'*

As planned 15 MoUs have been signed with communities and individual land owners for FFS and PVS plots. These are between the owner of the plot and the project to secure the land for the duration of the project. They cover all the plots where field training is taking place. Appendix 4 gives an example of these.

IRAG extension staff reviewed the sites available for the FFS and PVS plots and selected those most suitable to the activities identified by the beneficiary farmers. Sites were reviewed and meetings held during December and January with the beneficiary farmers to select the FFS topics. Ginger production and associated market development has been requested as an additional by female farmers in Avilissou. This will start in Y2.

Four MoUs have been signed with each village head to give their support for the project and its activities. Appendix 4 shows scanned versions of the MoUs.

As planned, one plot has been set up this year for training and propagation of macuna seeds. 400 kg mucuna seed have been purchased for planting at the FFS site which is a 1 ha plot. An assessment of the main weeds in the area was conducted during site review and are listed in Appendix 3.

*2.3 Establish project baselines, gender disaggregated from bas-fonds crops and monitor annually for direct beneficiary farmers*

Due to the late start from Darwin and therefore project field staff, we were not able to capture rice harvest figures from the bas fonds in June. We will develop the agricultural yield project baseline for rice during the harvest season which starts in June for bas fond / wet rice.

*2.4 Ground truth, update design and implement agricultural transition plan, incorporating agricultural extension plan, in participation with direct beneficiary target farmers including mapping shifting labour roles and responsibilities for women and men, support to enhance and shift to self-selected annual and tree crops etc. to ensure feasibility and ownership of the plan*

The delay in the start of field activities has delayed the drafting of the agriculture transition plan which was originally designed to be drafted by end of year one. The agricultural extension package has not yet been written up and this will be incorporated into an agriculture transition plan in year 2. We have focused activities on establishing the FFS groups and it is too early to then also ask participants to effectively engage in the design of the plan.

*2.6 Based on hydrology mapping, develop locally appropriate trials for irrigation systems, including construction of 'improved wells' (puits améliorés) and community agreements for location, use, management and maintenance of the selected systems and wells and ensured access for direct beneficiary farmers*

This activity was planned for Y2 but was brought into Y1 to increase the impact of economic opportunities for the women and to coincide with the selection of plots for market vegetables. The possibility to sell market vegetables during the dry season, when market vegetables are scarce, will be profitable, particularly for women. Experts to set up the irrigation system were identified and are setting up the irrigation systems in all four villages at the sites selected as being appropriate for both irrigation and vegetable production.

*2.9 Review potential processing opportunities for existing crops grown outside the bas-fonds in order to identify opportunities to increase income from simple feasible processing*

This activity was brought forward into Y1 and combined with the community participation in the selection of the agricultural extension plan. Ginger was requested by Avilissou and will be worked on in Y2. IRAG and the Sisters of Ste Ursule de Sérédou, identified Manioc (Cassava) as a most promising crop for processing opportunities. Cassava is grown and is easy to grow in the area but little consumed. In surrounding districts and countries, cassava is in high demand. Processed in a way that it can be stored and transported for longer, cassava may turn into a cash crop, particularly for women. Appendix 3 evidences the topics selected and numbers participating.

*2.10 Based on successful seed develop programmes from IRAG, update mapping of existing seed exchange groups within and between villages, and support them to design and implement their own scaling up of seed exchange of new varieties to ensure availability to wider farmer groups in 4 villages and beyond*

Activities mapping seed exchange groups in the villages was due to start in Q3. This has been delayed to Q1 Y2 as IRAG extension staff were focused on establishing the FFS and PVS plots and groups.

*2.11 Distribute improved rice and other annual crop seed varieties at a reduced cost to direct beneficiary farmers, providing training of planting techniques for seed and ensure collection of seed at harvest for following year use.*

Four varieties of rice have been planted over 0.6 ha for participatory farmer selection at one plot in Avilissou. The farmers selected the varieties of rice planted. Appendix 3 shows the plot laid out and the varieties selected. At harvest time we expect a yield of 1,000 kg which will be used for seed distribution to farmers.

*2.14 Establish trials for protecting crops and repelling elephants with direct beneficiary farmer groups in transition zone based on lessons learnt in FFI Elephant Survey report and use these as demonstration plots for wider community training on the topic according to demand for this village by village*

This activity was meant to start in Q3 but has been delayed to Y2 as training plots are not yet established.

*2.15 Monitor crop loss and human wildlife conflict in transition zone during monthly community meetings*

Under the guidance of FFI, CFZ set up a team of rangers that are responsible for handling HWC incidence. In 2017, rather than monitoring incidents at monthly meetings, it was agreed that village contacts are tasked with immediately informing the HWC ranger team if there are any new incidents. This approach was taken as the number of incidences in 2017 was very low in four of the five focal HWC villages.

In 2017 there were nearly no conflicts in the four focal Darwin villages, but a large number of incidents in N'Zebela. In the end, the community here refused to engage with the rangers on recording the incidents and showing the damage as no one was providing them with compensation for the damage. The damage was caused by a mother and her calf living in the community forest. These two elephants lost their natural fear and enter the village. Guards were posted to monitor the elephants for 15 days a month. The community took the initiative to set up an association to support farmers impacted by HWC. We are now looking for financial support to help this group and to potential replicate that fund to other villages that experience high incidences of HWC.

**Outputs 3:** Illegal activity within Ziama is reduced through a shift from bas-fonds to farming in transition zones

*3.1 Bas-fond user groups and CFZ develop and implement bas fond control and exit plan including monitoring existing use and halting further clearance in bas-fonds*

As planned, FFI and CFZ provided training over 2 days on the 8 March to CFZ rangers for the evaluation and on-going monitoring of the bas fonds. Eight guards were trained by the CFZ botanist and supported by a national FFI biologist. The ToR on training is attached as Appendix 10 and the training report as Appendix 11. An assessment of participant knowledge at the end of training showed 100% can complete the bas fond evaluation sheet and 80% have a good knowledge of identification of indicator species, invasive type of soil and water regimes. Additional training on GPS devices was requested and will be conducted by FFI in Y2.

Due to the late training, and the late start of the rains, which delays bas-fond use, the monitoring will start in Y2.

*3.2 CFZ ranger staff conduct regular patrols of bas-fonds and attend bas-fond users association meetings on a regular basis to update users and ensure a strong and harmonious dialogue with communities*

Registered users of the bas fonds do not appear to meet regularly. They have management committees that include a president and vice president. CFZ meet fairly regularly with the directors normally to collect a legitimate user fee. More effective ways to engage with the bas fond farmers will be explored in Y2.

*3.3 Provide training on environmental impacts of herbicide and pesticide use in water systems and safe application to bas fond associations in 4 villages and beyond*

The first round of training was planned for Q3. IRAG extension staff will deliver this training. As staff time was focused on setting up the FFS and preparing the plots, neither staff nor community time was available to deliver or attending training on agrochemicals. Pesticide and herbicide training has been provided before by IRAG and the modules will cover: the use of plant protection products (hazards and benefits); the use of protective equipment; and how to use phytosanitary products (dosage and method of treatment). We will try to make up for the delay by providing additional sessions in Y2.

*3.4 Conduct baseline survey for water quality in targeted bas fonds and repeat survey in year four*

We planned to develop our baseline prior to any training on agrochemicals in Q2. It was not possible to get access to the bas fonds until Q4.

We have contacted CERE, an analytical facility at the University of Conakry, to determine which herbicides they have the capacity to detect. We conducted a rapid market survey of locally available agrochemicals in February. We conducted this survey at the market of Irié to get an idea which herbicides are available and most widely used. We detected three different non-selective herbicides (“Glyphosate”, “Total” and “Bérérrouge”). Two selective herbicides are used (Sarclé for peanuts, potatoes and tomatoes; and Super Herbi Riz for rice fields). We identified three pesticides to be sprayed on fields (SARADAN, rice, bananas, corn, pineapples, coffee and palm oil; SARONE, rice, corn, cotton, peanuts, potatoes, vegetables, fruit trees, cocoa, coffee and grains; and SARLOTHRINE for all crops) and one to be used to preserve grains after harvest (SARBA-SUPER). We will use the results of this survey to guide our questions to CERE and they can test the water within and downstream from the bas-fonds.

**Outputs 4:** Targeted bas-fonds in Ziama MAB are showing signs of forest recovery

*4.1 Develop restoration plan incorporating identification of suitable cost effective methods for enhancing the restoration of bas-fonds based on successful work by CFZ to date including assisted and natural restoration and identification of suitable species to be planted as feasible, based on various suitability criteria including potential to increase forest cover and attract wildlife species to the sites*

The restoration plan was due to be completed at the end of Y1. The plan has not been completed but progress has been made. FFI biologists conducted interviews with IRAG and CFZ specialist staff to define the evaluation methods for monitoring of the restoration of bas fonds in the classified forest and to identify indicator pioneer woody species for restoration.

As mentioned in activity 3.1. eight CFZ staff have received training on bas fond monitoring. The CFZ botanist who has experience in bas fond restoration has selected five species to be used as indicators of bas fond restoration:

1. *Raphia vinifera*, 2. *Alchornea cordifolia*, 3. *Powpow ( Mytragina sp)*, 4. *Harungana madagascariensis*, 5. *Macaranga sp*

They are all native species that can indicate the quality of the soil at the point when the bas fond was abandoned. See Appendix 11.

## 3.2 Progress towards project Outputs

### ***Outputs 1: Bas-fond farmers and current transition zone farmers in 4 villages are trained in improved agricultural practices and apply them to farmland in transition zones***

***Indicator 1.1:*** 1.1 100% (380 individuals, gender disaggregated) of targeted bas-fond farmers from 4 villages have received direct training and on-going support on a range of improved agricultural, irrigation and tree crop techniques in each year of the project

A total of 260 individuals (109 men and 151 women) were reached through the farmer field schools in three of the four focal villages. They have started their training on improved agricultural and crop techniques. No data exist yet on participants in the fourth village, Avilissou. Appendix 2 and 3 show the participant lists and a summary of FFS set up.

In February 2018 communal elections occurred in Guinea. The election campaigns of some political parties supported actions opposing the Darwin project goals. This led to difficulties in all focal villages, with largest negative effects for the project in Avilissou. Up to end of March the election results were not yet published, intensifying dissatisfaction in the Guinean population. Additionally, in Avilissou two different ethnic groups live together and social tension between these two ethnic groups is generally higher in this community than in other villages. The difficulty faced, is to include both communities. Since the elections the extension team is slowly regaining trust from the community in Avilissou. These developments hindered the establishment of farmer field schools and data on participants is still not complete, as we hope the number of participants will increase.

We will include a few indicators on the socio-economic profile of our participants in 2018. This is still a good indicator to use and we expect to achieve by project end. Data on participation is collected by IRAG field staff. It is still too early to measure the impact and application of any training.

### ***Outputs 2: The incentives and wellbeing (food security, physical security, time, income, yield) from farming in the transition zone are equal or greater than farming in the illegal bas-fonds in the core and buffer zones***

***Indicator 2.4:*** Farmer seed exchanges and seed farmers make new varieties available to wider farming communities (additional to target villages) with 15% year on year increase to farmers in villages and beyond purchasing improved seed year on year

The baseline for this indicator is yet to be developed. Rice will be one of the crops monitored as the farmers chose rice for the PVS seed. We have not yet mapped existing farmer seed exchange groups but IRAG have worked on developing farmer seed networks in the region in the past.

***Indicator 2.5:*** Reduction in human-elephant conflict (compared to baseline collected 2016)

Appendix 6 and 7 shows the baseline data from 2016. This shows a total of 81 reported incidents of HCW in and around the villages of Irie, Boo, Sibata 2 and N'Zebela. There has been a significant drop in reported HWC incidents around the villages in 2017. We think this is due to a combination of two factors: one, the on-going presence of the HWC team and their rapid interventions and close observation of any reported elephants has meant that villagers are less liable to take matters into their own hands which is often a cause of conflict, and two, potentially elephants moving away from the area. Only the village of N'Zebela remains high as explained in activity 2.15.

These two elephants are now followed by CFZ guards for 15 day of every month reducing the poaching threat and the human-elephant conflict. Anecdotal evidence from the rangers states that continuous exposure to the elephants is increasing understanding for the elephants as natural parts of the environment, that there is a potential for tourism as people are coming to see the elephants and this has decreased the negative notation of their presence.

Data is mainly collected by a team of two CFZ rangers, which follow the two elephants (mother and child) which are causing most of the damage. They record a range of fields (see Appendix 7) including the GPS coordinate of the area, description of location, crops.

### ***Outputs 3: Illegal activity within Ziama is reduced through a shift from bas-fonds to farming in transition zones***



**Indicator 3.1:** *No new clearing of forest in bas-fonds areas against current figures from July 2016 survey*

Bas fonds are monitored on a monthly basis as part of CFZ's law enforcement patrols. Community members accompany rangers when patrolling the bas fonds to ascertain transparency and improve community visibility and acceptance of the data. Appendix 8 shows bas fond use and baseline for all villages in the area and Table one shows our baseline.

**Table One: Allowed 2006 use compared to actual 2016 use by ha.**

Village	2006 (ha)	2016 (ha)	Illegal use (ha)
Boo	110.90	130.13	19.23
Avilissou	92.60	160.85	68.25
Irié	39.60	93.72	54.12
Sibata2	56.70	115.75	59.05
<b>Total</b>	<b>299.80</b>	<b>500.45</b>	<b>200.65</b>

2017 figures are still being analysed but rangers are reporting of some further clearance in the bas fond and clearing of forests for fields. Some confusion has been generated in the communities when during presidential election campaigns, Ziama was listed as a priority forest for conservation but then a Taiwanese logging company was also given rights to log Ziama. This led to communities thinking Ziama had been de-classified as a reserve. The situation was exacerbated by municipal elections in February. CFZ have significantly increased their visibility in the villages to address this, particularly in Avilissou and Irié, two villages where most of the new fields were observed. Actual figures on additional clearance will be established during the detailed bas fond monitoring programme.

**Indicator 3.2:** *Law enforcement patrols report decline in illegal activity in core and buffer zones of Ziama MAB (compared to baseline from 2016 patrol data)*

Appendix 9 show the 2016 Law Enforcement patrol baseline data.

2017 data has not yet been analysed in full. Since project start 1687 incidents have been reported (522 used new and old cartridges, 1160 hunting huts, and 5 arrested poachers) and followed up with a site monitoring visit. However the last four months of data show a decline in the number of spent shotgun cartridges, but an increase in traps found. This is supposedly linked to the fact that there has been an increase in the number of poachers arrested due to improved anti-poaching techniques implemented in 2017 as well as an increased rate of successful prosecutions. FFI, CFZ and GALF combined efforts and lobbied the local judicial system to improve conviction rates.

Patrol data is collected by rangers and compiled in summaries by CFZ. FFI supports CFZ with the analysis of this data. FFI and CFZ monitor conviction rates following arrest.

**Indicator 3.4:** *Water testing in bas-fonds shows reduction in herbicide (compared to baseline to be collected at start of project) by end of year 4*

As explained in section 3.1, based on our rapid market review, we can ask specific questions that CERE can test the water within and downstream from the bas-fonds.

Water collected this rainy season (July and August) will be used to develop the baseline. This should still act as a baseline because we have not yet observed bas-fonds being abandoned and training on bas-fond assessment for CFZ staff happened in Q4 Y1.

**Outputs 4: Targeted bas-fonds in Ziama MAB are showing signs of forest recovery**

**Indicator 4.1:** *Restoration plan developed in year 1 and implemented across 50% of all targeted bas-fonds by year 4 (250 hectares)*

The restoration plan was due to be completed at the end of Y1. CFZ recommend natural regeneration as the most cost effective method for restoration. The plan will be produced in Q2 Y2 once the initial assessment of all the target village bas fonds is completed and analysed.

**Indicator 4.2:** Targeted bas fonds show annual improvements in ground cover / density of woody vegetation/ species richness in line with expected patterns of restoration by 25% year on year in years 2, 3, and 4 against project baseline

As reported in section 3.1, activity 4.1, indicator species have been selected for monitoring natural regeneration of the bas fond and assessments are underway to develop the baseline. Due to staff time constraints focusing on project set up, training for the assessment only happened in March 2018.

### 3.3 Progress towards the project Outcome

**Outcome:** The relocation and improvement of agricultural practices reduces encroachment and degradation of forest habitats and ecosystems, benefiting elephants, forest resources and biodiversity, while improving the wellbeing of targeted farmers.

*Outcome indicator 0.1: Stable or increasing indices of elephant and other key species (compared to baselines collected before start of project and through Y1 for full year)*

Appendix 12 shows the biomonitoring analysis for 2017. Despite the large number of elephant observations, an elephant census conducted in November 2017, gave no evidence that elephant number increased since 2016. In both years the estimated number of elephants present in the Ziama forest was 15 elephants. Appendix 13 is the report on the elephant census baseline and data analysis for 2016. The data is collected through monthly ranger patrols, is analysed by the FFI team and CFZ staff, and it serves to inform subsequent monitoring and law enforcement strategies.

*Outcome indicator 0.2: 50% of target bas-fonds in Ziama (250 hectares) show annual improvements in line with expected patterns of restoration in years 3, and 4 against project baseline (gathered at when farmer leaves bas-fond)*

An update on progress for developing the baseline for this indicator has been reported on in sections 3.1 and 3.2. As we were not expecting any farmers to leave the bas fond in Y1, we don't believe the baseline will be distorted by collecting data at the end of Y1 and beginning of Y2. The indicator should still be valid and achievable.

*Outcome indicator: 0.3 60% reduction (228 individuals) in number of men and number of women (minimum 50% women) using bas-fonds in target villages by project end with a 20% reduction by end of year 2. We anticipate the final 40% to leave within 3 years of project end*

We need to verify the bas fond farmers including both the registered legal list of bas fond users and those bas fond farmers considered illegal. Our current list indicates an increase in the number of people claiming to farm in the bas fond and shows an estimated 116 illegal bas fond farmers based on the registered number of 380. This is likely to be that the illegal users were much higher than originally reported and now that the project inception meetings have taken place, people feel more comfortable coming forward to declare they farm in the bas fond. Or it could be that they realise they will have access to additional farming support. This list will be verified and discussed with all partners and an agreement reached as to the best classification moving forward. FFI and IRAGs preference is to include all farmers who self-select as bas fond farmers as verified by the other bas fond users.

Table 2: Number of people in each town farming in the bas fonds:

N°	Village	Men		Women		TOTAL
		Number	%	Number	%	
1	Irié	40	30%	93	70%	133
2	Bôô	89	68%	42	32%	131
3	Sibata II	36	43%	48	57%	84
4	Avilissou	100	68%	48	32%	148
<b>TOTAL</b>		<b>265</b>	<b>53%</b>	<b>231</b>	<b>47%</b>	<b>496</b>

### **3.4 Monitoring of assumptions**

At this point all the assumptions still hold true and no significant new risks have been identified. All issues and delays in Y1 are not considered insurmountable.

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

The increased presence of anti-poaching and monitoring patrols in the reserve has acted as a strong deterrent, as well as improved prosecution rates for illegal hunting.

We have seen a good response in three of the four villages in terms of participation from bas fond farmers to attend the FFS and training being offered. Appendices 2 & 3 evidence this. 260 people have signed up to FFS (149 women and 109 men). Our complete target by project end was 380 individual bas fond farmers had received training and on-going support.

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

The project will support Guinea's contribution to the SDGs, specifically to targets under SDGs 1, 2, 3, 5, 6, 11, 12, 13, 15 and 17. In particular, it will primarily contribute to SDG 15, Life on Land, through working to protect and promote sustainable use of Ziama MAB, reduce degradation of the forest and restore degraded areas, and implement sustainable management of the forest.

There is an increased awareness in the four target communities following the inception meetings of the pressures on the forest from farming further and further into the protected area and the need to support the Government to respect the zones of the MAB.

One plot has been established to test and propagate macuna seeds which will be distributed for restoration of degraded farm land. 6,000 PICS bag have been purchased to improve niebe storage, a bean that is important in early year's nutrition.

## **5. Project support to the Conventions, Treaties or Agreements**

The project is supporting CBD Strategic Goals B and D by working to reduce direct pressure on biodiversity caused by the damaging practice of forest clearing and use of bas-fonds within the forest for agriculture. Appendix 9, 12 and 13 evidence patrol and species data.

The project is also working towards supporting Aichi Targets 5, 7 and 14. Initial work is underway to combat degradation of the forest landscapes through the activities for bas fond monitoring and restoration. Through the FFS we are promoting sustainable agricultural practices and ensuring female participation as they select the topics and crops they wish to work on. The announcement by CFZ at the inception meetings that farmers will be supported to transition out of farming in the bas fonds is a starting point to addressing the fragmentation of the forest ecosystem.

FFI is in regular contact with the CITES focal point. Guinea has been suspended from CITES, but hopefully this will be reversed due to the country's renewed commitment to addressing wildlife crime. FFI recently facilitated the signing of the Elephant Protection Initiative by the Guinean government and is supporting the proposed setting up of a national ivory stock management system.

## **6. Project support to poverty alleviation**

It is too early to evidence a directly link in activities to poverty alleviation. The support for farming and market development are expected to support livelihoods and reduce the burden of farming in the bas fond.

## **7. Project support to gender equality issues**

As evidenced in section 3.1, 47% (231 individuals) of participants in the agricultural extension training are women with a fairly even spread across the range of subjects offered. The main achievement this year is that 32 women have signed up to agroforestry training and support. Culturally women 'don't do tree crops' so it is fantastic that these women have stated that they have the land and want to take part.

Traditionally, and supported by men in other communities outside the Ziama region, women are not expected to be able to do agroforestry as the work is too heavy and as they are not expected to have the patience until the plantation pays off. Despite all these negative prepositions, the participants in the agroforestry modules were about 27% women (0% in Sibata 2 (only 7 men participating), 20.7% in Irié (total 58 participants), 37% in Boo (total 54 participants)). These surprising results show that the agriculture training methods and topics are reaching men and women.

## **8. Monitoring and evaluation**

We are still developing our M&E systems for the agricultural activities and currently IRAG extension staff have been recording all activity data effectively. We will add socio-economic profiling of the FFS participants to understand if we are reaching the more marginalised and vulnerable members of the communities that are farming in the bas fond. Monitoring the impact of the training has not yet been developed and as yet, no substantial training has yet been delivered.

We have not yet established a routine of having full project partner meetings where we are monitoring activities against the logframe. Monitoring activities against the work plan formed the main activity monitoring for the year.

IRAG extension staff are currently monitoring in a non-standardised anecdotal way the farmers' perceptions of how incentives and activities are progressing. IRAG will be supported by FFI to systematically monitor these changes. Difficulties were encountered in Avilissou.

Monthly patrol data for law enforcement and species monitoring is ongoing. Moving forward, detailed analysis and reporting of data will now be done quarterly and reviewed by all project partners. Staff time has been a major constraint to data analysis at the end of 2017 as activities have focused on project set up.

## **9. Lessons learnt**

We need to allow more time for discussions with CFZ as we overestimated how quickly activities would be able to start, especially given a change in leadership. We need to have regular monitoring and evaluation meetings with CFZ at the more senior level.

The late start put pressure on all partners to catch up. Ideally we would have paused activities during the elections, something we had to do anyway in Avilissou given the tension there.

We need to find a way to differentiate IRAG extension staff who are present in the communities the most from CFZ staff. Even though CFZ staff are in uniform, the communities appear to be currently voicing their concerns over the MAB and CFZ to IRAG staff. We are working out how to best manage this without dismissing the communities concerns or burdening IRAG staff with recording community grievance as this is clearly CFZ role.

FFI and IRAG were able to have regular productive meetings, this is in part due to proximity of offices making staff contact easy. Establishing this new partnership has worked very well.

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

N/A

## **11. Other comments on progress not covered elsewhere**

The elections have been mentioned but there is a political element that is important to consider in CFZ decision to restrain the start of project activities in the MAB. Some of the villages in and around the MAB are opposed to the government and with municipal elections planned for the beginning of February 2018, officials were wary about dealing with issues that involved communities in protected areas. What's more, because of corrupt practices by certain agents in the past, CFZ does not have a particularly good reputation amongst the communities. They were therefore very worried about how to proceed and to ensure that the message transmitted would not upset local sensibilities.

The municipal elections in February exposed a lot of the underlying conflict that exists between the communities and the authorities responsible for the reserve. This conflict has not been handled well in the past and the elections provided an opportunity for politicians to make outlandish promises to villagers about using the natural resources in Ziama. This was totally at odds with the objectives of the Darwin project. Emphasis will need to be put on promoting the project as a means to improve livelihoods rather than allowing it to be seen as a means of forcing people out of the reserve.

Discussions with local authorities, including the new Prefet in Macenta have eased the situation and it will be necessary to ensure their continued engagement.

As a team we identified other areas we could make progress despite field level activity delays. We have brought forward identification of sites and suppliers for irrigation systems as this also tied in with plot selection for market vegetables. We also brought forward the purchase of the pic bags for niebe as an activity that the whole community can benefit from so the project is seen to be reaching the wider community as fast as possible and not just bas fond farmers. It was also identified as a potential market opportunity for women which we had not anticipated and was currently scheduled for Y2. Bring these activities forward gives us longer to make progress around complex issues of improving livelihoods and addressing the drivers of poverty.

## 12. Sustainability and legacy

During village meetings, it was always highlighted that laws may change and that even bas-fond users how currently have the permission from CFZ, may due to new laws, loose this privilege. Our project wants to reduce negative effects in such event, in teaching sustainable agricultural methods.

At this stage our main indication of interest in the project is the attendance at the inception meetings and the number of bas fond farmers that have signed up to FFS activities as evidenced in section 3.1.

## 13. Darwin identity –

The Darwin logo has been clearly displayed during all activities to date, including the performances by the theatre group. All written communications and agreements carry the logo including signage at the farmer field schools.

The Darwin Initiative is widely known by the communities and authorities in the region after the efforts of the FFI team to promote the project during the implementation phase. It is recognised as a distinct project funded by the UK government. Prior to commencing activities the team met with a number of senior officials and NGO staff in Conakry to introduce the new initiative. This was met with great enthusiasm and promises of support.

Signs at the FFS plots include the DI logo, see Appendix 14 page 37.

## 14. Project expenditure

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

<b>Project spend (indicative) since last annual report</b>	<b>2017/18 Grant (£)</b>	<b>2017/18 Total Darwin Costs (£)</b>	<b>Variance %</b>	<b>Comments (please explain significant variances)</b>
Staff costs (see below)			-4%	
Consultancy costs				
Overhead Costs			+6%	
Travel and subsistence			-21%	We spent less than expected due to the later start in field activities than planned, staff did not spend as many

				nights in the field, there was not as much national travel and savings were made on international travel. Due to the bunching of significant levels of field activities towards Q3 & Q4, we estimated that the majority of funds would be used up and we would not have such a variance. This has not been discussed or approved with Darwin. We anticipate that we will catch up with travel and subsistence spend in the coming years.
Operating Costs			+9%	
Capital items (see below)			+4%	
Monitoring & Evaluation (M&E)				
Others (see below)				
<b>TOTAL</b>			<b>0</b>	

M&E was not a distinct line in the required budget categories and has not been captured separately.

## 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><b>Impact</b></p> <p>Ziama is an intact and effective Man and Biosphere reserve that supports optimal populations of key species, co-managed and equitably benefitting local men and women</p>			
<p><b>Outcome</b> The relocation and improvement of agricultural practices reduces encroachment and degradation of forest habitats and ecosystems, benefiting elephants, forest resources and biodiversity, while improving the wellbeing of targeted farmers.</p>	<p>0.1 Stable or increasing indices of elephant and other key species (compared to baselines collected before start of project and through Y1 for full year)</p> <p>0.2 50% of target bas-fonds in Ziama (250 hectares) show annual improvements in line with expected patterns of restoration in years 3, and 4 against project baseline (gathered at when farmer leaves bas-fond)</p> <p>0.3 60% reduction (228 individuals) in number of men and number of women (minimum 50% women) using bas-fonds in target villages by project end with a 20% reduction by end of year 2. We anticipate the final 40% to leave within 3 years of project end.</p> <p>0.4 70% (266 individuals) of both male and female farmers targeted (of which at least 50% are women) report an improved sense of wellbeing (material, physical and subjective) by the end of the project</p>	<p>0.1 elephant numbers are consistently low (15), nevertheless we have no indication they are decreasing. Biodiversity indices are comparable than in previous years.</p> <p>0.2 Not yet applicable, expected after year 3.</p> <p>0.3 Not yet applicable. No bas-fond farmer has yet left the bas-fond.</p> <p>0.4 Not yet applicable</p>	<p>On-going biomonitoring.</p> <p>Bas-fond vegetation monitoring to be completed and analysed.</p> <p>Agricultural and agroforestry training to be monitored for uptake.</p>
<p><b>Output 1.</b> Bas-fond farmers and current transition zone farmers in 4</p>	<p>1.1 100% (380 individuals, gender disaggregated) of targeted bas-fond</p>	<p>1.1. A total of 260 individuals (109 men and 151 women) were reached through the farmer field schools in three of the four focal villages. They started their</p>	

<p>villages are trained in improved agricultural practices and apply them to farmland in transition zones</p>	<p>farmers from 4 villages have received direct training and on-going support on a range of improved agricultural, irrigation and tree crop techniques in each year of the project</p> <p>1.2 From Year 2, 100 direct beneficiary farmers (at least 50% women) are applying at least 1 new intervention on their farmland in transition zones with a minimum of 300 farmers (78%) reporting application of at least 1 new intervention by project end</p> <p>1.3 50% male and 50% female transition zone farmers surveyed from 4 targeted villages (20% population estimated at 337 households) who are not direct beneficiaries of the project report having access to information on improved agricultural techniques by year 4. with 60% of participants reporting access to information in focus group feedback sessions on communications programme in year 2 and 3.</p>	<p>training on improved agricultural and crop techniques. No data exist yet on participants in the fourth village, Avilissou. Work on farmer field schools has started as evidenced in Appendices 2 &amp; 3.</p> <p>As reported in section 11 of the report, the elections caused delays and tensions in our villages between ethnic groups and towards project staff as they were seen as to support exclusion from the bas fond. Since the elections the extension team is slowly regaining trust from the community in Avilissou. These developments hindered the establishment of farmer field schools and data on participants is still not complete, as we hope the number of participants will increase (compare IRAG Synthesis report).</p> <p>1.2 Not yet applicable.</p> <p>1.3 Not yet applicable.</p>
<p>Activity 1.1. Inception workshops and participatory design of agricultural extension package with beneficiary farmers including soil and weed mapping to match annual and perennial crops to best locations according to available lands</p>		<p>1.1 Inception workshops were held in all four villages, at the following dates: Irié: 5th December 2017; Boo: 6th December 2017; Sibata II: 7th December 2017; Avilissou: 8th December 2017.</p> <p>Appendix 2 lists participants. Most bas-fonds users were participating at the inception workshops. From the communities were a total of 830 individuals (754 adults) present, among those 244 women, 510 men and 76 children. The inception workshops were supported by the authorities from each village, from the district offices, the sous-prefectures of Sérédou and N'Zebela and the Sérédou town hall representative. All partner organisations were represented by their senior management.</p> <p>IRAG and the bas fond farmers interested in receiving support discussed and selected the range of agricultural topics and training to be offered. Plots were reviewed and selected in conjunction between agricultural staff and community members and land owners. Seedling nursery sites were identified.</p> <p>1.2 We had several joint meetings with IRAG and Sisters de Ste Urusle de Guinée between the 17.02.2018 and 19.03.2018 to discuss synergies between</p>



<p>1.2 Coordinate and implement joint training for efficiency and synergies with Sainte Ursule de Guinée Order and Plan International including composting training</p> <p>1.3 Update IRAG assessment of local farmer savings groups with a view to supporting and establishing new savings groups as needed particularly for women and to ensure farmers are able to purchase seeds of improved varieties when seeds need replacing</p> <p>1.4 Targeted training sessions and ongoing mentoring for agricultural extension package on topics such as soil management, planting techniques, seed management, green manure, integrated pest management, tree crop improvement, conservation agriculture, weed management, herbicide and pesticide management, alley cropping, agroforestry and improved irrigation techniques for direct beneficiary farmers. Sessions offered as both single and mixed-sex groups to encourage participation by all.</p> <p>1.5 Update agriculture extension and training methods and topics according to regular participant feedback, with a focus on ensuring sessions are run in a format, time and place to enable women to participate, learn and support each other, without isolating male participants</p> <p>1.6 Develop and deliver communication plan including training materials and radio programmes using appropriate media to ensure outreach of training and information to village residents and wider area (indirect beneficiaries)</p>	<p>the capacities of IRAG and the sisters of St. Ursule de Guinée. It was concluded that the Sisters de Ste Ursule will take on the responsibility for the compost training.</p> <p>During a meeting with Plan 27.02.2018, we discussed possibilities for synergies particularly concerning the club d'ecoute. Young people, starting at 5 years old, are supported by Plan to develop short theatre plays and songs concerning topics of social interest. The club d'ecoute Sérédou has developed a short show on environmental themes, concerning the advantages of the Ziama forest, poaching and illegal logging. Together with Plan and the club d'ecoute Sérédou shows in the four focal villages were planned and conducted in two of the four villages in March (Irié and Sibata 2). The communities reacted very positive to these shows. The remaining two target villages and further villages around Ziama will be reached in Y2.</p> <p>1.3 Not yet applicable</p> <p>1.4 Topics for the training package have been selected. Training on market vegetables, niebe and seedling management for coffee started in February and March. Improved irrigation system training and composting will start in Q1 Y2 with certain activities scheduled seasonally. Agricultural training is scheduled to continue for the remainder of the project.</p> <p>1.5 Agricultural topics were discussed by communities and feedback provided during curriculum development. Women have chosen to participate in the Agroforestry modules, a surprising result showing that the agriculture training methods and topics are reaching men and women. In Avilissou the community has requested support to increase the value of ginger. The project will take this request into account in Y2.</p> <p>1.6 With the radio rurale situated in Macenta, we developed a plan for discussions in the four focal villages between the communities and experts from IRAG, FFI and if possible the sisters of Ste Ursule, which will be recorded and can be broadcasted by the radio and in the video clubs in other villages than the four villages. A socio-economic survey highlighted that the presence of radios in the villages is scarce. Hence, we plan to use the video clubs to reach a larger number of persons within the communities. Additionally, the shows of the club d'Ecoute de Seredou will be recorded in voice and video, which can be additionally broadcasted in the video clubs. The video club broadcasts and shows will continue through Y2. A communications plan has been drafted and will be discussed and agreed between all partners in Q1 Y2.</p>	
<p><b>Output 2.</b> The incentives and wellbeing (food security, physical security, time, income, yield) from farming in the transition zone are equal or greater</p>	<p>2.4 Farmer seed exchanges and seed farmers make new varieties available to wider farming communities (additional to target villages) with 15% year on</p>	<p>2.4 IRAG set in place Participatory Varietal Selection plots. Based on the results from these plots, seed farmers are trained and respective seed varieties provided to the communities. Due to the delayed start of the project seeds are not yet available, as we missed the planting window in the dry season.</p>

<p>than farming in the illegal bas-fonds in the core and buffer zones</p>	<p>year increase to farmers in villages and beyond purchasing improved seed year on year</p> <p>2.5 Reduction in human-elephant conflict (compared to baseline collected 2016)</p>	<p>2.5 Currently in one village N'Zebela, close to Sibata 2, two elephants, a mother with her calve, have caused most of the human-elephant conflict in the area in 2017. These two elephants are now nearly continuously followed by CFZ guards reducing the poaching threat and the human-elephant conflict. These elephants have lost their natural fear and enter villages. Anecdotally, due to this continuous exposure, understanding and acceptance as elephants as a natural parts of the area improved.</p> <p>Efforts are being made to set up a group which has the possibility to support farmers after crop loss from elephants.</p>
<p>Activity 2.1 Identify with village councils and CFZ land in the transition zone for those direct beneficiary farmers that need it, ensure harmonisation of the process within community and establish culturally appropriate agreements for long term use of the land (Y1)</p> <p>2.2 Review condition of land provided, identify appropriate annual and perennial crops, select appropriate farming methods with beneficiary farmers and prepare the land including managing weeds and increasing fertility through planting of 'mucuna'</p> <p>2.3 Establish project baselines, gender disaggregated from bas-fonds crops and monitor annually for direct beneficiary farmers</p> <p>2.4 Ground truth, update design and implement agricultural transition plan, incorporating agricultural extension plan, in participation with direct beneficiary target farmers including mapping shifting labour roles and responsibilities for women and men, support to enhance and shift to self-selected annual and tree crops etc. to ensure feasibility and ownership of the plan</p> <p>2.6 Based on hydrology mapping, develop locally appropriate trials for irrigation systems, including construction of 'improved wells' (puits ameliorés) and community agreements for location, use, management and maintenance of the selected systems and wells and ensured access for direct beneficiary farmers</p> <p>2.7 Provide training on niebe post-harvest storage loss, distribute storage bags at reduced cost and develop independent local supplier of storage bags</p> <p>2.9 Review potential processing opportunities for existing crops grown outside the bas-fonds in order to identify opportunities to increase income from simple feasible processing</p> <p>2.10 Based on successful seed develop programmes from IRAG, update mapping of existing seed exchange groups within and between villages, and support them to design and implement their own scaling up of seed exchange of new varieties to ensure availability to wider farmer groups in 4 villages and beyond</p>	<p>2.1 CFZ is yet to verify which of the self-declared beneficiaries do use a bas-fonds in the protected area. Without this information, it is not possible for IRAG to determine which of the beneficiaries could request permission of additional land to be found. It has also not been appropriate to start these conservations with the communities.</p> <p>2.2 16 FFS plots have been established including one plot for macuna propagation.</p> <p>2.3 CFZ guards received training in how to monitor bas-fonds. The developed form covers regeneration as well as current and past crops. As the project started during the dry season, no crops were yet cultivated in the bas-fonds. The monitoring and establishment of the project baseline is underway.</p> <p>2.4 Discussion around the agricultural transition plan have not yet started as a final list of beneficiary farmers is not yet present and efforts have focused on engaging participants in the agricultural extension work.</p> <p>2.6 Suitable sites for an irrigation system were identified. This activity was planned for Y2 but was brought into Y1 to coincide with FFS plot selection. The irrigation systems will be set up and training provided in the first half of Y2.</p> <p>2.7 Niebe post-harvest storage bags (pic-bags) were purchased in Ghana and are on their way to Ziama. The pic-bag developers offer and urge users to participate in training on pic bag use. IRAG have received some training in pic bags. This activity was brought forward into Y1 as an activity we could make progress on due to delays in other areas and one that benefits the whole community. Training will be provided and bags will be distributed in Y2.</p> <p>2.9 IRAG and the Sisters of Ste Ursule de Sérédou, identified Manioc (Cassava) as a crop for processing opportunities. This activity was brought forward into Y1 and combined with the community participation in the selection of the agricultural extension plan. Ginger was requested by Avilissou and will be worked on in Y2.</p>	<p>2.1 CFZ is yet to verify which of the self-declared beneficiaries do use a bas-fonds in the protected area. Without this information, it is not possible for IRAG to determine which of the beneficiaries could request permission of additional land to be found. It has also not been appropriate to start these conservations with the communities.</p> <p>2.2 16 FFS plots have been established including one plot for macuna propagation.</p> <p>2.3 CFZ guards received training in how to monitor bas-fonds. The developed form covers regeneration as well as current and past crops. As the project started during the dry season, no crops were yet cultivated in the bas-fonds. 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Training will be provided and bags will be distributed in Y2.</p> <p>2.9 IRAG and the Sisters of Ste Ursule de Sérédou, identified Manioc (Cassava) as a crop for processing opportunities. This activity was brought forward into Y1 and combined with the community participation in the selection of the agricultural extension plan. Ginger was requested by Avilissou and will be worked on in Y2.</p>

<p>2.13 Annually monitor yields for rice varieties being achieved by beneficiary farms in transition zone and incomes of any surplus sold and adapt activities and support accordingly</p> <p>2.14 Establish trials for protecting crops and repelling elephants with direct beneficiary farmer groups in transition zone based on lessons learnt in FFI Elephant Survey report and use these as demonstration plots for wider community training on the topic according to demand for this village by village</p> <p>2.15 Monitor crop loss and human wildlife conflict in transition zone during monthly community meetings</p>	<p>2.10 IRAG have up PVS (Participatory Varietal Selection) plots for Manioc (Cassava), rice and Niebe. Based on these PVS plots seed and seed farmers will be selected and volunteered during and after the first harvest in 2018.</p> <p>2.13 The project started during the dry season and has therefor missed the harvest window for rice.</p> <p>2.14 During the dry season, human-elephant conflicts are less frequent as no harvest can be destroyed by elephants. Beginning of June 2018 the most effective methods to repel elephants will be developed by a specialist on this topic (A. Todd) based on FFI Elephant survey reports. It will be ascertained if the communities have the means to implement them.</p> <p>2.15 This indicator is being reviewed as the areas of conflict have shifted and monthly community meetings did not take place in 2017 as anticipated.</p>
<p><b>Output 3.</b> Illegal activity within Ziama is reduced through a shift from bas-fonds to farming in transition zones</p>	<p>3.1 No new clearing of forest in bas-fonds areas against current figures from July 2016 survey</p> <p>3.2 Law enforcement patrols report decline in illegal activity in core and buffer zones of Ziama MAB (compared to baseline from 2016 patrol data)</p> <p>3.4 Water testing in bas-fonds shows reduction in herbicide (compared to baseline to be collected at start of project) by end of year 4</p> <p>3.1 Monthly patrols took place throughout Y1. Transparency of the process was enhanced by community members accompanying patrols. As reported in Section 3.2 additional clearance of forest was identified and CFZ responded to this with increasing presence in the villages with assumed responsibility. The indicator is still appropriate.</p> <p>3.2 The past months, law enforcement patrols report a decline in gun shots, but an increase in traps found. This is supposedly linked to the fact that now poachers are prosecuted and sentenced. This was possible due to the combined efforts from FFI, CFZ and GALF (an organisation present in Guinea, supporting effecting prosecution).</p> <p>3.4 CERE, an analytical facility at the University of Conakry, are confirming which herbicides they have the capacity to detect. We conducted a market survey at the market of Irié, to get an idea which herbicides are available and the most widely used as evidenced in section 3.1 Based on this survey CERE will test the water within and downstream from the bas-fonds in the first half of Y2.</p>
<p>Activities 3.1 Bas-fond user groups and CFZ develop and implement bas fond control and exit plan including monitoring existing use and halting further clearance in bas-fonds</p> <p>3.2 CFZ ranger staff conduct regular patrols of bas-fonds and attend bas-fond users association meetings on a regular basis to update users and ensure a strong and harmonious dialogue with communities</p> <p>3.3 Provide training on environmental impacts of herbicide and pesticide use in water systems and safe application to bas fond associations in 4 villages and beyond</p>	<p>3.1 A bas-fond control mechanism was set up and guards trained in its application. CFZ increased their visibility in communities with new bas-fonds clearings since the communal elections. The exit plan will be developed between CFZ, IRAG and FFI, when identities and situations of bas-fonds users are verified in Q1 Y2.</p> <p>3.2</p> <p>3.3 This activity has been rescheduled to start in Y2. The modules for the herbicide training (AVPV) where being drafted in Q4 Y1. We will evaluate all partner knowledge on the environmental and human health impact to ensure we are up to date. In Q1 Y2, 5 people per target village will receive training.</p> <p>3.4 We are in contact with the CERE, an analytical facility at the University of Conakry, to determine which herbicides they have the capacity to detect. We are</p>

3.4 Conduct baseline survey for water quality in targeted bas fonds and repeat survey in year four		developing specific questions for them to design the baseline method. The survey will take place in the first half of Y2.
<b>Output 4</b> Targeted bas-fonds in Ziama MAB are showing signs of forest recovery	4.1 Restoration plan developed in year 1 and implemented across 50% of all targeted bas-fonds by year 4 (250 hectares)	4.1 Discussion took place in Q4 Y1 on the most effective and appropriate method for restoration. The plan will be written up in Q1 Y2 once bas fond monitoring is further ahead and staff time if available to write the plan.
	4.2 Targeted bas fonds show annual improvements in ground cover / density of woody vegetation/ species richness in line with expected patterns of restoration by 25% year on year in years 2, 3, and 4 against project baseline	4.2 A plan to determine the baseline was written in Q4 Y1 and will be conducted in the first half of Y2.
Activities 4.1 Develop restoration plan incorporating identification of suitable cost effective methods for enhancing the restoration of bas-fonds based on successful work by CFZ to date including assisted and natural restoration and identification of suitable species to be planted as feasible, based on various suitability criteria including potential to increase forest cover and attract wildlife species to the sites 4.2 Develop baselines for a selection of indicators including ground cover / density of woody vegetation/ species richness depending on conditions found in bas-fonds areas to be restored 4.3 Implement and update restoration plan in years 2, 3 and 4 and scale up appropriate techniques at CFZ identified sites and sites volunteered by bas fond associations		4.1 Not started yet.  4.2 Indicators were identified and guards trained in recognising them to monitor restoration processes.  4.3 Not yet started.



## 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><b>Impact:</b> Ziama is an intact and effective Man and Biosphere reserve that supports optimal populations of key species, co-managed and equitably benefitting local men and women</p>			
<p><b>Outcome:</b> The relocation and improvement of agricultural practices reduces encroachment and degradation of forest habitats and ecosystems, benefiting elephants, forest resources and biodiversity, while improving the wellbeing of targeted farmers.</p>	<p>0.1 Stable or increasing indices of elephant and other key species (compared to baselines collected before start of project and through Y1 for full year)</p> <p>0.2 50% of target bas-fonds in Ziama (250 hectares) show annual improvements in line with expected patterns of restoration in years 3, and 4 against project baseline (gathered at when farmer leaves bas-fond)</p> <p>0.3 60% reduction (228 individuals) in number of men and number of women (minimum 50% women) using bas-fonds in target villages by project end with a 20% reduction by end of year 2. We anticipate the final 40% to leave within 3 years of project end.</p> <p>0.4 70% (266 individuals) of both male and female farmers targeted (of which at least 50% are women) report an improved sense of wellbeing (material, physical and subjective) by the end of the project</p>	<p>0.1 Species indices data collected through monthly biomonitoring patrols. Data collected includes tracks and signs from a range of species found in Ziama. Data will be collected throughout Ziama during different seasons. Elephants will be surveyed in Y4 Oct – Dec, repeating the 2016 census.</p> <p>0.2 Vegetation and forest regrowth (ground cover, density of woody vegetation, species richness) increases shown year on year against baseline from when farmer leaves bas-fond. Verified through biomonitoring analysis, vegetation mapping reports and photos in years 2 (if possible), 3 and 4</p> <p>0.3 Law enforcement patrols conducted on a monthly basis, targeting bas-fonds. Y1 &amp; Y2 to reinforce project messaging and ensure no expansion / new users. Y3 &amp; Y4 to enforce agreements. Reports compiled and analysed on a monthly basis with 6 monthly and annual status reports</p> <p>0.4 Participatory Impact Assessment (PIA) in Y2 and Y4 to assess wellbeing of beneficiaries (including human-wildlife conflict). Repeat 2016 socio-economic survey in Y4.</p>	<p>That incentives offered in the agricultural transition plan do reflect ‘meeting their needs’ as reported, and that new law enforcement and education activities are sufficient to dissuade those wanting to continue bas-fond farming, or new farmers moving in.</p> <p>That there is no significant increase in population beyond natural growth, e.g. due to in-migration from conflict, mining opportunities in the region, etc.</p> <p>Assume that the bas fond farmers were honest during project scoping of their desire to leave the bas-fonds.</p> <p>That elephant poaching for ivory remains opportunistic and that increasing demand does not lead to professional ivory poaching.</p> <p>There is no extreme weather event (ie drought) during the lifetime of the project</p>

<p><b>Output 1</b></p> <p>Bas-fond farmers and current transition zone farmers in 4 villages are trained in improved agricultural practices and apply them to farmland in transition zones</p>	<p>1.1 100% (380 individuals, gender disaggregated) of targeted bas-fond farmers from 4 villages have received direct training and on-going support on a range of improved agricultural, irrigation and tree crop techniques in each year of the project</p> <p>1.2 From Year 2, 100 direct beneficiary farmers (at least 50% women) are applying at least 1 new intervention on their farmland in transition zones with a minimum of 300 farmers (78%) reporting application of at least 1 new intervention by project end</p> <p>1.3 50% male and 50% female transition zone farmers surveyed from 4 targeted villages (20% population estimated at 337 households) who are not direct beneficiaries of the project report having access to information on improved agricultural techniques by year 4. with 60% of participants reporting access to information in focus group feedback sessions on communications programme in year 2 and 3.</p>	<p>1.1 Training reports, attendance certificates, photos in each year, minutes from monthly informal farmer feedback session with extension workers.</p> <p>1.2 Recorded farmer feedback (videos, quotes, minutes from extension feedback sessions), lessons learnt paper produced each year.</p> <p>1.3 Locally appropriate media communications including radio programmes produced and confirmed through household survey of 20% of population of each town conducted in year 4 and designed to target both male and female audiences. Quotes and minutes from 4 focus groups feedback sessions in each village in years 2 and 3.</p>	<p>Bas-fond farmers remain committed and open to learning new techniques and have confidence in results demonstrated to fully adopt practices</p> <p>Multiple benefits of niebe bean convince farmers to increase production and consumption, as practiced in other West African countries</p> <p>Rainfall remains adequate to feed community irrigation systems for target villages</p>
<p><b>Output 2</b></p> <p>The incentives and wellbeing (food security, physical security, time, income, yield) from farming in the transition zone are equal or greater than farming in the illegal bas-fonds in the core and buffer zones</p>	<p>2.1 300 (78%) of direct beneficiary male and female farmers (of which at least 50% are women) have established or improved existing annual or perennial plots in transition zones by project end with 25% beginning the process by end Y2 and 50% by end Y3</p>	<p>2.1 Agricultural transition plan developed and validated with beneficiaries and key stakeholders by end Y1. Ongoing monthly meetings with extension staff – minutes. Plan reviewed and assessed in Y2 – Y4 by Project Manager. Appropriate management actions to address any issues documented in 6 monthly and annual reports.</p>	<p>Re-introduction of improved seed varieties conducted by IRAG for upland rice and niebe are replicated by direct beneficiary farmers as anticipated.</p> <p>Initial community discussions on availability and access to land hold true and sufficient land can be harmoniously secured inside and outside Transition Zone.</p>

	<p>2.2 By Year 4 60% of direct beneficiary farmers (228 individuals, of which at least 50% are women), report that the benefits of farming in transition zone equals or exceeds those from bas-fonds crops and remaining 40% of beneficiary farmers are projecting this within 3 years project end.</p> <p>2.3 100% (380 individuals) of targeted farmers have access to improved seed varieties and 25% of both male and female farmers are actively trialling them in the transition zone by year 2, 50% by year 3 and 100% by year 4.</p> <p>2.4 Farmer seed exchanges and seed farmers make new varieties available to wider farming communities (additional to target villages) with 15% year on year increase to farmers in villages and beyond purchasing improved seed year on year</p> <p>2.5 Reduction in human-elephant conflict (compared to baseline collected 2016)</p>	<p>2.2. Participatory Impact Assessment (PIA) in Y2 and Y4 to assess wellbeing of beneficiaries (including human-wildlife conflict). Annual yield and price surveys each year for transition plots, bas fond plots vs 2016 baseline. Six monthly extension staff reviews of farmer uptake and beneficiary farmer feedback focus groups.</p> <p>2.3 Annual extension staff reports on up take and use of varieties</p> <p>2.4 Annual farm seed exchange representative verbal feedback, annual seed farmer sales records. Socio-economic survey Y4.</p> <p>2.5 Monthly community meetings with farmers to ascertain incidents of wildlife conflict and impact (i.e. crop damage, projected income loss etc.) Reports collated monthly and annually. Information analysed by Project Manager to inform ongoing activities. Recorded in annual reports</p>	<p>The use of 'mucuna' and other soil improvement and weed management techniques to restore degraded land can be scaled up based on previous successful soil restoration work done by IRAG</p> <p>Tree crops seedlings have high survival rates and farmer shows excellent knowledge in crop management.</p> <p>Rainfall remains adequate to feed community irrigation systems for target villages</p> <p>Existing good access to local and regional markets remains stable for project duration</p>
<p><b>Output 3</b> Illegal activity within Ziama is reduced through a shift from bas-fonds to farming in transition zones</p>	<p>3.1 No new clearing of forest in bas-fonds areas against current figures from July 2016 survey</p> <p>3.2 Law enforcement patrols report decline in illegal activity in core and buffer zones of Ziama MAB (compared to baseline from 2016 patrol data)</p>	<p>3.1 Vegetation mapping, photos, bas-fonds control and exit plan</p> <p>3.2 Monthly law enforcement patrol data and reports</p>	<p>Participatory demarcation of MAB zones is completed successfully, with communities agreeing access and management.</p> <p>Reducing dependence on bas-fonds will decrease time spent in forest by farmers for poaching/illegal activity</p>



	<p>3.3 60% reduction (228 individuals) in number of men and number of women (minimum 50% women) using bas-fonds in target villages by project end with a 20% reduction by end of year 2. We anticipate the final 40% to leave within 3 years of project end.</p> <p>3.4 Water testing in bas-fonds shows reduction in herbicide (compared to baseline to be collected at start of project) by end of year 4</p>	<p>3.3 Law enforcement and targeted bas-fond patrol data and reports, management plan for Ziama MAB including bas fond control plan by CFZ.</p> <p>Law enforcement patrols conducted on a monthly basis, targeting bas-fonds. Y1 &amp; Y2 to reinforce project messaging and ensure no expansion / new users. Y3 &amp; Y4 to enforce agreements. Reports compiled and analysed on a monthly basis with 6 monthly and annual status reports</p> <p>3.4 Water quality report</p>	<p>Training on safe use of agrichemicals including application of herbicides is effective.</p>
<p><b>Output 4</b> Targeted bas-fonds in Ziama MAB are showing signs of forest recovery</p>	<p>4.1 Restoration plan developed in year 1 and implemented across 50% of all targeted bas-fonds by year 4 (250 hectares)</p> <p>4.2 Targeted bas fonds show annual improvements in ground cover / density of woody vegetation/ species richness in line with expected patterns of restoration by 25% year on year in years 2, 3, and 4 against project baseline</p>	<p>4.1 Restoration plan produced by end year 1</p> <p>4.2 Vegetation mapping, biomass analysis in year 4, photos in year 2, 3 and year 4</p>	<p>Restoration sites respond in line with samples plots conducted to date.</p> <p>Seedlings and seeds, if needed, are readily available at the right times.</p>
<p><b>Activities</b> (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>1.1. Inception workshops and participatory design of agricultural extension package with beneficiary farmers including soil and weed mapping to match annual and perennial crops to best locations according to available lands</p> <p>1.2 Coordinate and implement joint training for efficiency and synergies with Sainte Isaure de Guinee Order and Plan International including composting training</p> <p>1.3 Update IRAG assessment of local farmer savings groups with a view to supporting and establishing new savings groups as needed particularly for women and to ensure farmers are able to purchase seeds of improved varieties when seeds need replacing</p> <p>1.4 Targeted training sessions and ongoing mentoring for agricultural extension package on topics such as soil management, planting techniques, seed management, green manure, integrated pest management, tree crop improvement, conservation agriculture, weed management, herbicide and pesticide management, alley cropping, agroforestry and improved irrigation techniques for direct beneficiary farmers. Sessions offered as both single and mixed-sex groups to encourage participation by all.</p>			

- 1.5 Update agriculture extension and training methods and topics according to regular participant feedback, with a focus on ensuring sessions are run in a format, time and place to enable women to participate, learn and support each other, without isolating male participants
- 1.6 Develop and deliver communication plan including training materials and radio programmes using appropriate media to ensure outreach of training and information to village residents and wider area (indirect beneficiaries)
- 1.7 Conduct Participatory Impact Assessment in 4 target villages to ascertain effectiveness of training sessions, to monitor and update communications plan and to assess impact on wellbeing
- 1.8 Arrange and facilitate learning exchange visits with other Ziama communities, to demonstrate agricultural practices and crop choices
- 2.1 Identify with village councils and CFZ land in the transition zone for those direct beneficiary farmers that need it, ensure harmonisation of the process within community and establish culturally appropriate agreements for long term use of the land (Y1)
- 2.2 Review condition of land provided, identify appropriate annual and perennial crops, select appropriate farming methods with beneficiary farmers and prepare the land including managing weeds and increasing fertility through planting of 'mucuna'
- 2.3 Establish project baselines, gender disaggregated from bas-fonds crops and monitor annually for direct beneficiary farmers
- 2.4 Ground truth, update design and implement agricultural transition plan, incorporating agricultural extension plan, in participation with direct beneficiary target farmers including mapping shifting labour roles and responsibilities for women and men, support to enhance and shift to self-selected annual and tree crops etc. to ensure feasibility and ownership of the plan
- 2.5 Adaptively manage the process of change through on-going monitoring of farmers' perceptions of how incentives and activities are progressing, and provide continuous support, follow up and respond to any issues as they arise
- 2.6 Based on hydrology mapping, develop locally appropriate trials for irrigation systems, including construction of 'improved wells' (puits améliorés) and community agreements for location, use, management and maintenance of the selected systems and wells and ensured access for direct beneficiary farmers
- 2.7 Provide training on niebe post-harvest storage loss, distribute storage bags at reduced cost and develop independent local supplier of storage bags
- 2.8 Identify cost effective storage improvements to address post-harvest loss for other crops beyond niebe as identified as significantly problematic by farmers and implement cost effective solutions in Y3 and Y4
- 2.9 Review potential processing opportunities for existing crops grown outside the bas-fonds in order to identify opportunities to increase income from simple feasible processing
- 2.10 Based on successful seed develop programmes from IRAG, update mapping of existing seed exchange groups within and between villages, and support them to design and implement their own scaling up of seed exchange of new varieties to ensure availability to wider farmer groups in 4 villages and beyond
- 2.11 Distribute improved rice and other annual crop seed varieties at a reduced cost to direct beneficiary farmers, providing training of planting techniques for seed and ensure collection of seed at harvest for following year use

### Annex 3: Standard 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
5	Agroforestry training	F: 32 M:87	Guinean	F: 32 M:87			F: 32 M:87	F:52 M:147
6A	Farmer field school training provided on a range of topics.	F:149 M:22	Guinean	F: 149 M:22			F:149 M:22	F:200* M:66
6B	Training on bas fond monitoring pro rata to a 46% week	M:8	Guinean	M:8			M:8	M:8
6B	1 week training to CFZ rangers on HWC mitigation measures	M:15	Guinean		M:15		0	M:15
6A	Training on safe agrochemical use pro rata to a 20% week	F:30 M:30	Guinean		60	60	0	120
6A	No. of trainings on quality seed selection				3	3	0	6
6A	No. of trainings on PIC bags				3	3	0	6
9	1 bas fond restoration and monitoring plan				1	0	0	1
20	£4,800						£4,989.19	£4,989.19
23	£87,330			46981	40349		46981	£87,330

**Table 2                      Publications**

<b>Title</b>	<b>Type</b> (e.g. journals, manual, CDs)	<b>Detail</b> (authors, year)	<b>Gender of Lead Author</b>	<b>Nationality of Lead Author</b>	<b>Publishers</b> (name, city)	<b>Available from</b> (e.g. weblink or publisher if not available online)

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

### Year 1 Annual Report Appendix List:

- Appendix 1: Inception Meeting Report
- Appendix 2: Liste Exploitants\_Beneficiaries\_FFI: Names of target beneficiary farmers.xls
- Appendix 3: Agricultural Activities Evidence report
- Appendix 4: Community MoUs for FFS and PVS plots, Project MoUs with villages
- Appendix 6: 2016 HWC baseline report (in French)
- Appendix 7: 2016 HWC data baseline
- Appendix 8: Bas fond baseline data 2016
- Appendix 9: 2016 Law enforcement patrol report (in French)
- Appendix 10: Bas Fond Training Terms of Reference
- Appendix 11: Bas Fond Training Report
- Appendix 12: 2017 Biomonitoring report
- Appendix 13: Elephant patrol baseline and report 2016
- Appendix 14: Y1 Photo report including Darwin signage

### Checklist for submission

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