



## Darwin Initiative: Final Report

### Darwin Project Information

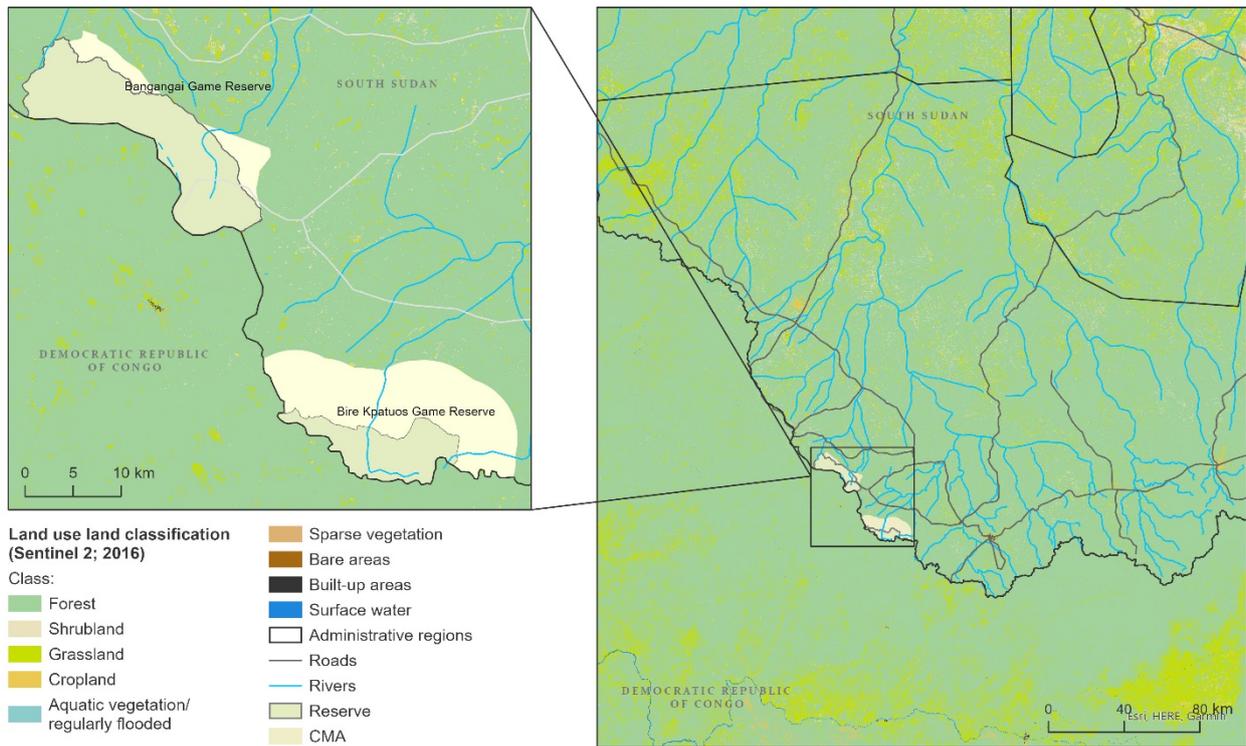
Project reference	25-002
Project title	A model for conservation, stabilisation and development in South Sudan
Country(ies)	South Sudan
Lead organisation	Fauna & Flora International
Partner institution(s)	Caritas Austria, Community Organisation for Development (COD), Bucknell University, South Sudan Ministry of Wildlife Conservation and Tourism
Darwin grant value	£356,076
Start/end dates of project	1st July 2018-31st March 2021
Project leader's name	Alison Mollon, Director of Operations, Africa
Project website/blog/social media	<a href="http://www.fauna-flora.org">www.fauna-flora.org</a> , <a href="https://www.faunaflora.org/countries/south-sudan">https://www.faunaflora.org/countries/south-sudan</a> , @FaunaFloraInt,
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### 1 Project Summary

South Sudan contains rich but little-known biodiversity and habitats, but is hampered by political and economic crises. In Western Equatoria state, Fauna & Flora International (FFI) has been working in two Game Reserves at the border with the Democratic Republic of the Congo (DRC) and, in part, Central African Republic (CAR) since 2014. These Game Reserves, within a forested tropical/subtropical zone in South Sudan, where the Eastern and Central Africa ecoregions meet, are exceptionally biodiverse, containing eastern chimpanzees (*Pan troglodytes schweinfurthii*; EN), forest elephants (*Loxodonta cyclotis*; CE), African golden cat (*Caracal aurata*; VU), bongo (*Tragelaphus eurycerus*; NT) and other threatened forest species.

In the two Game Reserves (GRs), Bire Kpatuos (BK; Annex 1) and Bangangai (BGG; Annex 2), FFI has created a nationally unique model of protected area management involving government and community stakeholders, against a national backdrop of mistrust and conflict. This model of active reconciliation and community stabilisation supports resilient livelihoods development, enabling the disenfranchised, including young people, to build assets, which will enhance social cohesion whilst protecting natural resources.

Direct threats to biodiversity include illegal extraction of resources, including poaching and logging, all for high market value resources driven by pressure from local stakeholders facing severe poverty and food insecurity. Subsistence activities disregarding the natural resources upon which communities rely for their livelihoods also represent a direct threat to biodiversity. Other threats result from the instability in the region which has driven cross-border (DRC) encroachment. Indirectly, instability has also hindered long-term planning and the protected area network suffers from a lack of active management, zero institutional resources and severe capacity gaps.



Data sources: The land cover classification was provided by the ESA-CCI collaboration on a land use land cover classification for the entire content of Africa, which was clipped to cover the Democratic Republic of Congo and South Sudan. The town points and roads polyline data (2017) were added from The World Bank data catalogue, and the rivers polylines from the ICPAC Geoportal. The 2018 administrative regions were provided by the Humanitarian Data Exchange (2018) and FFI by no means considers these official.

Specifically, for BGG late in 2015, local rebel forces (“Arrow Boys”) created political instability which resulted in the movement of large numbers of people to safe havens in DRC and in the hostile takeover by rebels of the Wildlife Service (WLS) ranger post in BGG. Rebels at the ranger post persecuted local communities and destroyed WLS infrastructure and equipment. Due to this takeover of BGG by the rebels and to significant insecurity on the roads, FFI was forced to abandon work in BGG for approximately 20 months.

However, a scoping survey to BGG in 2017, following the elimination of rebel activity, confirmed that former WLS personnel were ready for redeployment to the Game Reserve and that populations of wildlife still remained. In parallel, men’s and women’s focus group meetings at BK in 2017 highlighted that local people are committed to the conservation of biodiversity for future generations and are supportive of sustainable management, yet face huge challenges. Nonetheless, an ongoing challenge remains the movement of displaced people back into the BGG area throughout this fund period.

This project sought to address these challenges, provide benefits to key stakeholders, and protect 430 km<sup>2</sup> of nationally important tropical forest, by 1) strengthening governance and management arrangements for the two Game Reserves, and agreeing boundaries and governance structures for a Community Managed Area; 2) increasing awareness of wildlife and protected area legalities; 3) strengthening monitoring and law enforcement activities; and 4) mitigating wildlife damage to local communities and enhancing agricultural and livelihoods strategies. There is a lack of stable and sustainable examples of development projects in South Sudan, so in this current, relatively peaceful and unique region of the country, this collaborative and holistic initiative will be an exemplar project for other regions.

## 2 Project Partnerships

Design and implementation of this project was coordinated by Fauna & Flora International (FFI), working in close partnership with Caritas Austria, Community Organisation for Development (COD; a South Sudanese Community-Based Organisation), the South Sudan Ministry of Wildlife Conservation and Tourism (MWCT) and Bucknell University. The relationship between partners has been positive throughout the project period.

As lead institution and drawing from its global experience and technical expertise, FFI has provided technical and operational management of the project, including oversight of activity implementation, logistics and trouble-shooting, impact monitoring, collating technical project information and technical reporting. Caritas Austria and COD have provided agricultural extension services, inputs and training to support sustainable livelihoods pilots. They have also ensured that the state-level Ministry of Agriculture is fully aware of, and engaged in, the project. Caritas Austria has also continued to provide mentorship to COD through its CBO mentoring programme. Bucknell University has provided technical input into the development of standardised patrols and monitoring, as well as advising on community survey techniques and data management. The MWCT, particularly its WLS representatives at state and county levels, have supported the project by providing local expertise in biodiversity protection and through providing administrative and operational advice and support, enabled through dedicated full-time personnel.

All partners played a role in project planning and decision making. FFI has long standing working relationships with the MWCT and Bucknell University and spent significant time with Caritas Austria and COD during the inception phase to plan and refine the project. Through planning and project delivery, it was recognised that FFI on the one hand, and Caritas Austria and COD on the other, saw this project through different lenses, each with their own background, vocabulary and approaches. It was therefore important to carefully plan implementation and to dedicate particular effort to communication to ensure expectations were managed. All partners recognised the value added by our partnership and the multipronged approach it enabled.

Partnership between project partners will continue beyond the lifetime of this project. FFI has a renewed 5-year MOU (signed 2021; Annex 3) with MWCT, and will continue to support protected area management in South Sudan over the long term. FFI also continues to have a close working relationship with Bucknell University, including joint delivery of a USFWS-funded project, and is exploring several opportunities for ongoing collaboration. Going forward, closer collaboration between COD and FFI is also being actively encouraged. For example, joint trainings on community development and conservation are recommended to further encourage a shift to more sustainable livelihood activities. This joint working will be particularly important in the coming months as the easing of Covid-19 restrictions allows for greater progress on the Community Managed Area (CMA).

FFI has led on the writing of this report, informed by internal reports provided by Caritas Austria and COD and data analysis supported by Bucknell University. Versions of the report have been circulated to all partners for feedback, input and future learning.

### **3 Project Achievements**

#### **3.1 Outputs**

**Output 1. 430km<sup>2</sup> of Game Reserve (GR) and Community Managed Area (CMA) habitat is under stronger conservation management, with local women and men better informed about biodiversity and engaged in decision-making**

Both Game Reserves now have clear boundaries (BK 70km<sup>2</sup>; BGG 171km<sup>2</sup>) that are physically demarcated and recognised at state level. The newly demarcated boundary shapefiles for BK and BGG have been submitted to MWCT to be re-gazetted into national law when parliament is formed, which is still pending (Annexes 1, 2, 4, 5; Indicator 1.1). Both Game Reserves are also under stronger conservation management with agreed Standard Operating Procedures (SOPs) (Annexes 6-10 are example SOPs; Indicator 1.3) and increased patrol effort (see Output 2). At both sites, the count of wildlife observations is increasing (see Output 2), with both sites evidencing wildlife abundance (Annex 11).

Progress of the CMA has been hampered by the impacts of Covid-19 as meetings and consultation processes were heavily restricted by social distancing requirements. That said, having socialised the concept of a CMA, there is now widespread agreement between key stakeholders on CMA establishment, evidenced by the ongoing CMA patrols in this area. The

proposed boundaries of the CMA have been discussed, ground-truthed and consensus reached in both BK (182km<sup>2</sup>; Annex 12) and BGG (38km<sup>2</sup>; Annex 13, 14) (Indicator 1.4). The details of governance structures and management plans, including draft zones, rules, and regulations, have not yet been finalised, because of the restrictions on consultative processes, but have been progressed (Annex 15, 16). Patrols within the CMA (see Output 2), which were initiated in April 2020, continue to gather information on natural resource use and land-use patterns within the CMA, which will be used to inform the CMA management plan. Now that Covid-19 restrictions in South Sudan are easing, work to agree the governance arrangements and management plan is continuing, supported by additional funding from other sources.

Over the project period, training on wildlife laws and Game Reserve regulations has been provided to 126 WLS rangers and CWAs (111M:15F) through dedicated courses, reinforced with on-the-job training. WLS rangers and, in particular, CWAs have passed this information and agreed conservation messaging (Annex 29) on to local communities through ongoing outreach. Additionally, in Yr2, billboards with key conservation message posters were erected on the Game Reserve boundaries (Annex 30) and in Yr3, key WLS staff communicated key conservation message on local radio. Planned roadshows were prevented by Covid-19 restrictions.

Direct community stakeholders in this project are defined as, for BK, one large community called Ndoromo (53 Households) which borders the Reserve; and for BGG there are three smaller, distinct communities neighbouring the Reserve: Baragu, Bangangai and Nyasi (131 Households). Average household size in these communities is 8.1 individuals per household meaning total people represented as direct stakeholders 1,652 individuals.

Indirect and wider community engagement carried out by partner Caritas Austria and COD also included the communities of Namama and Basukangbi which are within the same Payam (the second-lowest administrative division) as BK. No wider community engagement was carried out by Caritas Austria and COD at BGG.

Of the community members surveyed in the repeat household survey, 63.8% (BK) and 4.5% (BGG) reported that they had received training on wildlife laws (provided by both the project and other organisations). Of those surveyed, 39.7% (BK) and 0% (BGG) were able to list any wildlife laws against baselines of 22% (BK) and 26.7% (BGG) respectively (Indicator 0.2). Achievement Indicator 0.2 is hampered by the ambiguity that exists around wildlife laws in South Sudan (Annex 17). With this in mind, it is possible that measurement of progress against this indicator could have been better measured through a more nuanced assessment method (see Section 6.1). It should also be noted that, specifically around BGG, the movement of local people as a result of changes in security in the early years of this project meant that it was not possible to repeat survey the same people, or ensure that those being surveyed had received any of the information on wildlife or wildlife laws. We would argue that external factors have rendered a comparison from within a standard sample group not possible. In BK, the ability of the community to list a wildlife law has improved, although not to the extent desired, likely in part down to the formulation of the questions as described in Section 6.1. In comparison to BGG, the population in BK is small, remote and cohesive. There are also good connections with the WLS rangers and CWAs, which have been operating for a longer time than in BGG. These factors are likely to have enabled greater knowledge transfer. In both locations, the impacts of Covid-19 restrictions have impacted awareness raising activities in the final year of the project and, without opportunities to reinforce earlier learning, knowledge has not increased at the rate desired.

### **Output 2. Collaborative routine and intelligence-led patrols in Game Reserves and community ranger teams in Community Managed Areas are deterring and responding to wildlife crime**

Regular patrols, involving 46 WLS rangers (40M:6F; 17<25yrs:29>25yrs) 46 CWAs (39M:7F; 8<25yrs:38>25yrs) were established in the Game Reserves (at the time of project outset in BK and by April 2019 in BGG) and initiated in the Community Managed Area in April 2020, and have continued since (Annex 19). Targets around female representation (>10%) have been met but targets about youth representation have been harder to achieve because of limited influence on community leaders in terms of CWA selection. In BK particularly, many CWAs have been working

with FFI for a long time (>5 years) and so were considered 'youth' when their engagement began. Collaborative patrol units have been fully trained on subjects of biomonitoring, law enforcement, information management and reporting, maps and GPS handling, patrol organisation, wildlife conservation and natural resource management, and are following agreed SOPs (Annexes 6-10 are example SOPs).

Over the project period, in BK (Table 1 below) there have been a total of 130 patrols, covering 900.31km and representing 5,117 person-days (please note increased coverage in Yr3 relative to Yr2 is due to increased number of observations which are used to calculate minimum distance. Yr2 focused on building capacity to carry out boundary patrols and Yr3 on wildlife sightings which, as capacity increased, resulted in a lot more data points taken. This method of calculating distance means that the more data points taken will result in a greater distance recorded. This is an approach used at entry level data monitoring when the focus is to increase the capacity of rangers collecting data; as data accuracy improves, the methodology will also evolve to using actual distance covered, which will increase the robustness on effort).

In BGG (Table 2), there have been a total of 111 patrols, covering 1,726.25km and representing 4,419 person-days. In the CMA (combined BK and BGG), where patrolling is solely by the CWAs, there has been 15 patrols, covering 149.94km and representing 515 person-days.

Table 1 - Patrol effort BK \*April 2017 – March 2018 \*\*Note, year 1 only contains 9 months of data

Row Labels	Number of Patrols	Number of Days (All)	Person - Days (All)	Distance (km)
Yr0: Baseline year*	20	82	920	118.83
Yr1: Jul 18 – Mar 19**	23	108	1140	94.20
Yr2: Apr 19 – Mar 20	61	270	2141	280.46
Yr3: Apr 20 – Mar 21	46	219	1836	525.65
<b>Total – Yr1-Yr3</b>	<b>130</b>	<b>597</b>	<b>5117</b>	<b>900.31</b>

Table 2 - Patrol effort BGG \*Patrols started in April 2019

Row Labels	Number of Patrols	Number of Days (All)	Person – Days (All)	Distance (km)
Yr2*: Apr 19 – Mar 20	63	245	2494	1037.12
Yr3: Apr 20 – Mar 21	47	226	1875	669.95
<b>Grand Total</b>	<b>110</b>	<b>471</b>	<b>4369</b>	<b>1707.07</b>

Table 3 - Patrol effort CMA (combined BK and BGG) \*Patrols started in April 2020

Row Labels	Number of Patrols	Number of Days (All)	Person – Days (All)	Distance (km)
Yr3: Apr 20 – Mar 21	15	65	515	149.94
<b>Grand Total</b>	<b>15</b>	<b>65</b>	<b>515</b>	<b>149.94</b>

Data has been made available and shared with government and civil society partners throughout project implementation. The MoU between FFI and MWCT requires the sharing of appropriate data and findings from the programme on a regular basis (a minimum of four times per year). In actuality, this has been happening more often at State level, with weekly or bimonthly informal exchanges (Annex 18), and then quarterly at national level. Data sharing was a focus point of discussion during the renewal of FFI-MWCT's MoU in 2020, with both parties seeking to build on the good practices engendered by this project and formalise data sharing processes. In terms of civil society partners, a communication network has been established between FFI, WLS, and African Parks in Garamba National Park in DRC. The focus of this information exchange has been on the movement of teak from South Sudan, through DRC and Garamba National Park, to Uganda; and the movement of armed poacher groups from South Sudan. Beyond the national / regional level, relevant project data has also been shared with the IUCN SSC A.P.E.S and the IUCN SSC Red Colobus groups. In late 2019, training on the handling of seized wild meat and live animals was provided (Annex 20) and deployment of a questionnaire to collect market and

trade data of wild meat and live animals was planned but WLS has been slow to implement data collection and FFI could not conduct further training due to Covid-19 restrictions.

As per the summary under Output 2 above, regular patrols, involving WLS rangers and CWAs, were established in the Game Reserves and initiated in the CMA. Reports of illegal activity reached the project target of at least one report per month, with patrol data shared between WLS and FFI. WLS facilitate sharing of data with other government authorities, state government, and national security. A monthly feedback patrol report was developed (Annex 21), and provided to Ranger Post commanders and CWA team leaders, to adaptively manage patrol routes to encompass areas of concern. Each report is a summary of patrol effort, illegal activity, and biodiversity information, for patrols from the previous month. Data is high-level in order to project sensitive information. Relevant information has also been shared through the communication network established between FFI, WLS and African Parks in Garamba National Park in DRC, as well as Chinko National Park in CAR.

### **Output 3. Livelihood activities appropriate to existing local norms and constraints to wellbeing are strengthening the assets of 900 people (150 households) against external shocks**

From the household survey conducted in Yr1/2, extensive information on cultural and non-cultural practices of communities around hunting and natural resource use was gathered (Annex 22; Indicator 3.1). This information, combined with a Participatory Rural Appraisal (PRA; Annex 23) undertaken by Caritas Austria in collaboration with Hummingbird Action for Peace & Development and COD prior to project implementation, was used to inform asset development strategies (e.g. agriculture or animal husbandry).

In the baseline household survey, 34% of respondents reported having lost 8-15 bags of food to animals (not to insects). Furthermore, 57% of the respondents reported doing nothing to prevent/mitigate crop raiding, only 17% put some form of barrier and 21% prefer to chase the crop raiders away. Enhanced understanding of the challenge was used to design strategies that were built into the livelihood development activities supported by Caritas Austria and COD (Indicator 3.4). For example, supporting fencing was an effective way of tackling the impact of wildlife on household assets. Strategies, such as lining storage units with plastic sheeting, to tackle post-harvest loss have also proved to be important. These strategies have had an impact on human-wildlife conflict, although not to the extent anticipated. In the baseline and repeat household survey, respondents were asked "Have any animals raided / destroyed your current crops and stored food in the past year?". In BK, respondents answering 'yes' to this question decreased from 95.6% to 91.4%. In BGG, respondent answering 'yes' to this question decreased from 82.3% to 79.1% (Annex 24). A reduction in the number of respondents trapping or hunting wildlife as a result of human-wildlife conflict was also observed (Annex 24).

In total, 309 households (represented by 134M:175F) have been supported to engage with asset development strategies (Indicator 3.4; Annex 25). This has included establishing and training seventeen groups in crop production, livestock production, beekeeping, and fish farming. Direct inputs, such as livestock, agriculture tools, seeds, beekeeping materials, bicycles, sewing machines, animal medicines/vaccines and cash grants, have also been delivered to the various groups. Correspondingly, Caritas Austria and COD have anecdotally reported a reduction in hunting activities and increase in agriculture and small-scale business activities throughout the project area over the period of implementation. Due to the creation of alternative income sources, Caritas Austria and COD have also anecdotally reported a significant drop in game meat consumption and sales in local markets. Prior to the implementation of this project, the project area was extremely isolated and lacked business activities, market support, schooling, and community activities. Significant progress has been made during the project period, but ongoing support is needed to ensure that these activities are strengthened and ultimately sustained.

Anecdotal feedback received by Caritas Austria and COD from project beneficiaries has shown that, because of their engagement with business enterprises supported by this project, many households have been able to save between SSP (approx. GBP ) and SSP (approx. GBP ). This has enabled them to meet financial demands such as paying school fees. Of those surveyed

during the repeat household survey, 47.5% (BK) and 14% (BGG) of those surveyed received support and/or training in agriculture, within the last 12 months. In BK, the support/training referenced can be assumed as being provided by the project as no other actors are present. In BGG, support/training is provided largely by others. Of those receiving support and/or training, 92.9% (BK) and 83.3% (BGG) of respondents changed the agricultural techniques used by their household as a result of the support/training, and 85.7% (BK) and 83.3% (BGG) said that their wellbeing had changed as a result of the support/training. In all but one case, where the respondent did not feel the technique worked, this change in wellbeing was positive. Of those surveyed during the repeat household survey, 20.3% (BK) and 9.3% (BGG) of those surveyed received support and/or training in livestock and animal husbandry, within the last 12 months. Of those receiving support/training, 75% (BK) and 50% (BGG) of respondents changed the livestock and/or animal husbandry techniques used by their household as a result of the support/training, and 75% (BK) and 75% (BGG) said that their wellbeing had changed as a result of the support/training. Again, all but one case, where the respondent felt it was too soon to tell, this change in wellbeing was positive.

### **3.2 Outcome**

The stated project outcome was *“Integrated conservation and development provide benefits to over 900 direct and 3000 indirect beneficiaries in South Sudan and protects 430km<sup>2</sup> of nationally important tropical forest habitat”*.

#### 0.1 By project end 900 women, men and children report an improvement in their wellbeing in one or more areas of social, natural, physical, human or financial capital, compared to project baseline (indicator of direct benefit)

A repeat household survey was conducted at project end in which a total of 102 households were surveyed (59 from BK; 43 from BGG making a sample size of >50% of all direct project households; Annex 24). Respondents were asked: (1) How would you describe the wellbeing of yourself and your family; and (2) How has your wellbeing changed in the past year (Indicator 0.1). In BK, the majority of respondents (50.8%) said that their wellbeing was good and the majority (68%) said that it had stayed the same over the last year (Indicator 0.1). In BGG, the majority of people (69.8%) said that their wellbeing was bad and the majority (53.3%) said that it had deteriorated over the last year (Indicator 0.1). In both locations, people cited poor health as the main factor that negatively impacted and/or restricted the quality of their wellbeing (BK: 50.8%; BGG: 55.8%); and changes in personal safety (BK: 30.5%; BGG: 25.6%), food availability (BK: 23.7%; BGG: 41.9%) and health (BK: 25.4%; BGG: 23.3%) as the primary drivers of changes in wellbeing.

The variability in wellbeing between BK and BGG reflects the geographic focus of project livelihood interventions. For security reasons, and drawing on existing strong community relationships, Caritas Austria and COD focused their activities in and around BK, where the majority of survey respondents characterised their wellbeing as good and stable. In both locations, the impacts of Covid-19 have negatively impacted wellbeing over the last 12 months. In addition to health concerns and travel and social restrictions, commodity costs have significantly increased.

#### 0.2 Following training, 75% of a representative sample of 3,000 people can articulate at least five wildlife laws and GR regulations, compared to pre-training baseline (indicator of indirect benefit)

As per Output 1 (Question 3.1), over the project period, training on wildlife laws and Game Reserve regulations has been provided to the communities around BGG and BK through billboards and posters (Annex 30) and through WLS staff presenting on local radio.

More robust and ongoing training has been provided to the 126 WLS rangers and CWAs (111M:15F) through dedicated courses, reinforced with on-the-job training. Anecdotally we know that WLS rangers and, in particular, CWAs have passed this information and agreed conservation messaging (Annex 29) on to local communities through ongoing outreach. In addition, when the

WLS and CWA interact with people whilst on patrol within the Reserves, the first course of action is to educate them on relevant laws, rules and regulations.

The project has not attained this indicator as outlined in the project logframe for the external reasons outlined above and also due to the way the questions were framed which is outlined in Section 6.1. Due to these reasons, it is not possible to evidence the increase in knowledge and increased awareness that we do believe the project has created; however, if we look at evidence such as the decreased number of human activity within the Game Reserves, especially in the context of increasing patrol coverage (Outcome 0.4 below), then using this a proxy indicator, it is possible to say that there has been an increased knowledge of the Reserves and behaviour change in relation to the rules around use of natural resources.

**0.3 2 Game Reserves (GRs) are demarcated and 1 Community Managed Area (CMA) is pioneered and has recognised boundaries, regulations and a governance structure by project end (indicator of protection)**

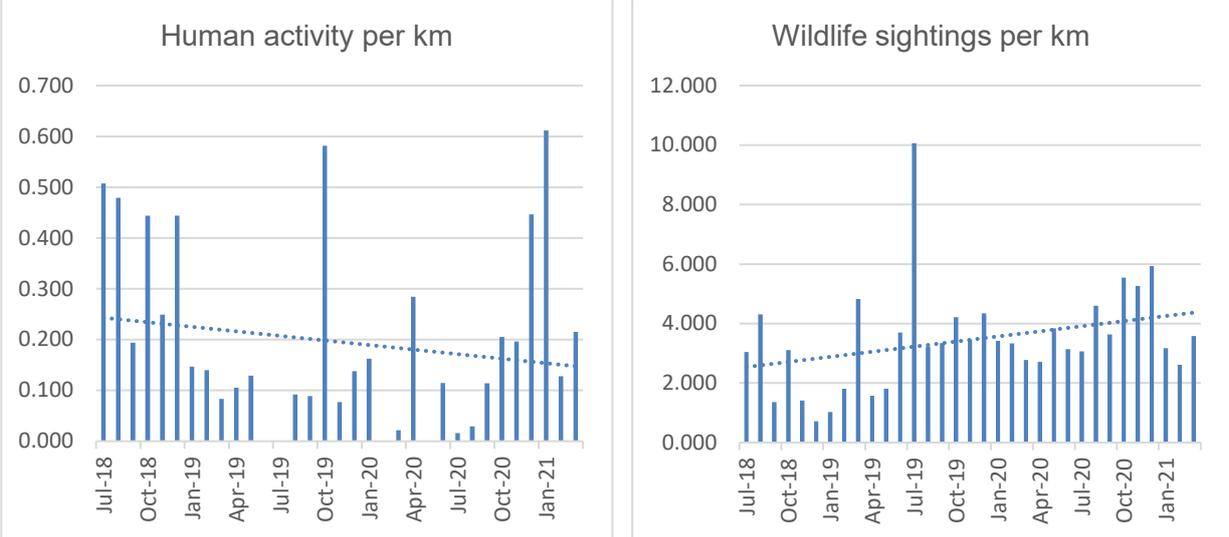
The two Game Reserves have been demarcated (Annexes 1, 2, 4, 5; Indicator 0.3) and strong foundations have been established for the CMA (Annexes 13-16; Indicator 0.3), although this and the development of associated governance and management structures, have been delayed by the impacts of Covid-19. The formally demarcated area of the Game Reserves and the agreed boundary for the CMA total 461km<sup>2</sup>.

**0.4 By project end there is a reduction in the incidence of illegal activity in 2 GRs, from baseline (indicator of direct benefit)**

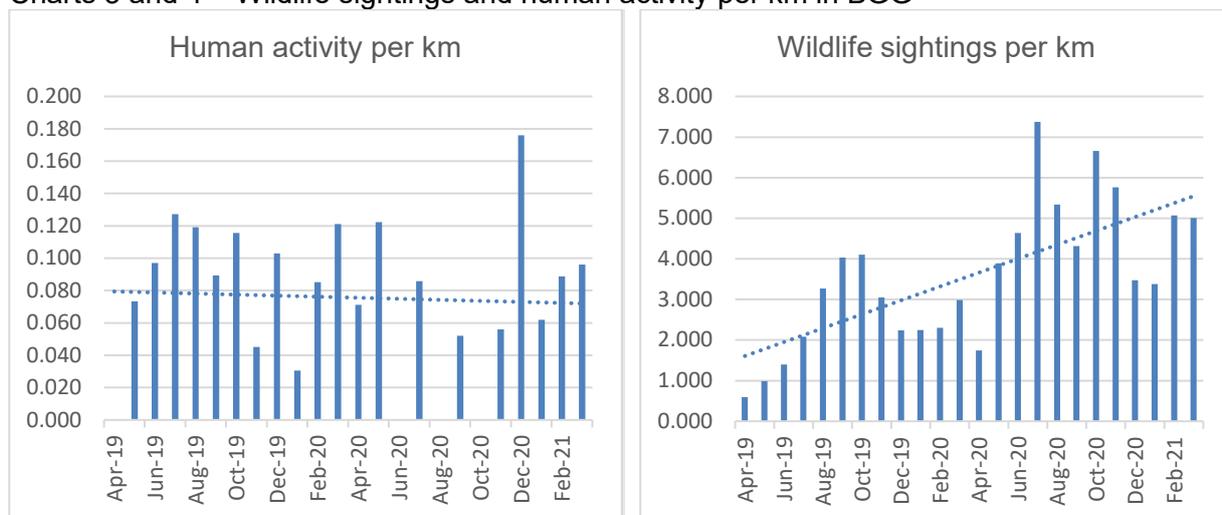
Whilst the incidence of human activity (not synonymous with illegal activity but encompassing of it) in the Game Reserves does fluctuate across the project period, in both Game Reserves there is an overall downward trend in human activity per km (Charts 1 and 3; Indicator 0.4). Where spikes are seen each year, it is towards the end of the year which corresponds with the end of the rainy season, often the most intense ‘hunger months’ for those relying on subsistence hunting and/or agriculture to survive. This would appear to support the theory that local people are aware that following years of inactive management, the Game Reserves are again in operation and are not a common resource.

An increase in wildlife sightings in both Game Reserves demonstrates the increased capacity of the WLS and CWAs to monitor wildlife and record data. Over time it may well be possible to also track an increase in wildlife using certain species or overall data as an indices for wildlife numbers in general but this must be used in the context on many years of data. Nonetheless this will form a useful baseline for monitoring how wildlife and protection related activities respond to current and future interventions.

Charts 1 and 2 – Wildlife sightings and human activity per km in BK



Charts 3 and 4 – Wildlife sightings and human activity per km in BGG



**0.5 75% of direct beneficiaries report an increased reliance on sustainable livelihoods options between project start and end (indicator of direct benefit)**

Of those surveyed during the repeat household survey, that had received training and/or support, 92.9% (BK) and 83.3% (BGG) of respondents changed the agricultural techniques used by their household, and 75% (BK) and 50% (BGG) of respondents changed their livestock and/or animal husbandry techniques to the sustainable livelihood options given in the training.

**0.6 Forest cover does not decrease in Bire Kpatuos Game Reserve between 2018 and 2021 (indicator of protection)**

Data from Global Forest Watch indicates minimal forest cover loss in Bire Kpatuos Game Reserve in 2018 and 2019 and zero forest cover loss in 2020 (Annex 26; data for 2021 unavailable at time of reporting).

**3.3 Monitoring of assumptions**

Outcome and Output level assumptions and risk were monitored throughout the course of the project and, in large part, assumptions held true for the duration of the project. The impacts of Covid-19 (see Question 8) did, however, create undue delays in the creation of the Community Managed Area by delaying effective consultative processes and the ability to hold previously noted awareness raising roadshows. Covid-19 restrictions also caused some unanticipated challenges in the availability of tools and materials which delayed some activities, but adaptive responses were implemented.

The assumption that “women and youth are willing to be trained for patrols, and receive recognition from existing patrol team members” did hold true, but there was learning during the project period about the conditions needed to encourage this (see Question 4.4).

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

The stated project impact was: *Integrated conservation and sustainable livelihoods strategies boost protected areas, forest habitats and endangered species, and enhance aspects of wellbeing as a model of engagement with rural communities in South Sudan*

This project has contributed to a higher-level impact on biodiversity conservation by contributing to the more effective management, and improved protection, of threatened species and habitats, and by contributing to the scientific knowledge base on South Sudan’s rare but little-known wildlife. Through project implementation, the management of 461km<sup>2</sup> of nationally important forest has improved, as evidenced by clear boundary demarcation (Indicator 0.3; (Annexes 1, 2,

4, 5, 13, 14, 15, 16); agreed management protocols (at least for the Game Reserves; Indicator 1.3; Annexes 6-10 are example SOPs); and increased patrol effort (Indicator 2.1; see Section 3.2). Correspondingly, there has been minimal forest loss over the project period (Indicator 0.6; Annex 26) and a decrease in human activity (which encompasses illegal activity) within the focal protected areas (Indicator 0.4). Additionally, this project has contributed to establishing important baseline biodiversity data, with a particular focus on the Critically Endangered forest elephant (*Loxodonta cyclotis*) and Endangered eastern chimpanzee (*Pan troglodytes schweinfurthii*). Knowledge attained through this work has also contributed to IUCN range extensions of the red colobus (*Piliocolobus sp.*; Annex 28) and forest elephant.

This project has contributed to a higher-level impact on human development and wellbeing by increasing the knowledge base on cultural and non-cultural practices of communities living in the project area; building awareness of, and capacity for, more sustainable livelihood options; developing strategies to reduce the impact of human-wildlife conflict on local livelihoods; and developing novel governance arrangements that enable Azande men and women to have a stronger voice in natural resource management. Through detailed household surveys (Indicator 3.1; Annex 22, 24), understanding of cultural and non-cultural practices related to hunting and natural resource use has increased and can be used to inform conservation and sustainable development interventions beyond this project. In total, 309 households (represented by 134M:175F) have been supported to engage with asset development strategies (Indicator 3.4; Annex 25) and thereby building capacity for more sustainable livelihood options. There is anecdotal evidence (Annex 25) that this is translating into direct benefits for local communities as are the income earning opportunities created through the CWA programme. Asset development strategies were designed to mitigate human-wildlife conflict and correspondingly a reduction in human-wildlife conflict has also been reported over the project period (Indicator 3.3; Annex 24). Beyond direct impacts on financial and food security, through the CWA programme and the CMA establishment process (Indicator 1.4; Annex 16), this project has created, and is creating, enhanced governance frameworks that strengthens the voice of the poor and marginalised in natural resources management. We expect the CMA establishment, which is a novel PA management approach, to inform national and regional practitioners and policy makers, and potentially contribute to national legislation.

## **4 Contribution to Darwin Initiative Programme Objectives**

### **4.1 Contribution to Global Goals for Sustainable Development (SDGs)**

This project has contributed to SDG 1, particularly targets 1.2, 1.4 and 1.5, by supporting 309 households (134M:175F) to engage with asset development strategies, including improving access to savings and loan schemes. The project's direct beneficiaries are people affected by multiple dimensions of poverty in South Sudan and, anecdotally (Annex 25), project activities have resulted in increased household incomes and economic resilience, and reduced poverty. The project has also contributed to SDG 2, particularly target 2.3, by providing inputs and the transfer of knowledge on more sustainable agricultural practices and livestock husbandry as well as contributing to a reduction in human-wildlife conflict.

Through the formal demarcation of the two Game Reserves, the significant progress achieved in establishing the CMA and the increase in patrol capacity and effort, as well community awareness raising activities, this project has contributed meaningfully to SDG15, particularly targets 15.1, 15.2, 15.5 and 15.7.

### **4.2 Project support to the Conventions or Treaties (e.g. CBD, Nagoya Protocol, ITPGRFA, CITES, Ramsar, CMS, UNFCCC)**

By encouraging communities living around nationally important tropical forest habitat to diversify and shift to more sustainable livelihood practices (Aichi Target 7; Indicator 0.5) this project has supported Aichi Strategic Goal B and is contributing to a reduction in pressure of forest habitat (Aichi Target 5; Indicator 0.6).

South Sudan acceded to the United Nations Convention on Biological Diversity in 2014 and submitted its first National Report to the CBD in 2015. The report recognises the lowland forest around Yambio within its scope. This project has contributed to addressing the threats identified in that report by (1) supporting 309 households (134M; 175F) to engage with more sustainable and diversified livelihood opportunities; and (2) demarking and establishing effective management mechanisms for 241km<sup>2</sup> of forest habitat in the two Game Reserves, and establishing strong foundations for the creation of a pioneering CMA in a further 220km<sup>2</sup>. This project has also responded to the report recommendations by including specific activities and targets to promote and measure women's participation. For example, Caritas Austria and COD's support to local communities included activities specifically targeting women's groups and built capacity around both leadership and income generating activities and FFI's promotion of women in ranger and CWA roles.

The project focal area is critically important for key CITES-listed species. South Sudan is not a full CITES party, but the project has engaged with authorities to improve the information base for future potential CITES engagement. Through regular meetings and briefings with WLS, the MWCT has been kept abreast of project activities and resulting CITES relevant data, including new information on the prevalence of wildlife crime relating to key species. There has also been communication with the CITES MIKE programme during the course of project implementation.

### **4.3 Project support to poverty alleviation**

Project beneficiaries were the local communities living around BK and BBG Game Reserves. The majority ethnic group is the Azande, coming from South Sudan, DRC and CAR. It is an agrarian society that has been impacted by civil unrest, with periods of displacement to DRC, CAR and Uganda because of insecurity.

In total, 309 households (134M:175F) have been supported to engage with asset development strategies (Indicator 3.4) (Annex 25). The direct impacts of this project have already begun to materialise. For example, in 2019 the six farmer groups primarily engaged in maize crop production, representing 127 households, recorded a total harvest of over 70MT of maize. Of this, 50MT was sold in local markets with the rest reserved for household consumption, providing an important boost to local food security and income. Likewise, anecdotal feedback received by Caritas Austria / COD from project beneficiaries has shown that, because of their engagement with business enterprises supported by this project, many households have been able to save. This has enabled them to meet financial demands such as paying school fees. In addition to the benefits derived from asset development strategies, local community members appointed as CWAs also received financial benefit from project activities in the form of a patrol stipend.

Beyond financial benefits, project activities have also delivered benefits in terms of community voice in decision making (see Question 4.5) and gender equality (see Question 4.4). See Questions 3.1 / 3.2 for impacts on wellbeing.

### **4.4 Gender equality**

Under the long-term goal of attaining a gender equality outcome, FFI has focussed on gender equity processes for WLS ranger and CWA employment and development. For example, the BGG Ranger Post consists of 26 WLS rangers, of which there are now 4 women and 22 men (as opposed to 5 rangers in total at project start, all male, who were present but not active). One of these women is 2nd Lt. Bibiana (or Bebe) Ezekiah Martin who is the Deputy Ranger Post Commander. She supports patrol operations and also ensures that patrol information is processed and sent back to the WLS HQs and FFI offices. She has been present at all anti-poaching patrols by the WLS) during this fund period and is the highest-ranking woman in the WLS in the state posted to a field site. Another female ranger is Lucia Zanaro who oversees the ranger post storeroom and all technical and operations equipment. Lucia was also recently asked to train 11 additional rangers who were recently deployed to BGG. These women are in respected roles and clearly valued by all their colleagues. Another noteworthy woman working in BGG is Jaqueline James. Jaqueline is one of two CWA Team Leaders in BGG, responsible for patrol

management and biomonitoring and GPS data collection. Jaqueline's position is particularly noteworthy as the majority of CWAs are men. To ensure equity of opportunity, and as a result of feedback that as given to FFI by women in these roles, FFI ensures that there is always more than one woman on a patrol unit to ensure those women feel safe.

These specific examples are noteworthy because they are the pioneers for women in this region working in these roles and they are providing direct evidence to both women and men that women can achieve the same outcomes as men.

#### **4.5 Programme indicators**

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

The integration of CWAs in biomonitoring and patrol effort has been a highly effective way in which to enable greater representation of local poor people in management structures for the Game Reserves. The CWA model, which is legally supported under the community conservation approach contained in the national wildlife conservation policy, has been designed to be bespoke to the militarised society that exists in South Sudan and the need for conflict sensitivity. The role of CWAs is manifold: crossing geographical and social divides between urban and rural as well as perceptions of government and opposition; raising local awareness about Protected Areas and biodiversity; a demonstration that communities can benefit from better management of their resources; and "keeping young people's minds from the fighting" (quoted from a community leader when first initiating the CWA model). The CWA model also provides a valuable entry point for further engagement with youth.

Whilst not fully achieved within the project period, the CMA that will be established following the progress made under this project will, and already has, enabled greater representation of local poor people in management structures of biodiversity. Historically there has been little participation and involvement between GR management and surrounding communities' needs, and there have been longstanding conflicts between the local communities and WLS with very few shared objectives. Establishing a buffer zone in the form of a CMA will help to bridge the divide between the communities and WLS, increase information flow, influence decision making, and therefore see both parties' goals converge to see biodiversity conservation and sustainable development enabled. The proposed governance structures and increased community engagement is expected to have the indirect benefit of increasing support for the conservation activities and reducing conflict between stakeholders.

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

During the project period, the boundaries of BK and BGG Game Reserves were demarcated. The two boundaries have been georeferenced in their entirety and comprehensive maps have been created and shared in hard and soft copy with local communities and state authorities. Following agreement by all stakeholders and presentation of information to WLS, the State Government has formally approved the boundary demarcation (Annex 5, 31, 32) and written to MWCT to request that the boundaries are processed into national law.

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

Throughout project implementation, FFI has sought to use participatory approaches (see FFI's statement on displacement and restrictions on access to resources; Annex 27). FFI's organisational toolkit has been used to design and facilitate participatory approaches to reach agreement on natural resource use and access restrictions and other relevant decisions.

The boundary demarcation process for the Game Reserves was participatory in its nature. Community members and elders were selected from the communities living around the Game Reserves. These individuals, termed through the community engagement process as 'boundary

specialists' (5 in BK and 3 in BGG; all male), had generational knowledge of the boundaries as originally gazetted in the 1930s and as commonly, long understood by the local community. Boundary specialists, CWAs, and WLS rangers jointly walked and collected GPS tracks for the Game Reserve boundaries. In parallel, there were numerous meetings between the boundary specialists, in which community leaders and government authorities discussed and agreed the boundaries. A grievance mechanism was developed and put in place to ensure that there was a standardised process for addressing major unresolved Game Reserve boundary conflicts and grievances. Grievances were documented by FFI and discussed with CWAs; local government officials; and local chiefs before holding a large meeting, inclusive of all stakeholders, to resolve boundary grievances. The resulting decisions were well-publicised amongst the communities and other stakeholders.

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

Through this project, a total of 309 households (134M; 175F) have been supported to engage with asset development strategies. Additionally, a reduction in human-wildlife conflict has been reported over the project period (see Output 3, Question 3.1). Whilst this has not been quantified as part of project monitoring, it can be assumed that this change will have positively impacted household income and/or food security.

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

Change in HH income was not an indicator within the project M&E framework. Anecdotal feedback received from project beneficiaries has shown that, because of their engagement with business enterprises supported by this project, many households have been able to save.

#### **4.6 Transfer of knowledge**

The CMA establishment process in this project is a novel PA management approach in South Sudan. Through relationships and engagement with local, regional and national level stakeholders, we expect the CMA establishment to inform national and regional practitioners and policy makers, and potentially contribute to national legislation.

Knowledge attained through this work has provided important baseline biodiversity data and contributed to IUCN range extensions for the red colobus (*Piliocolobus sp.*; Annex 28) and forest elephant.

#### **4.7 Capacity building**

Emmanuel Kutote (male), Environmental Science graduate from Western Equatoria, joined FFI as part of a Conservation Leadership Programme Intern, and has now been employed by FFI. Due to his ability exhibited during the internship, Emmanuel is now coordinating FFI's input into improving biomonitoring efforts in the GRs. He has taken part in an Endangered Species Recovery Course offered by Durrell Conservation Academy, where the feedback from the course coordinators was that Emmanuel's contribution was valued.

Clement Salvatore Bagunda (male), FFI programme Officer, has been promoted from Logistics and Admin Assistant to Programme Officer, Community Engagement due to his ability exhibited during this project.

At an institutional level, the WLS and other government agents will have greater capacity to progress on needs identified in the 2015 CBD report. This is not through expenditure on government institutional capacity building directly, but derives from continually developing the protected area co-management model with community stakeholders and providing the learning to relevant government departments. The Game Reserve patrol units will have improved capacity to monitor and respond to illegal activities through training, the establishment of SOPs, and the increased support for conservation among local communities who we anticipate will become

more proactive in sharing information with patrol team members. Game Reserve and CMA governance structures will enable increased capacity for decision-making through the establishment of regulations, protocols and defined roles and responsibilities.

## **5 Sustainability and Legacy**

FFI has worked in South Sudan since 2010, during the ongoing conflict, and is committed for the long term. The envisaged end point is that the government takes responsibility and ownership of all aspects of protected area management and financing, with community-level finance (e.g. saving and lending groups or micro-loan schemes) playing an important role in sustainable use and mitigating human-wildlife conflict. Whilst this may be a distant goal given the complexities of South Sudan, this project has served as an important catalyst to build local capacity for conservation and interrelated sustainable livelihood development.

In all aspects of project implementation, building the capacity and ownership in local leaders and institutions has been a critical strategy to ensure that the work is able to continue beyond the project period. As such, the inclusion of local staff, partners and communities in this project has been fundamental.

Demarcation of the two Game Reserves, and associated governance and management structures, has now been formally recognised within South Sudan. Through extensive capacity building efforts under this project, there has been significant improvement in biomonitoring and law enforcement within these areas, although these activities remain in large part financially dependent on FFI and Bucknell University. FFI continues to develop exit scenarios for financial, and indeed security, risks.

Moreover, whilst not fully achieved within the project period, the CMA that will be established following the progress made under this project will be a novel approach to protected-area and natural resource management South Sudan, having never been developed in the country before. The area surrounding BK and BGG is owned by the community in essence, practice and by law. The land tenure is customary; however, government agencies have legal mechanisms to acquire this customary tenured land if it is deemed to hold national interest. Establishing a CMA under customary land tenure is perceived to be the most effective way of securing land ownership in South Sudan. The framework established for the CMA around BK and BGG will act as a resource for replication and upscaling in South Sudan.

As noted elsewhere, transformation of livelihood activities will take sustained effort over the long-term, which is something that the project partners are committed to beyond the lifetime of this project. The extension of “emergency-based” cash for assets programming by UN implementing partners to the project area, enabled by the opening up of road access during the project period, has created additional challenges by resulting in waning engagement with sustainable agriculture group activities. Caritas Austria together with COD and local community leaders are actively lobbying the government, UN and other INGOs operating in the area to bring much needed additional development support and raising awareness on the negative consequences of implementing emergency-based activities in non-emergency development areas.

FFI has resources to continue work in the Game Reserves throughout 2021, and is fundraising for additional resources to continue the work beyond this period. The staff and resources supported by this project will be supported by and utilised for ongoing work, with a particular focus on finalising the CMA and a progress shift to self-sustaining strategies in the CMA and Game Reserves.

## **6 Lessons learned**

Implementation of this project has reiterated the fact that transformation of livelihood activities, in this case from a mainly traditional hunter society towards a farming and small-scale business orientated society, is a long-term endeavour. Such a transformation will always

be characterised by success and failure, dependent on the attitudes and willingness of the community to adopt the knowledge and training received, group leadership capacities, and conflicting interests. In particular, the provision of livestock support and trainings has been met with mixed results. This is because the Azande ethnic group have, traditionally, been purely crop production farmers. For example, significant support and training were provided to piggery and fishing farming groups but these have had limited success because of inadequate feeding of the livestock and, in the case of fish farming, theft. Long-term, sustained support and engagement is needed to fully realise transformation.

In terms of patrol and monitoring activities, a key learning was the value of establishing a centralised database using SMART (Spatial Monitoring and Reporting Tool). By having this in place, and monitored by both staff in country and FFI's global technical experts, data could regularly feed into adaptive management processes. For example, through the centralised database it was possible to identify some inconsistencies in data gathering and these led to an adaptation of the SOPs and some refresher training.

Across the project period, staff changes within FFI have created some challenges. During Yr1 there were two changes to the project's field team leader, although fortunately replacements were swiftly found, and over the course of the project there have been three Project Leaders. These challenges have highlighted the importance of rigorous project documentation and comprehensive handovers.

Across the partnership, it has been learnt that a healthy partnership needs to provide the space for different approaches to be shared and considered. The great strength of this project partnership has been that it has brought together conservation and development organisations to implement a multi-pronged approach to what is a multidimensional challenge. This has, however, also brought about some challenges in relation to diversity in approaches. By ensuring open and constructive communication, it has been possible to identify complementary approaches and ultimately strengthen implementation and monitoring.

## **6.1 Monitoring and evaluation**

There were no major changes in the project design and no changes to the logframe. Project M&E was led by FFI, drawing on expertise from all project partners. Output-level monitoring of project implementation and the success of various approaches was monitored by the relevant expert partner. Methods were designed to be as simple and replicable as possible to enable the research to be repeated in future with minimal external input. Whilst there has not been a formal evaluation of this project, regular coordination meetings with partners and the sharing of monitoring data enabled effective adaptive management throughout implementation.

The use of SMART (Spatial Monitoring and Reporting Tool) has been a critical aspect of the M&E systems used by this project. All patrol data from the project period has been entered into a centralised SMART database, building the capacity of local FFI staff and partner staff in the process. This has enabled both the robust assessment of changes in human activity (including illegal activity) with the protected area and been an important element of adaptive management within the lifetime of the project, allowing troubleshooting where necessary and for patrol effort to be responsive to identified threats.

Also core to the M&E systems for this project has been the household survey. An extensive household survey was designed by FFI and Bucknell University, and then translated into Azande, in order to establish baselines across a range of project indicators, as well as inform certain aspects of project design. Through a repeat survey, this household survey was also used to assess change over the project period. Open Data Kit (ODK) technology was initially used to collect the survey data in order to systematise, digitalise and optimise data gathering and analysis. There were limitations to server space and the format of results using ODK, and as FFI institutionally has access to ESRI products, subsequent surveys were designed and carried out in Survey123 to ease survey rollout and streamline data analysis.

On reflection, certain questions within the household survey could have been framed or phrased in a more nuanced way, in order to provide more meaningful information. For example, as referenced elsewhere, there is significant ambiguity around the Wildlife Law in South Sudan. As such, asking local communities to name a 'wildlife law' was unlikely to produce many positive responses. Had the question been framed around what activities were or weren't permitted within the Game Reserves, it is more likely that community members would have demonstrated an awareness of the regulations in place. Similarly, in the repeat household survey, community members were asked about their current wellbeing and how this had changed over the last 12 months. As such, this did not provide comprehensive information about change in wellbeing over the project period. Moreover, because of the impacts of Covid-19, the last 12 months have been extraordinary and wellbeing has been impacted in a way that was not anticipated.

The quantitative approach of the household survey was complemented by Caritas Austria and COD adopting more qualitative approaches to the collection of monitoring data (Annex 25). Whilst ultimately this was considered a strength of the project monitoring systems, it did create some challenges, particularly in terms of sampling. For example, the household surveys targeted communities living around both BK and BGG Game Reserves, whereas livelihood interventions were focused around BK only, and were random in their sampling methods. In order to provide more robust data, ideally a greater number of those receiving training or inputs as a result of this project would have been surveyed under the household survey. More stratified approaches to sampling should have perhaps been considered.

## **6.2 Actions taken in response to annual report reviews**

Reviews have been discussed with project partners. All feedback on Annual Report Review Yr1 was addressed in the Yr2 reporting. Feedback on Annual Report Review Yr2 and associated responses are as follows:

1. Please assess the impact of Covid-19 on your project work plan.
  - > See response to Question 8
2. It would be very interesting for the reviewer if you could add a copy or link of the Standard Operation Procedures and the report on extend of sourcing mentioned under Indicator 2.4.
  - > See Annexes 6-10 which are selected SOPs
- 3 Also an example of the agreed conflict mitigation plans (Indicator 3.2) would be great!
  - > Conflict mitigations plans do not exist as standalone documents per se. Rather, data on the extent and nature of human-wildlife conflict, collected through household surveys, was used to design efficient and effective strategies that were built into the livelihood development activities supported by Caritas Austria and COD (Indicator 3.4).
- 4 The project shows an impressive capacity for quantitative data gathering, but in some cases also qualitative data would be helpful. As I understood the partners Caritas Austria and COD are focusing on these more qualitative data. A combination of both approaches would surely add value to your monitoring and reporting.
  - > See Annex 25 which includes a series of case studies from the individuals that have been supported in asset development strategies.

## **7 Darwin identity**

Where appropriate, and respecting that some information needed to be restricted to protect people and species vulnerable to illegal threats, information generated from this project has been made freely available online. FFI has a dedicated webpage for its South Sudan project<sup>1</sup> which has been updated during project implementation. A wide variety of online and print publications have also been secured (see Annex 5a below), including the Darwin Initiative newsletter and acknowledging the Darwin Initiative in external publications wherever possible. Project activities have also been promoted on social media, via past Project Leaders personal accounts and FFI's

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<sup>1</sup> <https://www.fauna-flora.org/projects/conserving-biodiversity-south-sudan>  
Darwin Final Report Template 2021

institutional accounts, and these have been linked back to Darwin Initiative social media accounts.

In country, whilst FFI's activities in South Sudan are broader, given the geographic focus, this project was recognised as a distinct project. The sharing of learning with DFID in Juba has been limited to date, hampered more recently by Covid-19 restrictions. Likewise, during Yr3 the Project Leader was due to meet with the UK Ambassador to South Sudan but this was prevented by the Covid-19 pandemic. Sharing of this final report will be an opportunity to reinvigorate these conversations, share learning and explore opportunities for future collaboration.

## 8 Impact of COVID-19 on project delivery

South Sudan officially confirmed its first case of Covid-19 on 5 April 2020. At the end of the project period, there were 10,168 confirmed cases and 112 deaths due to Covid-19. It should be noted however that, due to the extremely limited testing facilities, the World Health Organisation estimates the actual number of cases to be many multiple times higher than officially reported.

International and national level travel restrictions have affected the movement of people and access to services for both the implementers and beneficiaries of this project. In-country and cross-border restrictions have also meant that basic commodity prices have significantly increased.

As a result of the risks posed by Covid-19, FFI's two international staff, normally based in-country, were forced to work remotely for an extended period (4-5 months) during Yr3 of the project. Implementation of project activities continued, coordinated by FFI's international staff working remotely and implemented by FFI's national staff who were still in-country, but progress of implementation was slower than anticipated. Travel restrictions also hampered the transport of essential equipment, which is normally sourced internationally, meaning it had to be sourced locally and therefore typically more expensive and of lower quality. In some instances, however, local sourcing arrangements were positive. For example, local tailors were employed to make uniforms for the CWAs and this arrangement will be continued and potentially expanded. As noted elsewhere, travel and social distancing restrictions also negatively impacted some project activities, particularly those seeking to achieve consultative and representative engagement with local communities. Given the remoteness and low IT literacy of local communities, virtual meetings were unfortunately not a viable alternative.

All activities were implemented in full compliance with national level restrictions and guidelines in place at the time. Moreover, FFI provided tippy taps to allow adequate hand washing, medical supplies, gloves and facemasks to WLS rangers and local communities to assist in the fight against Covid-19.

The project was not designed specifically to reduce the risk of future pandemics however it does address biodiversity conservation and land use, both of which are important dynamics in emerging infectious diseases. The project has also promoted a shift from wildmeat consumption to sustainable agricultural practices, thereby contributing to a reduction in the risk associated with zoonotic disease transmission.

## 9 Finance and administration

### 9.1 Project expenditure

Project spend (indicative) since last annual report	2020/21 Grant (£)	2020/21 Total actual 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)				
Others (see below)				
<b>TOTAL</b>				

<b>Staff employed (Name and position)</b>	<b>Cost (£)</b>
Nicolas Tubbs, Senior Programme Manager – Eastern Africa (previous Project Leader)	
Alison Mollon, Director of Operations, Africa (current Project Leader)	
Benoit Morkel, Landscape Manager, Western Equatoria, South Sudan	
Jessica Farish, Programme Manager, Africa	
Jasmien Verheyen, Programme Officer, Africa	
Michelle Villeneuve, Agricultural Landscapes Specialist (LF)	
Samuel Gregory, GIS Specialist	
Chelsea Smith, GIS Specialist	
Amy Duthie, M&E and Reporting Adviser	
Rob Small, Community, Livelihoods & Governance	
<b>TOTAL</b>	

<b>Capital items – description</b>	<b>Capital items – cost (£)</b>
N/a	
<b>TOTAL</b>	

<b>Other items – description</b>	<b>Other items – cost (£)</b>
Awareness raising materials and events	
Demarcation Materials	
Project materials, safety equipment etc.	
Cash delivery and pick-up fees	
Visas, permits, insurance, registrations	
Publishing and dissemination	
<b>TOTAL</b>	

## 9.2 Additional funds or in-kind contributions secured

<b>Source of funding for project lifetime</b>	<b>Total (£)</b>
Halcyon to end 2018	
Halcyon 2019-2021	
USFWS to 2019	
CITES to end 2018	
Rainforest Trust	
Partner organisation contributions	
<b>TOTAL</b>	

Source of funding for additional work after project lifetime	Total (£)
Halcyon 2021-2023	
<b>TOTAL</b>	

### 9.3 Value for Money

FFI is fortunate to have a long-term donor who has supported our work in South Sudan for many years and who is able to fund a large portion of our operating costs. In South Sudan it is essential to have a secure compound both in Juba and in any field site, which for FFI is in Yambio. These costs average out at about USD p/a and as FFI are able to mostly absorb these costs elsewhere, it means that funds from the Darwin Initiative can be used to directly support activities and the staff essential to delivering these activities, whilst still ensuring a duty of care to employees.

FFI's work in South Sudan also benefits from the combined experience of FFI staff operating in conflict zones. Finding and retaining the right personnel in South Sudan is critical to the long-term success of any approach as it is not an environment that many people can work within. This Darwin funded work supported the FFI team that have many years of experience and who were already operational, including the local South Sudanese team, which meant the Darwin specific work was not subject to key personnel recruitment and the delays that this inevitably brings.

Operating in South Sudan is expensive and, as highlighted elsewhere, the impacts of Covid-19 have further increased costs. FFI has also taken measures such as installing solar power wherever possible and although procurement is not cheap, running costs are then significantly reduced and with the added benefit of using green energy. This in turn benefits donor funded work as these running costs are not then passed on to donors. In addition to the combined local experience and connections of project partners, FFI's ability to draw on procurement support from its office in Uganda, enabled financial efficiency to be achieved wherever possible.

In terms of procurement and types of equipment used, an example of efficiencies would include the purchase and use of camera traps; it is important that camera traps are robust and we specifically use Reconyx for this feature and because they have low camera failure rates, and have a reliable wake up time and trigger speed which makes the data useable for scientific studies and species inventories. Within the range of camera traps that collect data for scientific/biomonitoring purposes, these are among the more affordable models whilst also offering a reliable solution. Additionally, we use the same model across the sites where FFI works (Guinea, Liberia, Mozambique) making the data comparable across multiple sites.

All project expenditure was carried out in line with DI's and FFI's financial policies and procedures, which have been designed to deliver value for money.

## 10 OPTIONAL: Outstanding achievements of your project during the (300-400 words maximum). This section may be used for publicity purposes

I agree for the Darwin Secretariat to publish the content of this section (please leave this line in to indicate your agreement to use any material you provide here).

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

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

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p><b>Impact:</b> Integrated conservation and sustainable livelihoods strategies boost protected areas, forest habitats and endangered species, and enhance aspects of wellbeing as a model of engagement with rural communities in South Sudan</p>			
<p><b>Outcome:</b></p> <p>Integrated conservation and development provide benefits to over 900 direct and 3,000 indirect beneficiaries in South Sudan and protects 430km<sup>2</sup> of nationally important tropical forest habitat</p>	<p>0.1 By project end 900 women, men and children report an improvement in their wellbeing in one or more areas of social, natural, physical, human or financial capital, compared to project baseline (<i>indicator of direct benefit</i>)</p> <p>0.2 Following training, 75% of a representative sample of 3,000 people can articulate at least five wildlife laws and GR regulations, compared to pre-training baseline (<i>indicator of indirect benefit</i>)</p> <p>0.3 2 Game Reserves (GRs) are demarcated and 1 Community Managed Area (CMA) is pioneered and has recognised boundaries, regulations and a governance structure by project end (<i>indicator of protection</i>)</p>	<p>0.1 Baseline, annual and project end community survey Additional community focus group notes</p> <p>0.2 Post-training assessment of knowledge uptake</p> <p>0.3 Documentation of the process from approval to physical demarcation Images of demarcation process Updated maps of the national protected area estate Documentation of the process from FPIC to stakeholder consultation meetings to agreement on rules, regulations and zoning Evidence of government support for CMA GIS maps</p> <p>0.4 Patrol-based threat monitoring data from Game Reserves Patrol records</p>	<p>Conflict in other parts of the country does not spread and cause any movements of people or critical changes within government</p> <p>Government counterparts at county level continue to be supportive of awareness-raising activities outside of the immediate project focus area</p> <p>No undue delays are experienced in the demarcation process, and the government continues to be supportive at community, county, state and national levels</p> <p>No unexpected and new serious threats affect the Game Reserves</p> <p>No large-scale deforestation occurs, such as through corporate actions, forest fires etc.</p> <p>Community actors continue to be supportive of collaboration on patrolling and wider community engagement by the project</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	<p>0.4 By project end there is a reduction in the incidence of illegal activity in 2 GRs, from baseline (<i>indicator of direct benefit</i>)</p> <p>0.5 75% of direct beneficiaries report an increased reliance on sustainable livelihoods options between project start and end (<i>indicator of direct benefit</i>)</p> <p>0.6 Forest cover does not decrease in Bire Kpatuos Game Reserve between 2018 and 2021 (<i>indicator of protection</i>)</p>	<p>0.5 Baseline, annual and project end community surveys Additional community focus group notes</p> <p>0.6 GIS analysis and mapping</p>	
<p><b>Outputs:</b> 1. 430km<sup>2</sup> of Game Reserve (GR) and Community Managed Area (CMA) habitat is under stronger conservation management, with local women and men better informed about biodiversity and engaged in decision-making</p>	<p>1.1 Both Game Reserves have clear boundaries, physically demarcated and recognised as part of the national protected area network. Target: first Game Reserve by end of Y2; second Game Reserve by project end</p> <p>1.2 The proportion of men and women in local communities who are able to articulate at least five relevant wildlife laws and/or Game Reserve regulations. Target: of a trained number of 3,000, 75% are able to articulate by project end</p> <p>1.3 Two Game Reserves have agreed SOPs and adaptive management structures in which local men and women are in decision-making roles and relevant agreement(s) are in place by project end (linked to 2.5)</p> <p>1.4 At least one Community Managed Area has a governance structure in which local men and women are in decision-making roles, and has proposed boundaries, recognised by</p>	<p>1.1 Documentation of the process from approval to physical demarcation Images of demarcation process Updated maps of the national protected area estate GIS maps</p> <p>1.2 KAP study of stakeholders Documentation of awareness-raising modules, materials, images and videos, focusing on demarcation and wildlife regulations</p> <p>1.3 Endorsed financial and technical SOPs for effective and adaptive governance. Governance agreements signed by relevant stakeholders</p> <p>1.4 Documentation of the process from FPIC to stakeholder consultation meetings to agreement on rules, regulations and zoning Evidence of government support GIS maps Draft SOPs for effective operational management and governance of management board</p>	<p>No undue delays are experienced in the demarcation process, and the government continues to be supportive at community, county, state and national levels</p> <p>National, state and county level government personnel support and recognise the development of Community Managed Areas</p> <p>No unexpected and new serious threats affect the Game Reserves</p> <p>Government counterparts at county level continue to be supportive of awareness-raising activities outside of the immediate project focus area</p> <p>Conflict in other parts of the country does not spread and cause any critical changes within government</p> <p>Definitive records of the international boundary can be accessed</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	local government and with draft zones, rules, regulations and a draft operational management plan by project end	Draft management plans discussed by relevant stakeholders Review of sustainable financing options for CMA operations	Women's status isn't a barrier to involvement in decision-making
<p>2. Collaborative routine and intelligence-led patrols in Game Reserves and community ranger teams in Community Managed Areas are deterring and responding to wildlife crime</p>	<p>2.1 4 Fully trained collaborative patrol units are providing patrol coverage and generating patrol data. Target: 2 Game Reserve patrol units active on 50% of available patrol days by end of Y1; 2 further units by project end. 2 CMA ranger units active on 25% of available patrol days by project end</p> <p>2.2 Collaborative patrol and monitoring units are composed of diverse members. Target: 50 individuals of whom at least 10% are women and 50% are under age of 25, by project end</p> <p>2.3 Collaborative patrol units for the Game Reserves and community ranger units for the Community Managed Areas are following established and agreed Standard Operating Procedures. Target: 2 patrol units (50%) following SOPs by end of Y1; 2 further patrol units (total 100%) by project end; 2 community ranger units following SOPs by project end</p> <p>2.4 Data are available and shared with government and civil society partners (South Sudan government, TRAFFIC, IUCN Pangolin Specialist Group) on community involvement in and market mapping of wildlife trade in target species originating from target area encompassing Community Managed</p>	<p>2.1 Patrol-based biodiversity and threat monitoring data from Game Reserves and CMA. Patrol records, maps and records of meetings and decisions Records of patrol group operations and attendance</p> <p>2.2 Records and images of patrol group registers and routine planning documents</p> <p>2.3 SOP documents and collaborative agreements signed by relevant stakeholders</p> <p>2.4 Report on extent of sourcing of wildlife and products for the domestic and international wildlife trade Evidence of collaboration with wildlife trade partners over new data, and contribution to data repositories</p> <p>2.5 Database of community-derived information on wildlife crime Meeting minutes/email correspondence regarding the sharing of wildlife crime data Evidence of population of national platforms with biodiversity information</p>	<p>Conflict in other parts of the country does not spread and cause any critical changes within government</p> <p>Community actors continue to be supportive of collaboration on patrolling and wider community engagement by the project</p> <p>Women and youth are willing to be trained for patrols, and receive recognition from existing patrol team members</p> <p>Information on wildlife trade and crime is willingly shared by community-level actors and external actors e.g. county town markets</p> <p>SOPs are agreed by key stakeholders with no untimely delays</p> <p>Co-management patrolling model continues to be the most appropriate method for protected area management, and continues to carry low financial risk and exposure</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
	<p>Areas and Game Reserves. Target: Preliminary data available by end of Y2; final data available and sharing complete by project end</p> <p>2.5 Information on wildlife crime from community members informs patrolling effort and increases threat detection. Target: at least one report per month is made on average to a patrol team member, and all reports are logged and shared with national and international partners between end of Y1 and project end</p>		
<p><b>3.</b> Livelihoods activities appropriate to existing local norms and constraints to wellbeing are strengthening the assets of 900 people (150 households) against external shocks</p>	<p>3.1 Information on cultural and non-cultural practices of communities around hunting and natural resource use is available by end of Y1</p> <p>3.2 By the end of Y2, 150 households have plans in place to mitigate wildlife impact on household assets</p> <p>3.3 75% of households with a wildlife impact mitigation plan report a decrease in the number of incidents by project end</p> <p>3.4 By end of Y2, 150 households are engaged in assets development strategies (e.g. agriculture or animal husbandry) according to the results of 3.1.</p> <p>3.5 By project end 75% of households in receipt of assets development support report a positive change in wellbeing</p>	<p>3.1 Socio-economic baseline survey Records of community meetings focusing on natural resource use</p> <p>3.2 Agreed conflict mitigation plans Evidence of human-wildlife conflict Annual household/community surveys and focus group notes</p> <p>3.3 Annual household/community surveys and focus group notes</p> <p>3.4 Annual household level/community surveys</p> <p>3.5 Annual household level/community surveys</p>	<p>Conflict in other parts of the country does not spread and cause any movements of people</p> <p>Tools and materials necessary for mitigating wildlife damage are locally available</p> <p>Tools, materials and expertise necessary for piloting livelihoods and agricultural activities are locally available</p> <p>Community actors continue to be supportive of collaboration on patrolling and wider community engagement by the project</p> <p>Women and youth are willing to engage in assets development strategies</p>

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<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><b>Output 1: 430km2 of Game Reserve (GR) and Community Managed Area (CMA) habitat is under stronger conservation management, with local women and men better informed about biodiversity and engaged in decision-making</b></p>			
<p>1.1 Undertake stakeholder mapping exercise to identify all key stakeholders (and their roles) to be involved in demarcation roadmap</p> <p>1.2 Socialise process with stakeholders and securing of government backing at relevant levels</p> <p>1.3 Gather evidence of historical boundary information including discrepancies in the literature and clarity on land tenure and any customary rights</p> <p>1.4 Undertake ground-truthing and mapping exercise and present information to decision-makers</p> <p>1.5 Facilitate discussions on and resolve boundary conflicts and other issues</p> <p>1.6 Identify appropriate physical demarcation materials and methods (track cutting, signboards etc.) and conduct demarcation exercise alongside stakeholders</p> <p>1.7 Produce maps and clear information on demarcated sites to inform the national protected area estate</p> <p>1.8 Review government wildlife legislation (draft and final), and clauses/loopholes, to understand up-to-date national policies on wildlife management</p> <p>1.9 Assess stakeholder (government and community) attitudes and knowledge of conservation and protected areas through a KAP survey</p> <p>1.10 Design content and appropriate channels (e.g. Yambio FM) for dissemination of conservation messaging, drawing on existing stakeholder knowledge, relevant cultural values and known information about ecosystems and wildlife (also linked with Activity 3.7 and Farmer Field School messaging)</p> <p>1.11 Assess take-up of conservation messaging through follow up KAP survey</p> <p>1.12 Identify legislative needs/barriers to enable governance agreements for Game Reserves to be created and implemented</p> <p>1.13 Seek exemplars of governance agreement to learn from nationally/regionally, especially with regard to sustainability planning</p> <p>1.14 Discuss and agree on governance structures, roles, responsibilities and SOPs</p> <p>1.15 Facilitate and socialise governance agreements and relevant approvals/endorsements</p> <p>1.16 Identify legislative needs/barriers to enable Community Managed Areas (CMAs) to be developed and supported</p> <p>1.17 Follow FPIC principles to determine approach to develop CMA as buffer zone to Bire Kpatuos GR and establish draft structure, roles, activity zoning, regulations and management plan/SOPs</p> <p>1.18 Consider options for sustainably financing CMA operations following establishment and discuss with community actors and CBO partners</p> <p>1.19 Facilitate evidence of government support for CMA establishment</p> <p>1.20 Develop GIS materials to document progress with CMA development</p>			
<p><b>Output 2: Collaborative routine and intelligence-led patrols in Game Reserves and community ranger teams in Community Managed Areas are deterring and responding to wildlife crime</b></p>			
<p>2.1 Engage the Wildlife Service to increase the patrol intensity in two Game Reserves, through structure of patrol teams (Biodiversity Data Collection and Law Enforcement teams) and design of routes, including option for night time patrol work (flexible to security situation)</p> <p>2.2 Identify trained Wildlife Service rangers and Community Wildlife Ambassadors to join increased frequency of patrols in two Game Reserves</p>			

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>2.3 Equip all patrol teams with adequate provisions, kit, health and safety equipment and patrol gear</p> <p>2.4 Ensure logistics and project operations (vehicles, communications, personnel) are in place to support patrol activities</p> <p>2.5 Roll out patrol SOPs for a) biodiversity data collection and b) law enforcement and ensure a rigorous system of data collection, collation in a centralised location and system for continual feedback to patrol team members to improve understanding of how data collection is linked to patrol planning</p> <p>2.6 Use digital records of patrol findings to adaptively manage patrol routes</p> <p>2.7 Mentor Wildlife Service personnel at state level to increase capacity for data management and analysis</p> <p>2.8 Liaise with key actors, such as WCS, the Ministry of Wildlife Conservation and Tourism and the MIKE Programme to share information sensitively on species monitoring, to add to repositories and inform tracking of trends</p> <p>2.9 Identify trained Community Wildlife Ambassadors, including previously trained women, to initiate patrols in proposed CMA area around Bire Kpatuos Game Reserve</p> <p>2.10 Train additional CWA patrol team members if needed, with a focus on increasing participation and youth</p> <p>2.11 Initiate system of data collection and facilitate agreement on SOPs for CMA patrols</p> <p>2.12 Review literature, data gaps and successful models of community-level illegal wildlife trade tracking prior to initiating discussion with community leaders (2.13)</p> <p>2.13 Discuss with community leaders on an informal system for collection of information about community involvement in wildlife trade, linked to governance structures for both GRs and CMA and issues emerging as a result of Activity 3.1</p> <p>2.14 Centralise both qualitative and quantitative information and review data to inform patrol routes (linked with Activity 2.6)</p> <p>2.15 Share findings sensitively and periodically with government and local and international civil society partners to inform increasing body of knowledge on IWT especially from under-studied areas</p> <p>2.16 Provide advice to government counterparts on the protocols for handling confiscated meat, in line with national wildlife regulations</p>			
<p><b>Output 3: Livelihoods activities appropriate to existing local norms and constraints to wellbeing are strengthening the assets of 900 people (150 households) against external shocks</b></p>			
<p>3.1 Finalise socio-economic baseline design with local partners, building on existing knowledge of communities</p> <p>3.2 Undertake socio-economic baseline assessment at the household level focusing on key themes of human-wildlife conflict, natural resource use, specifically hunting, cultural practices, market access and youth and male/female dynamics</p> <p>3.3 Research human-wildlife conflict mitigation methods involving identified problem species to assess successful/non-successful methods</p> <p>3.4 Work with individual households to decide practical plans and provide equipment and advice to tackle impact of wildlife on household assets</p> <p>3.5 Advise government counterparts on developing clear regulations for mitigating and compensating for human-wildlife conflict</p> <p>3.6 Monitor impact of human-wildlife conflict mitigation on household assets and wellbeing</p> <p>3.7 Support households to develop assets development strategies based on results of PRA and socio-economic baseline surveys (*note that if improvements to agricultural practices are noted as a key priority, the Farmer Field School model will be adopted, which will be able to incorporate environmental awareness raising and take-up of wildlife friendly practices – also linked to Activity 1.10 on channels for conservation messaging)</p> <p>3.8 Monitor impact of assets development support on household and community assets and wellbeing</p>			

## Annex 2(a) Report of progress and achievements against final project logframe for the life of the project

Project summary	Measurable Indicators	Progress and Achievements
<p><b>Impact:</b></p> <p>Integrated conservation and sustainable livelihoods strategies boost protected areas, forest habitats and endangered species, and enhance aspects of wellbeing as a model of engagement with rural communities in South Sudan</p>		<p>Management of 461km<sup>2</sup> of nationally important forest has improved. Evidenced by boundary demarcation (Indicator 0.3; Annexes 1, 2, 4, 5, 13, 14, 15, 16); agreed management protocols (at least for the Game Reserves; Indicator 1.3; Annexes 6-10 are example SOPs); and increased patrol effort (Indicator 2.1; see Section 3.2).</p> <p>Minimal forest loss over the project period (Indicator 0.6; Annex 26) and a decrease in human activity (which encompasses illegal activity) within the focal protected areas (Indicator 0.4).</p> <p>Contributing to scientific knowledge base on South Sudan's rare but little-known wildlife, including: forest elephant (<i>Loxodonta cyclotis</i>), eastern chimpanzee (<i>Pan troglodytes schweinfurthii</i>), red colobus (<i>Piliocolobus sp.</i>), bongo (<i>Tragelaphus eurycerus</i>), and African golden cat (<i>Caracal aurata</i>).</p> <p>Understanding of cultural and non-cultural practices related to hunting and natural resource use has increased through detailed household surveys (Indicator 3.1; Annex 22, 24).</p> <p>Proxy indicators and anecdotal of improved capacity and financial and food security: 309 households (represented by 134M:175F) have been supported to engage with asset development strategies (Indicator 3.4; Annex 25). Reduction in human-wildlife conflict reported over the project period (Indicator 3.3; Annex 24).</p> <p>Enhanced governance frameworks that strengthen the voice of the poor and marginalised in natural resources management, through the CWA programme and the CMA establishment process (Indicator 1.4; Annex 16).</p>
<p><b>Outcome:</b></p> <p>Integrated conservation and development provide benefits to over 900 direct and 3,000 indirect beneficiaries in South Sudan and</p>	<p>0.1 By project end 900 women, men and children report an improvement in their wellbeing in one or more areas of social, natural, physical, human or financial capital, compared to project baseline (<i>indicator of direct benefit</i>)</p>	<p>See Section 3.2:</p> <p>0.1 BK: the majority of respondents (50.8%) said that their wellbeing was good and the majority (68%) said that it had stayed the same over the last year (Annex 24)</p>

Project summary	Measurable Indicators	Progress and Achievements
protects 430km <sup>2</sup> of nationally important tropical forest habitat	<p>0.2 Following training, 75% of a representative sample of 3,000 people can articulate at least five wildlife laws and GR regulations, compared to pre-training baseline (<i>indicator of indirect benefit</i>)</p> <p>0.3 2 Game Reserves (GRs) are demarcated and 1 Community Managed Area (CMA) is pioneered and has recognised boundaries, regulations and a governance structure by project end (<i>indicator of protection</i>)</p> <p>0.4 By project end there is a reduction in the incidence of illegal activity in 2 GRs, from baseline (<i>indicator of direct benefit</i>)</p> <p>0.5 75% of direct beneficiaries report an increased reliance on sustainable livelihoods options between project start and end (<i>indicator of direct benefit</i>)</p> <p>0.6 Forest cover does not decrease in Bire Kpatuos Game Reserve between 2018 and 2021 (<i>indicator of protection</i>)</p>	<p>0.1 BGG: the majority of respondents (69.8%) said that their wellbeing was bad and the majority (53.3%) said that it had deteriorated over the last year (Annex 24)</p> <p>0.2 Of those surveyed, 39.7% (BK) and 0% (BGG) were able to list any wildlife laws (Indicator 0.2) (Annex 24)</p> <p>0.3 BK and BGG Game Reserves have been demarcated and strong foundations have been established for the CMA (Annexes 1, 2, 16)</p> <p>0.4 In both Game Reserves, over the project period there is an overall downward trend in human activity per km patrolled (see Question 3.2)</p> <p>0.5 Minimal forest cover loss in BK Game Reserve in 2018 and 2019, which is likely to be related to forest fire rather than direct clearing, and zero forest cover loss in 2020 (Annex 26)</p>
<p><b>Output 1.</b> 430km<sup>2</sup> of Game Reserve (GR) and Community Managed Area (CMA) habitat is under stronger conservation management, with</p>	<p>1.1 Both Game Reserves have clear boundaries, physically demarcated and recognised as part of the national protected area network. Target: first Game Reserve by end</p>	<p>See Section 3.1: 1.1 BK and BGG Game Reserves have been demarcated (Annexes 1, 2). They will be re-gazetted into national law when parliament is formed, which is still pending.</p>

Project summary	Measurable Indicators	Progress and Achievements
<p>local women and men better informed about biodiversity and engaged in decision-making</p>	<p>of Y2; second Game Reserve by project end</p> <p>1.2 The proportion of men and women in local communities who are able to articulate at least five relevant wildlife laws and/or Game Reserve regulations. Target: of a trained number of 3,000, 75% are able to articulate by project end</p> <p>1.3 Two Game Reserves have agreed SOPs and adaptive management structures in which local men and women are in decision-making roles and relevant agreement(s) are in place by project end (linked to 2.5)</p> <p>1.4 At least one Community Managed Area has a governance structure in which local men and women are in decision-making roles, and has proposed boundaries, recognised by local government and with draft zones, rules, regulations and a draft operational management plan by project end</p>	<p>1.2 Of those surveyed, 39.7% (BK) and 0% (BGG) were able to list any wildlife laws (Indicator 0.2) (Annex 24)</p> <p>1.3 SOPs are in place for the two Game Reserves (Annexes 6-10 are selected SOPs)</p> <p>1.4 Progress delayed by Covid-19 impacts. There is widespread agreement on CMA establishment and the boundaries are agreed. Governance and management arrangements to be finalised (Annex 16).</p>
<p>Activity 1.1. Undertake stakeholder mapping exercise to identify all key stakeholders (and their roles) to be involved in demarcation roadmap</p>		<p>Completed. Stakeholder mapping exercise to identify all key stakeholders completed (see Yr1 report).</p>

Project summary	Measurable Indicators	Progress and Achievements
Activity 1.2. Socialise process with stakeholders and securing of government backing at relevant levels		Completed. Frequent meetings held to socialise the process with stakeholders and secure government backing at relevant levels. Roadmap for boundary demarcation agreed with WLS (see Yr1 report).
Activity 1.3. Gather evidence of historical boundary information including discrepancies in the literature and clarity on land tenure and any customary rights		Completed. All historical boundary information collected and collated, flagging discrepancies to stakeholders was done in parallel to Activity 1.4 (see Yr1 report).
Activity 1.4. Undertake ground-truthing and mapping exercise and present information to decision-makers		Completed. Ground-truthing and mapping completed and presented to decision makers (Annex 1, 2, 4, 5)
Activity 1.5. Facilitate discussions on and resolve boundary conflicts and other issues		Completed. Discussions on boundary facilitate and resolved (Annex 4, 5). A grievance mechanism was developed and put in place to ensure that there was a standardised process for addressing major unresolved Game Reserve boundary conflicts
Activity 1.6. Identify appropriate physical demarcation materials and methods (track cutting, signboards etc.) and conduct demarcation exercise alongside stakeholders		Completed. Design developed with WLS and agreed by State Director. Boundaries of the two Game Reserves are clearly demarcated (Annex 4, 5)
Activity 1.7. Produce maps and clear information on demarcated sites to inform the national protected area estate		Completed. Maps of BK (Annex 1) and BGG (Annex 2) produced and provided to stakeholders at national and local level.
Activity 1.8. Review government wildlife legislation (draft and final), and clauses/loopholes, to understand up-to-date national policies on wildlife management		Partially completed. Wildlife legislation reviewed in Yr1 (Annex 17) and used to inform project activities but in Yr3 MWCT initiated the process of revising wildlife legislation This process is ongoing and no draft has been shared.
Activity 1.9. Assess stakeholder (government and community) attitudes and knowledge of conservation and protected areas through a KAP survey		Partially completed. In lieu of KAP survey, baseline (Annex 22) and repeated (Annex 24) household surveys completed. Participatory Rural Appraisal (Annex 23; completed prior to this project period) and qualitative monitoring by Caritas Austria / COD (Annex 25).
Activity 1.10. Design content and appropriate channels (e.g. Yambio FM) for dissemination of conservation messaging, drawing on existing stakeholder knowledge, relevant cultural values and known information		Partially completed. Key conservation messages developed in Yr1 (Annex 29), translated and delivered through regular engagement with local and national stakeholders. In Yr2, billboards with key conservation message

Project summary	Measurable Indicators	Progress and Achievements
about ecosystems and wildlife (also linked with Activity 3.7 and Farmer Field School messaging)		posters erected on Game Reserve boundaries (Annex 30). In Yr3, key WLS staff communicated key conservation message on local radio. Planned roadshows prevented by Covid-19 restrictions.
Activity 1.11. Assess take-up of conservation messaging through follow up KAP survey		Completed. Repeated household surveys (Annex 24), which assessed knowledge of wildlife laws and hunting activity, completed.
Activity 1.12. Identify legislative needs/barriers to enable governance agreements for Game Reserves to be created and implemented		Completed. Legislative needs/barriers were reviewed in Yr1, and reviewed in Yr2.
Activity 1.13. Seek exemplars of governance agreement to learn from nationally/regionally, especially with regard to sustainability planning		Partially completed. As Activity 1.12. A framework for the establishment and implementation of the CMA, which includes exemplar governance arrangements to learn from, has been drafted (Annex 16).
Activity 1.14. Discuss and agree on governance structures, roles, responsibilities and SOPs		Completed. Management procedures, roles and responsibilities have been defined and articulated in SOPs which in place for the two Game Reserves (Annexes 6-10 are selected SOPs)
Activity 1.15. Facilitate and socialise governance agreements and relevant approvals/endorsements		Completed. SOPs were developed and agreed collaboratively between stakeholders.
Activity 1.16. Identify legislative needs/barriers to enable Community Managed Areas (CMAs) to be developed and supported		Partially completed. Progress delayed by Covid-19 impacts. A framework for the establishment and implementation of the CMA has been drafted (Annex 16).
Activity 1.17. Follow FPIC principles to determine approach to develop CMA as buffer zone to Bire Kpatuos GR and establish draft structure, roles, activity zoning, regulations and management plan/SOPs		Partially completed. As Activity 1.6. FFI has ensured that organisational commitments regarding human rights have been upheld (Annex 27).
Activity 1.18. Consider options for sustainably financing CMA operations following establishment and discuss with community actors and CBO partners		Limited progress. Given with wider socio-economic challenges of South Sudan, CMA operations will be dependent on external funding in the short to medium term. FFI is committed to working with project partners to ensure ongoing support until sustainably financing solutions can be developed.
Activity 1.19. Facilitate evidence of government support for CMA establishment		Partially completed. As Output 1.4. Although formal agreement of the CMA has been delayed, there is strong government support (Annex 16).
Activity 1.20. Develop GIS materials to document progress with CMA development		Completed. Maps of proposed CMA boundaries developed and shared with stakeholders (Annexes 12-14).
<b>Output 2.</b> Collaborative routine and intelligence-led patrols in Game Reserves and community ranger teams in Community Managed Areas are	2.1 4 Fully trained collaborative patrol units are providing patrol	See Section 3.1:

Project summary	Measurable Indicators	Progress and Achievements
<p>detering and responding to wildlife crime</p>	<p>coverage and generating patrol data.            Target: 2 Game Reserve patrol units active on 50% of available patrol days by end of Y1; 2 further units by project end. 2 CMA ranger units active on 25% of available patrol days by project end</p> <p>2.2 Collaborative patrol and monitoring units are composed of diverse members. Target: 50 individuals of whom at least 10% are women and 50% are under age of 25, by project end</p> <p>2.3 Collaborative patrol units for the Game Reserves and community ranger units for the Community Managed Areas are following established and agreed Standard Operating Procedures. Target: 2 patrol units (50%) following SOPs by end of Y1; 2 further patrol units (total 100%) by project end; 2 community ranger units following SOPs by project end</p> <p>2.4 Data are available and shared with government and civil society partners (South Sudan government, TRAFFIC, IUCN Pangolin Specialist Group) on community involvement in and market mapping of wildlife trade in target species originating from target area encompassing Community Managed Areas and</p>	<p>2.1 Regular patrols, following SOPs, established in the Game Reserves (at the time of project outset in BK and by April 2019 in BGG) and initiated in the Community Managed Area (April 2020) and continuing since.</p> <p>2.2 Regular patrols involve 46 WLS rangers (40M:6F; 17&lt;25yrs:29&gt;25yrs) and 46 CWAs (39M:7F; 8&lt;25yrs:38&gt;25yrs)</p> <p>2.3 All regular patrols follow SOPs (Annexes 6-10 are selected SOPs)</p> <p>2.4 Data has been made available and shared with government and civil society partners throughout project implementation (Annex 18).</p> <p>2.5 A monthly feedback patrol report has been developed (Annex 21), and provided to Ranger Post commanders and CWA team leaders to adaptively manage patrol routes.</p>

Project summary	Measurable Indicators	Progress and Achievements
	<p>Game Reserves. Target: Preliminary data available by end of Y2; final data available and sharing complete by project end</p> <p>2.5 Information on wildlife crime from community members informs patrolling effort and increases threat detection. Target: at least one report per month is made on average to a patrol team member, and all reports are logged and shared with national and international partners between end of Y1 and project end</p>	
<p>Activity 2.1. Engage the Wildlife Service to increase the patrol intensity in two Game Reserves, through structure of patrol teams (Biodiversity Data Collection and Law Enforcement teams) and design of routes, including option for night time patrol work (flexible to security situation)</p>		<p>Completed. Over the project period: BK:130 patrols, covering 900.31km and representing 5,117 person-days; BGG: 111 patrols, covering 1,726.25 km and representing 4,419 person-days; CMA: 15 patrols, covering 149.94 km and representing 515 person-days (see Section 3.1).</p>
<p>Activity 2.2. Identify trained Wildlife Service rangers and Community Wildlife Ambassadors to join increased frequency of patrols in two Game Reserves</p>		<p>Completed. As Activity 2.1. Regular patrols involve 46 WLS rangers (40M:6F; 17&lt;25yrs:29&gt;25yrs) and 46 CWAs (39M:7F; 8&lt;25yrs:38&gt;25yrs) (see Section 3.1).</p>
<p>Activity 2.3. Equip all patrol teams with adequate provisions, kit, health and safety equipment and patrol gear</p>		<p>Completed. All patrols provided with necessary field equipment, basic medical aid and materials for reporting (see detailed financial reporting).</p>
<p>Activity 2.4. Ensure logistics and project operations (vehicles, communications, personnel) are in place to support patrol activities</p>		<p>Completed. As Activity 2.2. FFI has ensured that ranger posts and patrol teams have been consistently supplied throughout project implementation. FFI has also provided and maintained all necessary vehicles and communications (see detailed financial reporting).</p>
<p>Activity 2.5. Roll out patrol SOPs for a) biodiversity data collection and b) law enforcement and ensure a rigorous system of data collection, collation in a centralised location and system for continual feedback to patrol team members to improve understanding of how data collection is linked to patrol planning</p>		<p>Completed. All regular patrols follow SOPs (Annexes 6-10 are selected SOPs). Data is processed using SMART software for streamlined processing and analysis. A monthly feedback patrol report has been developed (Annex 21).</p>

Project summary	Measurable Indicators	Progress and Achievements
Activity 2.6. Use digital records of patrol findings to adaptively manage patrol routes		Completed. Data is processed using SMART software for streamlined processing and analysis (this can be made available on request). A monthly feedback patrol report has been developed (Annex 21).
Activity 2.7. Mentor Wildlife Service personnel at state level to increase capacity for data management and analysis		Partially completed. Covid-19 restrictions prevented formally training event but mentorship is provided through on-the-job training. Solar energy systems were made available were made available to WLS state HQ and a Game Reserve ranger post to enable the running of computers and processing of digital records.
Activity 2.8. Liaise with key actors, such as WCS, the Ministry of Wildlife Conservation and Tourism and the MIKE Programme to share information sensitively on species monitoring, to add to repositories and inform tracking of trends		Completed. Data has been made available and shared with government and civil society partners throughout project implementation. At state level there are weekly or bimonthly informal exchanges (Annex 18), which is then shared nationally on a quarterly basis. Regular communications with African Parks in DRC / CAR. Data has also been shared with the IUCN SSC A.P.E.S and the IUCN SSC Red Colobus groups.
Activity 2.9. Identify trained Community Wildlife Ambassadors, including previously trained women, to initiate patrols in proposed CMA area around Bire Kpatuos Game Reserve		Completed. As Activity 2.1 and 2.2. Following discussions facilitated by FFI, Team Leaders of CWAs patrols teams were elected by community leaders.
Activity 2.10. Train additional CWA patrol team members if needed, with a focus on increasing participation and youth		Partially completed. As Activity 2.7 and 2.9. Targets around female representation (>10%) met but targets about youth representation not met because of limited influence on community leaders in terms of CWA selection.
Activity 2.11. Initiate system of data collection and facilitate agreement on SOPs for CMA patrols		Partially completed. Formal agreement on CMA governance structures, regulations and zonation still be to be confirmed. CWA patrols in the proposed CMA are following SOPs developed for the GRs (Annexes 6-10 are selected SOPs).
Activity 2.12. Review literature, data gaps and successful models of community-level illegal wildlife trade tracking prior to initiating discussion with community leaders (2.13)		Partially completed. Baseline information on wildlife trade and natural resource utilisation gathered through the household survey (Annex 22, 24). SOP dedicated to illegal activities developed. Highly sensitive topic (protein sources are limited and there is a cultural preference for wild meat) so discussion with community leaders has been slow to progress.
Activity 2.13. Discuss with community leaders on an informal system for collection of information about community involvement in wildlife trade, linked to governance structures for both GRs and CMA and issues emerging as a result of Activity 3.1		Limited progress. As Activity 2.12

Project summary	Measurable Indicators	Progress and Achievements
Activity 2.14. Centralise both qualitative and quantitative information and review data to inform patrol routes (linked with Activity 2.6)		As Activity 2.6
Activity 2.15. Share findings sensitively and periodically with government and local and international civil society partners to inform increasing body of knowledge on IWT especially from under-studied areas		As Activity 2.8
Activity 2.16. Provide advice to government counterparts on the protocols for handling confiscated meat, in line with national wildlife regulations		Partially completed. Training on the handling of seized wild meat and live animals provided (Annex 20). Questionnaire to collect market and trade data of wild meat and live animals designed but WLS has been slow to implement data collection. Further efforts impacted by Covid-19 restrictions.
<p><b>Output 3.</b> Livelihoods activities appropriate to existing local norms and constraints to wellbeing are strengthening the assets of 900 people (150 households) against external shocks</p>	<p>3.1 Information on cultural and non-cultural practices of communities around hunting and natural resource use is available by end of Y1</p> <p>3.2 By the end of Y2, 150 households have plans in place to mitigate wildlife impact on household assets</p> <p>3.3 75% of households with a wildlife impact mitigation plan report a decrease in the number of incidents by project end</p> <p>3.4 By end of Y2, 150 households are engaged in assets development strategies (e.g. agriculture or animal husbandry) according to the results of 3.1.</p> <p>3.5 By project end 75% of households in receipt of assets development support report a positive change in wellbeing</p>	<p>See Section 3.1:</p> <p>3.1 Baseline household survey (Annex 22) combined with Participatory Rural Appraisal (Annex 23) provided information on cultural and non-cultural practices of communities around hunting and natural resource use</p> <p>3.2 Strategies to address human-wildlife conflict were integrated into asset development strategies (see 3.4)</p> <p>3.3 BK: respondents reporting that animals raided / destroyed current crops and stored food in the past year dropped from 95.6% to 91.4% (Annex 24).</p> <p>3.3 BGG: respondents reporting that animals raided / destroyed current crops and stored food in the past year dropped from 82.3% to 79.1% (Annex 24)</p> <p>3.4 309 households (134M:175F) have been supported to engage with asset development strategies (Annex 25)</p> <p>3.5 BK: the majority of respondents (50.8%) said that their wellbeing was good and the majority (68%) said that it had stayed the same over the last year (Annex 24)</p> <p>3.5 BGG: the majority of respondents (69.8%) said that their wellbeing was bad and the majority (53.3%) said that it had deteriorated over the last year (Annex 24)</p>

Project summary	Measurable Indicators	Progress and Achievements
Activity 3.1. Finalise socio-economic baseline design with local partners, building on existing knowledge of communities		Completed. Baseline household survey (Annex 22) undertaken. Survey included 7 modules, focusing on themes including: human-wildlife conflict, natural resource use, cultural practices, market access and youth and male/female dynamics.
Activity 3.2. Undertake socio-economic baseline assessment at the household level focusing on key themes of human-wildlife conflict, natural resource use, specifically hunting, cultural practices, market access and youth and male/female dynamics		Completed. As Activity 3.1. Earlier Participatory Rural Appraisal (Annex 23) also drawn from.
Activity 3.3. Research human-wildlife conflict mitigation methods involving identified problem species to assess successful/non-successful methods		Completed. As Activity 3.2
Activity 3.4. Work with individual households to decide practical plans and provide equipment and advice to tackle impact of wildlife on household assets		Completed. 57% of household survey respondents reported doing nothing to prevent/mitigate crop raiding. 7% put some form of barrier and 21% prefer to chase the crop raiders away. Strategies incorporated into asset development strategies (Annex 25)
Activity 3.5. Advise government counterparts on developing clear regulations for mitigating and compensating for human-wildlife conflict		Partially completed. Project activities and learning have been regularly communicated to Government partners (see Section 3.1)
Activity 3.6. Monitor impact of human-wildlife conflict mitigation on household assets and wellbeing		Completed. Impact of human-wildlife conflict assessed through baseline (Annex 22) and repeat (Annex 24) household survey. Qualitative monitoring by Caritas Austria / COD (Annex 25).
Activity 3.7. Support households to develop assets development strategies based on results of PRA and socio-economic baseline surveys (*note that if improvements to agricultural practices are noted as a key priority, the Farmer Field School model will be adopted, which will be able to incorporate environmental awareness raising and take-up of wildlife friendly practices – also linked to Activity 1.10 on channels for conservation messaging)		Completed. 309 households (134M:175F) have been supported to engage with asset development strategies (Annex 25)
Activity 3.8. Monitor impact of assets development support on household and community assets and wellbeing		Completed. Baseline (Annex 22) and repeated (Annex 24) household surveys completed. Qualitative monitoring by Caritas Austria / COD (Annex 25).

## Annex 3(a) Standard Measures

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

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

Code	Description	Total	Nationality	Gender	Title or Focus	Language	Comments
<b>Training Measures</b>							
1a	Number of people to submit PhD thesis						
1b	Number of PhD qualifications obtained						
2	Number of Masters qualifications obtained						
3	Number of other qualifications obtained						
4a	Number of undergraduate students receiving training						
4b	Number of training weeks provided to undergraduate students						
4c	Number of postgraduate students receiving training (not 1-3 above)						
4d	Number of training weeks for postgraduate students						
5	Number of people receiving other forms of long-term (>1yr) training not leading to formal qualification (e.g., not categories 1-4 above)						
6a	Number of people receiving other forms of short-term education/training (e.g., not categories 1-5 above)	92	South Sudanese	79M:13F	Training Measure: Number of people to receive trainings on Biodiversity Data Collection, threat monitoring, Protected Area Management, patrolling, etc.		

6a	Number of people receiving other forms of short-term education/training (e.g., not categories 1-5 above)	309 members equivalent to up to 309 house-holds	South Sudanese	134M:175 F	Training Measure: number of people/households to receive trainings on livelihood support, including agricultural practices and animal husbandry		
6b	Number of training weeks not leading to formal qualification	103			Training: Biodiversity Data Collection, threat monitoring, Protected Area Management, patrolling, etc. Worth noting that this is predominantly done through on the job training, hence specific figures are somewhat arbitrary		
7	Number of types of training materials produced for use by host country(s) (describe training materials)	6					
<b>Research Measures</b>		<b>Total</b>	<b>Nationality</b>	<b>Gender</b>	<b>Title</b>	<b>Language</b>	<b>Comments/ Weblink if available</b>
9	Number of species/habitat management plans (or action plans) produced for Governments, public authorities or other implementing agencies in the host country (ies)	36			Number of Standard Operating Procedures relating to species/habitat/protected area management to be produced for the Wildlife Authorities and Communities in South Sudan		Participatory process?
10	Number of formal documents produced to assist work related to species identification, classification and recording.						

11a	Number of papers published or accepted for publication in peer reviewed journals						
11b	Number of papers published or accepted for publication elsewhere						Location?
12a	Number of computer-based databases established (containing species/generic information) and handed over to host country	3					
12b	Number of computer-based databases enhanced (containing species/genetic information) and handed over to host country						
13a	Number of species reference collections established and handed over to host country(s)						
13b	Number of species reference collections enhanced and handed over to host country(s)						

Dissemination Measures		Total	Nationality	Gender	Theme	Language	Comments
14a	Number of conferences/seminars/workshops organised to present/disseminate findings from Darwin project work	32					
14b	Number of conferences/seminars/ workshops attended at which findings from Darwin project work will be presented/ disseminated.	10					

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

<b>Financial Measures</b>		<b>Total</b>	<b>Nationality</b>	<b>Gender</b>	<b>Theme</b>	<b>Language</b>	<b>Comments</b>
23	Value of additional resources raised from other sources (e.g., in addition to Darwin funding) for project work <i>(please note that the figure provided here should align with financial information provided in section 9.2)</i>						

## Annex 4(a) Aichi Targets

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

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

## Annex 5(a) Publications

Type * (e.g. journals, manual, CDs)	Detail (title, author, year)	Nationality of lead author	Nationality of institution of lead author	Gender of lead author	Publishers (name, city)	Available from (E.g. web link, contact address etc.)
Unexpected Achievements, Adapting and innovating in South Sudan	Darwin Initiative Newsletter	Ivan De Klee & Nicolas Tubbs, 2018	British	Male	Darwin Initiative	<a href="http://www.darwininitiative.org.uk/publications/newsletter">www.darwininitiative.org.uk/publications/newsletter</a>
Are aid groups ignoring South Sudan's climate crisis?	News Article	Sam Mednick, 2019	Canadian	Female	Devex	<a href="http://www.devex.com/news/are-aid-groups-ignoring-south-sudan-s-climate-crisis-95790">www.devex.com/news/are-aid-groups-ignoring-south-sudan-s-climate-crisis-95790</a>
You (Yes, You) Can Help Scientists Identify Wildlife In South Sudan	News Article	Christine Ro, 2019	Unknown	Female	Forbes	<a href="http://www.forbes.com/sites/christinero/2019/07/20/you-yes-you-can-help-scientists-identify-wildlife-in-south-sudan/#6a7de6f12acb">www.forbes.com/sites/christinero/2019/07/20/you-yes-you-can-help-scientists-identify-wildlife-in-south-sudan/#6a7de6f12acb</a>
South Sudan tries to protect wildlife after long conflict	News Article	Sam Mednick, 2019	Canadian	Female	New York Post, Washington Post, Associated Press (same article, several outlets)	<a href="https://nypost.com/2019/07/29/south-sudan-tries-to-protect-wildlife-after-long-conflict/">https://nypost.com/2019/07/29/south-sudan-tries-to-protect-wildlife-after-long-conflict/</a> <a href="http://www.washingtontimes.com/news/2019/jul/27/post-war-south-sudan-tries-to-protect-wildlife-fro/">www.washingtontimes.com/news/2019/jul/27/post-war-south-sudan-tries-to-protect-wildlife-fro/</a> <a href="https://apnews.com/d831355c52174fdc826375cc8235fdbd">https://apnews.com/d831355c52174fdc826375cc8235fdbd</a>
South Sudan's Sixth National Report to the Convention on Biological Diversity	Publication	South Sudan Ministry of environment (DRAFT, 2019)	South Sudanese	n/a	South Sudan Government, UN Environment, CBD, GEF	<a href="http://www.cbd.int/doc/nr/nr-06/ss-nr-06-en.pdf">www.cbd.int/doc/nr/nr-06/ss-nr-06-en.pdf</a>
South Sudan: latest images reveal a global hotspot for biodiversity	News Article	Nathan Williams, 2019	British	Male	FFI	<a href="http://www.fauna-flora.org/news/south-sudan-latest-images-reveal-global-hotspot-biodiversity">www.fauna-flora.org/news/south-sudan-latest-images-reveal-global-hotspot-biodiversity</a>
Mystery monkey Rare red colobus caught on camera in South Sudan	News Article	Tim Knight, 2020	British	Male	FFI	<a href="http://www.fauna-flora.org/news/mystery-monkey-rare-red-colobus-caught-camera-south-sudane">www.fauna-flora.org/news/mystery-monkey-rare-red-colobus-caught-camera-south-sudane</a>

Conflict cycles and the management of Protected Areas in South Sudan	News Article	Adrian Garside, 2021	British	Male	Conflict and Environment Observatory	<a href="https://ceobs.org/conflict-cycles-and-the-management-of-protected-areas-in-south-sudan/">https://ceobs.org/conflict-cycles-and-the-management-of-protected-areas-in-south-sudan/</a>
New protected area relieves pressure on primates and pangolins in South Sudan	News Article	Tim Knight, 2021	British	Male	FFI	<a href="http://www.fauna-flora.org/news/new-protected-area-relieves-pressure-primates-pangolins-south-sudan">www.fauna-flora.org/news/new-protected-area-relieves-pressure-primates-pangolins-south-sudan</a>

## Annex 6(a) Darwin Contacts

Ref No	25-002
Project Title	A model for conservation, stabilisation and development in South Sudan
<b>Project Leader Details</b>	
Name	Alison Mollon, FFI Director of Operations, Africa
Role within Darwin Project	Project Leader
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Fax/Skype	
Email	
<b>Partner 1</b>	
Name	Rob Beasley, Country Representative
Organisation	Caritas Austria
Role within Darwin Project	Supervising partner for livelihood and agricultural activities
Address	
Fax/Skype	
Email	
<b>Partner 2 etc.</b>	
Name	James Mabu, Executive Director
Organisation	Community Organisation for Development (COD)
Role within Darwin Project	Implementing partner livelihood and agricultural activities, under the supervision of Caritas Austria
Address	
Fax/Skype	
Email	

### Checklist for submission

	Check
<b>Is the report less than 10MB?</b> If so, please email to <a href="mailto:Darwin-Projects@itsi.co.uk">Darwin-Projects@itsi.co.uk</a> putting the project number in the Subject line.	X
<b>Is your report more than 10MB?</b> If so, please discuss with <a href="mailto:Darwin-Projects@itsi.co.uk">Darwin-Projects@itsi.co.uk</a> about the best way to deliver the report, putting the project number in the Subject line.	X
If you are submitting photos for publicity purposes, <b>do these meet the outlined requirements (see section 10)?</b>	X
<b>Have you included means of verification?</b> You should not submit every project document, but the main outputs and a selection of the others would strengthen the report.	X

<b>Do you have hard copies of material you need 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. However, we would expect that most material will now be electronic.	X
Have you involved your partners in preparation of the report and named the main contributors	X
Have you completed the Project Expenditure table fully?	X
Do not include claim forms or other communications with this report.	