

## Darwin Initiative Main Annual Report

To be completed with reference to the “Writing a Darwin/IWT Report” Information Note:  
(<https://www.darwininitiative.org.uk/resources-for-projects/reporting-forms-change-request-forms-and-terms-and-conditions/>).

It is expected that this report will be a **maximum** of 20 pages in length, excluding annexes)

**Submission Deadline: 30<sup>th</sup> April 2021**

### Darwin Project Information

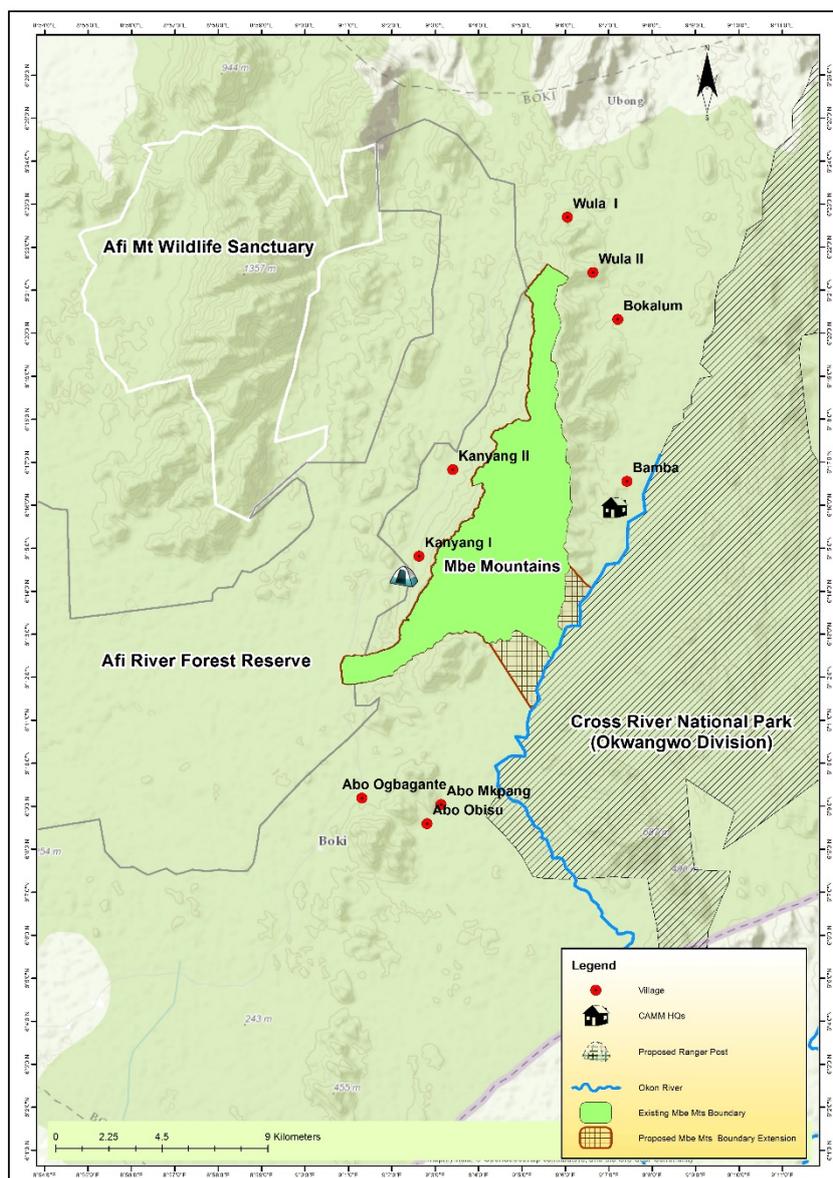
Project reference	24-001
Project title	Improving forest governance for Cross River gorillas and Nigerian farmers
Country/ies	Nigeria
Lead organisation	Wildlife Conservation Society
Partner institution(s)	1) Conservation Association of Mbe Mountains; 2) Cross River State Ministry of Climate Change and Forestry; 3) Cocoa Research Institute of Nigeria (CRIN); 4) Boki Local Government Area
Darwin grant value	£303,641
Start/end dates of project	1 April 2017
Reporting period (e.g. Apr 2020 – Mar 2021) and number (e.g. Annual Report 1, 2, 3)	April 2020 – March 2021 Annual Report 4
Project Leader name	Inaoyom Imong
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### 1. Project summary

The Cross River gorilla (CRG) is the most threatened ape in Africa, with a total remaining population of less than 300 individuals. Hunting for the bushmeat trade is the most significant direct threat to the species; although CRGs are protected in Nigeria, they are still occasionally killed by hunters when snares placed in the forest for smaller mammals inflict potentially fatal injuries. Given the small size of the remaining CRG population, the loss of even a few individuals to hunting represents a serious threat to the long-term survival of the species. Although many CRGs are found within formal protected areas such as national parks, approximately 100 CRGs (one-third of the remaining population) survive on community land that lacks any legal protection, such as the Mbe Mountains in Nigeria. In 2005, the nine communities surrounding the Mbe Mountains agreed to manage the landscape as a community wildlife sanctuary (though not yet formally recognised by the government) to protect its 25-30 resident gorillas and promote local development. The Mbe forest is critical to the livelihood of approximately 12,000 people living around Mbe. Farmers in the area traditionally clear small plots of forest each year to plant cash

crops; the deforestation rate within the landscape is 2.2% per annum (Okeke, 2013), among the highest anywhere in the world. Continued forest loss threatens local watersheds and livelihoods – through loss of water security, soil stabilization, and reduced resiliency to climate change – further exacerbating levels of rural poverty. Habitat loss and fragmentation also pose a serious threat to the forested corridor that currently links the Mbe Mountains to the adjacent Cross River National Park. If this corridor is destroyed and opportunities for natural dispersal are lost, the CRGs in the Mbe Mountains would become genetically isolated and their long-term survival will be unlikely.

The Mbe Mountains are located in southeast Nigeria close to the border with Cameroon. Rising to heights of 900 meters, they are a critical link between an increasingly isolated subpopulation of gorillas in the Afi Mountain Wildlife Sanctuary and those in the Okwangwo Division of Cross River National Park in Nigeria and other sites in Cameroon. Mbe is located within a recognized biodiversity hotspot of global significance that is home to many other endangered species such as the drill (*Mandrillus leucophaeus*) and the Nigeria-Cameroon chimpanzee (*Pan troglodytes ellioti*). Mbe currently lacks formal protection status. However, in 2005, the nine communities living around the mountain resolved to manage the area themselves for wildlife conservation. Since that time, WCS Nigeria has been working with the local people through the community-based Conservation Association of the Mbe Mountains (CAMM) and the Cross River State Forestry Commission (CRSFC) to set aside and manage a core area at the heart of the Mbe Mountains for the purposes of biodiversity protection.



**Map 1:** Location of the Mbe Mountains within the Cross River gorilla landscape in Nigeria

## 2. Project partnerships

On this project, WCS is partnering with the Conservation Association of Mbe Mountains (CAMM), the Cross River State Ministry of Climate Change and Forestry (MCCF), Cocoa Research Institute of Nigeria (CRIN), and the Boki Local Government Area (Boki LGA).

CAMM is playing the critical role of mobilizing the community buy-in and support for the project that is necessary for its sustainability. CAMM comprises of the nine communities that surround the Mbe Mountains and claim traditional ownership of the forest. CAMM has a governance structure that consists of General Assembly, Board of Trustees, Management Committee, and a Technical and Stakeholder Supervisory Group, with females represented in the different arms. This governance structure makes CAMM an ideal platform for engagement with the local communities given the representation of different interest groups. WCS has worked closely with CAMM this past four years to implement project activities including law enforcement, development and formalization of bylaws to protect the Mbe Mountains, legal gazettement of the Mbe conservation area, and training of men and women's groups in improved cocoa farming and bush mango collection, storage and marketing.

WCS is working with the MCCF on the process to officially recognize the Mbe Mountains as a community wildlife sanctuary. As the government agency with responsibility for the management of all forests within Cross River State, the MCCF is helping to facilitate engagement with the Cross River State Government on the gazettement process.

CRIN provided technical advice and support for cocoa and bush mango training.

WCS is working with Boki LGA and CAMM to develop and formalize bylaws to protect the Mbe Mountains.

## 3. Project progress

### 3.1 Progress in carrying out project Activities

#### **Output 1. Local farmers have been trained to increase efficiency of existing cocoa farms**

Based on feedback from farmers and field observations by the project staff, the project supported refresher training in certain areas for identified farmers requiring additional training during the reporting period. A total of 415 farmers were trained during this reporting period. Thirty farmers were trained in shade management techniques to improve survival rate of young trees, pollination, growth of pods, and reduce pest and animal infestation. A total of 197 farmers were trained in soil fertility management and forest fire prevention and management, while and 192 were trained in reduced use of harmful pesticides, highlighting the negative effects of chemical pesticides on biodiversity. In addition to training, 44,000 seedlings were distributed to 229 farmers (who all signed conservation contracts during the reporting period) to replant existing old farms to increase productivity. New cocoa nurseries were established with pods acquired from the Cocoa Research Institute of Nigeria (CRIN) to raise additional seedlings for distribution to farmers. We continued to map and monitor farms in the project area to reduce deforestation from cocoa farming.

#### **Output 2. Local women's groups and young men trained in improved bush mango collection, processing, storage and marketing.**

The project provided refresher training on sustainable harvesting of bush mango for the nine women's groups (one per community) established with support from the project, highlighting the dangers of poor practices such as felling trees to collect the fruits and disturbance to gorillas from human presence in core gorilla habitat when harvesting bush mango. The women were encouraged to only collect bush mango outside the core conservation area, emphasizing the importance of protected areas for biodiversity conservation including the importance of the Mbe Mountains to the conservation of the Cross River gorilla and other endangered wildlife. The women were also trained in proper drying and storage of bush mango seeds during the harvest season to improve quality and value for sale later when prices improve. To improve access to

market, the project supported the registration of nine women’s cooperatives (Table 1) with large markets in cities where prices are better. The project purchased and distributed 81 wheelbarrows to the women to facilitate transport of fresh bush mango fruits and the processed seeds. Additional 108 wheelbarrows, 108 tarpaulins and 180 rain boots were purchased for distribution to farmers.

**Table 1. Registered women’s bush mango cooperatives in the nine Mbe communities**

<b>Community</b>	<b>Name of registered cooperative</b>	<b>Number of members</b>
Bamba	Achi-Ote women bush mango cooperative	32
Bokalum	Future women bush mango cooperative	44
Wula-Mgba Eshuo	United women bush mango cooperative	68
Wula-Ekumpuo	Kejie bush mango cooperative	14
Abo Mkpang	Bufa Osowo women bush mango cooperative	32
Abo Obisu	Njore Osowo women bush mango cooperative	46
Abo Ogbagante	Kejie Nebale women bush mango cooperative	40
Kanyang I	Ejia-ebo women bush mango cooperative	30
Kanyang II	Kanyang women bush mango cooperative	32

**Output 3. Protection of the Mbe Mountains is enhanced and community land tenure secured through legal recognition of 127km<sup>2</sup> as a “Community Managed Wildlife Sanctuary”.**

Fieldwork for the survey and mapping of the Mbe Mountains conservation area was completed during this reporting period and data is now available to produce a certified boundary map of the conservation area as part of the process to gazette the area as a community wildlife sanctuary. Production and registration of the boundary map with the Cross River State government is however delayed because fieldwork took longer than planned to complete due to Covid-19 restrictions. Observing the Covid-19 protocols, the project also supported quarterly joint meetings of the General Assembly, Board of Trustees and Management Committee of CAMM, which discussed strategies to facilitate engagement with the Cross River State government on the gazette process. The meetings were also used to discuss other forest governance issues to improve the protection of the Mbe Mountains. All meetings observed approved Covid-19 protocols.

**Output 4. The effectiveness of law enforcement interventions of WCS and local communities is improved for Mbe Mountains ecosystem.**

The project continued to support 16 eco-guards to implement law enforcement patrols in the Mbe Mountains. This year, 120 anti-poaching patrols were completed by the eco-guards covering 4,642 km, a greater patrol effort compared to the previous year (107 patrols completed covering 4,179 km). The patrols led to the arrest of 23 offenders including nine hunters. All arrested offenders were reported to CAMM and were sanctioned (fines paid to CAMM). In addition to arrests, the patrols removed 3,709 wire snares from the forest and dismantled 16 camps used by hunters (Table 2). WCS provided refresher law enforcement training for the Mbe eco-guards in the field each month during patrols, including training in the use of SMART for data collection. Data from previous patrols and information collected from informants in surrounding communities was used to plan subsequent patrols, adapting patrol strategy to improve patrol effectiveness. Using SMART, we monitored patrol effort (kilometers walked and the number of patrol days completed), as well as hunting pressure through measuring encounter rate of signs such as wire snares, hunting camps, and empty shotgun shells discarded by hunters. Encounter rate of hunting signs such as wire snares, empty shotgun cartridges and gunshots heard decreased by 27% during this reporting period compared to the previous period (see Table 2). Gorillas were directly sighted on eight occasions during this reporting period, and 53 nest sites were observed. Average encounter rate of gorilla nest sites from inception of the project was 0.17 nest site per 10 kilometres walked, the same as the 2017 baseline encounter rate.

**Table 2. Comparison of encounter rate of hunting sign between 2019/2020 and 2020/2021.**

Sign	2019/2020		2020/2021	
	# of Observations	Encounter Rate/km	# of Observations	Encounter Rate/km
Gunshots heard	19	0.005	11	0.002
Wire snares	4,664	1.116	3,709	0.806
Empty cartridges	514	0.123	457	0.099
Hunting camps	13	0.003	16	0.003

### 3.2 Progress towards project Outputs

#### Outputs:

#### 1. Local farmers have been trained to increase efficiency of existing cocoa farms.

The project continued to make progress towards this output. During this reporting period, a total of 415 farmers received refresher training in improved practices to increase productivity of existing cocoa farms, bringing the total number of farmers (including >30% women) trained since inception of the project to 1,158. Based on feedback from farmers and field observations by the project staff, the training focused on shade management to improve survival of young cocoa trees, soil fertility management, and sustainable pest management methods (highlighting the dangers of using harmful chemical pesticides). The project also distributed 44,000 improved cocoa seedlings from nurseries developed by WCS to 229 farmers (who signed a conservation contract) to replant existing old and unproductive farms to improve their productivity and reduce deforestation from farm expansion. The seedlings planted are growing well, but have not yet started bearing fruits (the seedlings take 3-4 years to mature and bear fruits). Therefore, we are not able to measure and report the expected increase in average yield/farm compared to baseline at this time.

#### 2. Local women's groups and young men trained in improved bush mango collection, processing, storage and marketing.

The project supported refresher training of 500 women in the nine Mbe communities on sustainable bush mango harvesting, discouraging the felling of bush mango trees to collect fruits. The training highlighted the negative impact of human presence in core gorilla habitat on gorillas when harvesting bush mango, and promoted practices such as collecting only fallen fruits and limiting bush mango collection to areas outside core gorilla habitat. The women were also trained in processing and storage of bush mango seeds to improve quality. To improve access to market, the project supported the registration of nine women's cooperatives with large markets in cities where prices are better. Two stores were built for the groups to assist with storing of bush mango seeds during the harvest season for later sale when prices improve. To enhance ownership of the stores, the groups donated land and assisted with some labour. The groups were also provided with wheelbarrows and tarpaulins to facilitate transport and drying of bush mango seeds.

#### Output 3. Protection of the Mbe Mountains is enhanced and community land tenure secured through legal recognition of 127km<sup>2</sup> as a "Community Managed Wildlife Sanctuary".

The project continued to make progress towards improving the protection status of the Mbe Mountains and strengthening community land tenure through legal recognition of the site as a community managed wildlife sanctuary. Fieldwork for the survey and mapping of the Mbe Mountains conservation area was completed during this reporting period and data is now available to facilitate the production and registration of a boundary map of the area as part of the gazettelement process. However, as a result of the Covid-19 pandemic restrictions, fieldwork took longer than expected, consequently delaying the production and registration of the boundary map with the Cross River State government. The project continued to support the strengthening of CAMM through facilitating dialogue through quarterly joint meetings of the four organs of the association – the General Assembly, the Board of Trustees, the Management Committee, and the Technical Stakeholders Advisory Group. The meetings also provided a platform for

discussion and development of strategies to facilitate engagement with the Cross River State government on the gazettement process. The nine Mbe communities remain committed to the process for the legal recognition of the Mbe forest, which they have freely set aside for conservation (see letters of support attached).

**Output 4. The effectiveness of law enforcement interventions of WCS and local communities is improved for Mbe Mountains ecosystem.**

WCS continued to train and support 16 Mbe eco-guards to enforce community rules and regulations in the Mbe Mountains to protect Cross River gorillas and their habitat. Continuous training of the eco-guards by WCS staff has significantly improved their law enforcement capacity, thereby improving effectiveness of anti-poaching patrols. During this reporting period, the project supported 120 anti-poaching patrols of the Mbe Mountains that led to the arrest of 23 people including nine hunters. All arrested offenders were reported to CAMM and were sanctioned as a deterrent measure. The patrols also removed 3,709 wire snares from the forest and destroyed 16 hunting camps found. Gorillas were directly sighted on eight occasions during this reporting period, and 53 nest sites were observed. Average encounter rate of gorilla nest sites from inception of the project is 0.17 nest site per 10 kilometres walked (same as baseline encounter rate). New bylaws developed by CAMM with support from the project and endorsed by the Boki Local Government Council are helping to improve governance in the Mbe Mountains. The bylaws prohibit harmful activities such as hunting, farming inside the protected area, river poisoning for fishing, logging, indiscriminate use of fire for land clearance which causes forest fires, and unsustainable harvesting of non-timber forest products.

### **3.3 Progress towards the project Outcome**

WCS continued to support efforts by CAMM to improve the protected area status of the Mbe Mountains through official recognition of the area as a community wildlife sanctuary by the Cross River State Government, including support for boundary survey and mapping of the core conservation area. Fieldwork to collect data for the mapping of the area and marking of the boundary on the ground was completed during this reporting period, and data generated for the production of a map of the conservation area to be registered with the Cross River State government as part of the gazettement process. We continued to adaptively manage the patrol program in Mbe to improve patrol effectiveness and improve the protection of Cross River gorillas. Patrols during this reporting period led to the arrest of 23 people including nine hunters and destroyed 3,709 wire snares and 16 hunting camps. Encounter rate of hunting signs such as wire snares, empty shotgun cartridges and gunshots heard decreased by 27% during this reporting period compared to the previous period, an indication of the positive impact of the project. Because of these patrols, there continues to be no reports of gorillas killed in the Mbe Mountains. Average encounter rate of gorilla nest sites since inception of the project remained the same as the 2017 baseline, an indication of the positive impact of the project in addition to camera trap photos of a group of gorillas with several infants and young of different ages obtained in June 2020, which show that the population is healthy and reproducing. The project is contributing to the protection of the Mbe forest, with no net loss of forest detected since inception of the project. Analysis of historic deforestation over the Cross River gorilla landscape in Nigeria showed a decrease from 2.22% during 2000-2010 to 1.36% during the 2010-2018 period, with forest gain recorded in the Mbe Mountains in particular (Table 3). The project also continued to train and support cocoa farmers and women groups around Mbe to improve efficiency of existing farms and the sustainability and profitability of bush mango harvesting and marketing to increase income while reducing deforestation. Improved cocoa and bush mango seedlings provided to farmers and women for planting are growing well and will help increase productivity and income and reduce pressure on the forest. Support to women groups to improve bush mango storage and marketing has helped to increase their income from bush mango by over 20%, as they are now able to sell stored bush mango in large markets outside their communities (where they have been registered through supported from the project) long after the harvest season at better prices. Conservation contracts that cocoa farmers and bush mango beneficiaries signed with WCS and CAMM ensure that they respect the terms of agreement for support and continue to apply sustainable practices in cocoa farming and bush mango harvesting to reduce deforestation. Due to Covid-19 restrictions and consequent extension of the project duration, we will assess changes

in household wellbeing in year five to evaluate the impact of the project on wellbeing against baseline.

**Table 3: Assessment of deforestation in the Cross River Gorilla landscape.**

	Forest 1986 (ha)	Forest 2000 (ha)	Forest 2010 (ha)	Forest 2018 (ha)	Deforest. 86-00 (ha)	Deforest. 00-10 (ha)	Deforest. 10-18 (ha)	Ann. Def. 86-00 (%)	Ann. Def. 00-10 (%)	Ann. Def. 10-18 (%)
<b>Project Area</b>	176,869	174,658	139,470	124,980	2,211	35,188	14,490	0.09	2.22	1.36
<b>AMWS</b>	11,366	10,790	10,122	8,249	575	668	1,873	0.37	0.64	2.52
<b>ARFR</b>	29,218	28,991	26,231	24,172	227	2,760	2,059	0.06	0.99	1.02
<b>Mbe Mts.</b>	5,502	5,479	5,371	5,680	23	109	-309	0.04	0.19	-0.7
<b>Okwangwo</b>	63,767	63,448	61,831	61,076	319	1,616	755	0.04	0.27	0.15

Note: Mbe Mts. = Mbe Mountains, AMWS = Afi Mountain Wildlife Sanctuary, ARFR = Afi River Forest Reserve, Okwangwo = Okwangwo Division of Cross River National Park)

### 3.4 Monitoring of assumptions

**Assumption 1:** Benefits provided by improved cocoa techniques and sustainable bush mango collection, combined with effective law enforcement, are sufficient to influence local attitudes and behaviours towards CRG and their habitat.

**Comment:** This assumption remains valid, and will be confirmed in subsequent years of the project after benefits from improved cocoa techniques and sustainable bush mango collection begin to accrue, and their impact on the protection of the gorillas and forest in the Mbe Mountains can be evaluated against baseline.

**Assumption 2:** Communities and Cross River State Government are willing to embrace sustainable management of their forests for conservation purposes and there are no competing commercial interests such as logging or oil palm development.

**Comment:** This assumption is still considered valid and critical to the success of the project. No competing commercial interests witnessed to date

**Assumption 3:** Farmers actively and fully participate in and complete training

**Comment:** This assumption is still considered valid and critical to the success of the project. 1,158 farmers have been trained to date

**Assumption 4:** Weather conditions remain favourable for cocoa.

**Comment:** This assumption is still considered valid and critical to the success of the project. Average weather conditions have remained unchanged since inception of the project.

**Assumption 5:** Market price for cocoa remains favourable keeping buyers interested.

**Comment:** This assumption is still considered valid and critical to the success of the project. There has a yearly increase in the local market price of cocoa since inception of the project.

**Assumption 6:** Conservation contracts are socially accepted and provide sufficient incentive to protect the forest.

**Comment:** This assumption remains valid and critical to the success of the project. WCS is working with CAMM to enforce compliance with the conservation contracts.

**Assumption 7:** Bush mango value chain remains profitable for collectors and incentivizes forest protection.

**Comment:** This assumption is still valid and critical to the success of the project. We estimate that over 50% of the local population relies on bush mango for income. Increased profitability of the bush mango value chain will incentivize forest protection.

**Assumption 8:** Conservation contracts are socially accepted by women and young men and provide sufficient incentive to protect the forest.

**Comment:** This assumption is still considered valid and critical to the success of the project. Women and young men account for over 50% of cocoa farmers who have signed conservation contracts; 100% of the conservation contracts developed to improve the profitability and sustainability of bush mango harvesting have been signed by women.

**Assumption 9:** Government of Cross River State is willing to recognise customary rights and local land tenure.

**Comment:** This assumption is still considered valid and critical to the success of the project.

**Assumption 10:** Improved law enforcement is supported by local communities and maintains a net positive impact on local livelihoods.

**Comment:** This assumption is still considered valid and critical to the success of the project. Arrested offenders are sanctioned by the local communities, helping to reduce illegal activities in the Mbe Mountains.

**Assumption 11:** Community-created sanctions act as sufficient deterrent and reduce levels of illegal activity.

**Comment:** This assumption is still considered valid and critical to the success of the project.

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

The expected impact of this project is that Nigeria's Mbe Mountains ecosystems are effectively conserved, providing critical, connected habitat for the recovery of critically endangered Cross River Gorillas and sustainable livelihoods for local communities. The Mbe Mountains are part of the rainforests of Cross River, a globally recognized biodiversity hotspot with high levels of species richness and endemism, with over 64 species of reptiles, 61 species of amphibians, 54 species of fish, 18 primates and about 1,570 plant species, many of which are globally threatened. This project is contributing to biodiversity conservation through improving the protection of the Mbe forest and its gorillas. The project is also contributing to human development and wellbeing through the provision of benefits to surrounding communities from improved cocoa productivity and increased income from bush mango, as well as watershed protection.

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

Activities implemented under this project contribute to the following six SDGs: (1) End poverty in all its forms everywhere; (2) End hunger, achieve food security and improved nutrition and promote sustainable agriculture; (5) Achieve gender equality and empower all women and girls; (6) Ensure access to water and sanitation for all; (13) Take urgent action to combat climate change and its impacts; (15) Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss. The project contributes to SDGs 1, 2, and 5 by supporting sustainable agriculture and increasing benefits from forest products, focusing on women. By improving the protection of the Mbe Mountains, the project is contributing to SDGs 6, 13, and 15.

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

This project is supporting the government of Nigeria to meet its obligations towards the Convention on Biological Diversity (Goals A, B, C, D and E). The project is also contributing to Aichi Targets 1, 5, 7, 11, 12, 14 and 18. The project is contributing to Aichi Target 5 by improving outputs from existing cocoa farms to reduce the need to clear new farms, thereby reducing deforestation and forest fragmentation. The project is working with communities to sustainably manage a forest buffer zone around the wildlife sanctuary to achieve Target 7. Official recognition of the Mbe Mountains as a community-managed wildlife sanctuary will contribute to Nigeria's protected areas system, helping to achieve Aichi Target 11. The project is also contributing to Target 12 by improving the protection of the wildlife sanctuary to reduce bushmeat hunting and improve the conservation of threatened species including the Cross River gorilla (Critically Endangered), Nigeria-Cameroon chimpanzee and the drill monkey (both Endangered). Supporting community-led protection of the Mbe Mountains and surrounding buffer zone is contributing to the maintenance of traditional knowledge and ecosystem services, thereby contributing to Aichi Targets 14 and 18. The project has continued to interact with the CBD and CITES focal points in Nigeria.

## 6. Project support to poverty alleviation

The project directly benefits 3,000 men and women in communities around Mbe through training and support for improved cocoa production and bush mango harvesting, storage and marketing. In addition to training, the project provides improved cocoa seedlings to farmers to replant existing farms to increase productivity and income thereby contributing poverty alleviation among farmers. Women who have been trained in sustainable bush mango harvesting have also been provided with improved bush mango seedlings to plant on their farms to increase production and reduce dependence on the forest. The project also supports women to form cooperatives to improve their access to larger markets and increase income from better prices. In addition, by protecting the Mbe forest the project contributes to safeguarding the livelihoods of over 1,500 rural households living around the Mbe Mountains who depend on the forest for food and water.

## 7. Consideration of gender equality issues

The project design takes into account the understanding that the governance system in the project area tends to marginalize women. If conservation of the Mbe Mountains is to be successful, then all groups, particularly women who use forest resources for daily household needs, must be engaged in forest governance. The project is working to ensure that women are actively and adequately involved in the livelihood activities implemented. For example, the bush mango training and support focuses mainly on women. Women are also considered in the training and support for improved cocoa production provided by the project. The project also supports youths, a major group involved in cocoa farming in the area.

## 8. Monitoring and evaluation

- We monitored progress of the project based on the following key indicators (there were no changes to the M&E plan during this reporting period). WCS is responsible for the M&E work on this project and shares information with partners and stakeholders via quarterly and annual reports.
- **Status of gorillas**
- To monitor the status of gorillas we collected and analysed data on the number of gorilla nest sites per km walked each month. We will continue to collect this data annually and compare results to baseline at the end of the project to evaluate project impact.
- **Status of forest cover within the corridor**
- We are collecting and analysing land cover data to monitor rates of deforestation in the Mbe conservation area. We expect a zero net loss of forest within the corridor area and a deforestation rate not greater than 50% in the buffer zone if the project is successful.

- **Capacity of farmers and NTFP collectors**
- We are monitoring cocoa farmers and women trained under this project to assess how they apply the skills acquired to sustainably produce cocoa and increase income from more efficient cocoa farming and bush mango collection and marketing.
- **Household well-being**
- A Basic Necessities Survey was conducted in year 1 to establish a baseline of the level of wellbeing against which to monitor project progress annually and evaluate impact at the end of the project. At the end of the project we expect a 10% increase in household wellbeing due to improved cocoa production and bush mango collection, processing and marketing.
- **Protected area status of the Mbe Mountains**
- We are monitoring progress on the process to legally gazette the Mbe Mountains as a community wildlife sanctuary. Success will be indicated by official recognition of the Mbe Mountains as community-managed wildlife sanctuary by the Cross River State Government by the end of the project.
- **Improved bylaws and governance**
- WCS continued to monitor the development of bylaws for the Mbe Mountains by CAMM and their official endorsement by the Boki LGA. Development of the bylaws and ratification was successfully completed.

## 9. Lessons learnt

Covid-19 restrictions affected our ability to implement certain conservation activities as planned during this reporting period. However, WCS responded by developing guidelines and protocols that included an extensive set of recommendations and measures directed to all staff and also our partners that allowed us to continue project implementation (cautiously and at a slower pace) without increasing the risk of Covid-19 to project staff and the communities that we work with. CAMM remained a critical partner on this project, providing a valuable platform for engaging with the communities and ensuring their buy-in and support of the project. With high local demand, acquiring improved cocoa seedlings continued to be a challenge, the project's good working relationship with CRIN allowed to overcome the challenge and provide improved cocoa seedlings to farmers. We also raised cocoa nurseries ourselves using seeds from CRIN rather than relying on buying all the required seedlings. These lessons have helped us to adaptively manage the project and we will build these lessons into our future work.

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

### Comments and queries on year 3 annual report:

*1. Report progress made towards outputs and outcomes against output and outcome level indicators. See comment in Section 4.2 and 4.3 of this report.*

Progress towards outputs and outcomes is reported against output and outcome level indicators in the report.

*2. Provide additional information / support documentation of some of the activities undertaken such as:*

*(a) Number and names of the mango cooperatives that have been formed through the support of the project.*

Names of the nine bush mango cooperatives formed through the support of the project have been provided (see Table 1).

*(b) The map produced following the surveying and mapping of the proposed Community Managed Wildlife Sanctuary in readiness for the gazettment of the Sanctuary and community commitment towards this process.*

The letters of support and commitment to the gazette process provided by the nine Mbe communities are included as Annex I to the report.

*(c) Bylaws for improved governance of Mbe Mountains. See comments in Section 4.1 and 4.2 of this report.*

Update on the bylaws produced for improved governance of Mbe Mountains is provided in the report. A copy of the bylaws to be submitted with the report as an attachment.

*3. Include an analysis of data collected through monitoring to show the progress the project is making towards impact, e.g., analysis of data collected on gorilla nest sites and forest cover change over time mentioned in the report. See comment in Section 9 of this report.*

Analysis of data collected on gorilla nest sites and hunting, as well as forest cover change is presented in the report demonstrating progress towards impact.

*4. In relation to COVID-19;*

*(a) Provide details of measures the project has taken in relation to health and safety of project staff and beneficiaries in relation to COVID-19.*

*(b) Evaluate the activities that may be affected by COVID-19 and review the current work plan and project logframe including output and outcome indicators where necessary make a Change Request to DEFRA.*

Details of measures taken to safeguard the health and safety of project staff and beneficiaries during COVID-19 are presented in the report (see below and Annex III) and relevant documents provided as attachments to the report.

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

The Covid-19 global pandemic affected our ability to implement some project activities, consequently delaying progress towards the respective outputs. In particular, Covid-19 reduced our ability to work with farmers and women's groups on improving cocoa and bush mango productivity and marketing, as well as with CAMM and the government agencies involved in the gazette process, thereby delaying progress.

## **12. Sustainability and legacy**

The Mbe Mountains is an important site for biodiversity conservation in Nigeria – one of only three gorilla sites in Nigeria, and home to the endangered Nigeria-Cameroon chimpanzee, drill, and other threatened wildlife such as forest elephant, pangolin, and the critically endangered slender-snouted crocodile. There is growing interest from both the Federal Government of Nigeria and the Cross River State Government in the conservation of the Mbe Mountains. CAMM which manages Mbe is legally registered with the Corporate Affairs Commission of Nigeria, and the Cross River State Government, through the Ministry of Climate Change and Forestry and the Cross River State Forestry Commission, has supported conservation efforts in Mbe for a number of years.

Activities implemented under this project are shared on the WCS website at: <https://nigeria.wcs.org/>; and on Facebook: <https://www.facebook.com/CRgorilla/>, and Twitter: [https://twitter.com/WCS\\_Nigeria](https://twitter.com/WCS_Nigeria) to promote the project. The project enjoys the full support of the Mbe communities. Voluntary donation of community land inside the Mbe Mountains conservation area to CAMM is evidence of the communities' interest and support for the project. Each of the nine Mbe communities has signed a letter (see annex 1) confirming the donation of land in the Mbe Mountains to CAMM for biodiversity conservation to support the gazette process.

The proposed exit strategy for the project remains valid. Training farmers to produce cocoa sustainably while increasing efficiency, and training and support for women to increase income from bush mango equips the communities with skills to improve agricultural productivity, increase income generation from non-timber forest products and improve wellbeing. Importantly,

relationships established between CAMM and CRIN during this project will facilitate continuity and access to farmer training support beyond this project's endpoint. It promotes cocoa and bush mango value chain development that will improve income generation. The legal gazettement of the Mbe Mountains as a community-managed wildlife sanctuary, together with formalization of bylaws and capacity building of CAMM during this project, will enhance protection of Cross River gorillas and the Mbe forest, securing long-term benefits from the project. WCS remains committed long-term to the Cross River gorilla landscape and the Mbe Mountains. WCS will maintain targeted support to CAMM to manage the Mbe Mountains for conservation and alleviation of poverty long after the end of the project to ensure its impact endures long term.

### **13. Darwin identity**

Darwin Initiative funding for this project is acknowledged in monthly, quarterly, and annual reports shared with partners and stakeholders in the region and publicly on the WCS website and social media platforms. The Darwin Initiative logo has been used in workshop presentations to acknowledge and promote Darwin funding.

The UK Government's contribution to this project through the Darwin Initiative funding is recognised. Darwin Initiative funding for this project is acknowledged in quarterly and annual reports shared with partners and stakeholders in the region and publicly on the WCS website and social media platforms. The Darwin Initiative logo has been used in workshop presentations to acknowledge and promote Darwin funding.

This project forms part of a larger ongoing conservation programme aimed at protecting Cross River gorillas and tropical rainforest in the Mbe Mountains. Funding from the Darwin Initiative is complemented by funding from other sources.

There is considerable level of understanding of the Darwin Initiative Funding in Nigeria among government agencies, NGOs and local communities based on their involvement in past and current Darwin Initiative funded projects. For example, a Darwin Initiative funded bushmeat research project in Cross River State implemented from 2001 to 2002 involved government agencies such as the Nigeria National Park Service and the Cross River State Forestry Commission, as well as numerous local communities and local conservation NGOs. Another ongoing Darwin Initiative funded project focusing on illegal wildlife trade in Nigeria involves the Nigeria Customs Service, the Nigeria Environmental Standards Regulatory Agency and local NGOs.

WCS shares activities implemented in this project and promotes the project via the WCS website: <https://nigeria.wcs.org/>; and on our Facebook: <https://www.facebook.com/CRgorilla/> and Twitter: [https://twitter.com/WCS\\_Nigeria](https://twitter.com/WCS_Nigeria).

### **14. Impact of COVID-19 on project delivery**

Although we were able to maintain full support for essential law enforcement patrols, Covid-19 affected our ability to implement project activities such our education and awareness campaign and support for alternative livelihood which require substantial direct interaction (meetings) with communities (e.g., work with cocoa farmers and women's groups). It also delayed progress on the gazettement process with CAMM and the various government agencies involved in the process. To reduce the risk of Covid-19 to the communities where work and other partners, we suspended all education and livelihood support work as well as certain aspects of the gazettement process for a number of months beginning from April consequently slowing down progress in those aspects of the project. In response to the pandemic, WCS developed guidelines and directives that included an extensive set of recommendations and measures directed to all staff and also our partners, with the objective of contributing effectively to the global effort to slow down and stop the spread of Covid-19. These guidelines and measures were adapted and adopted as country specific Covid-19 Response Action Plans in March and revised in July (see attached). The plans take into account the guidance of the WHO, best practices identified around the world, and measures and directives taken by the national government to fight the pandemic and aim to protect the health and safety of WCS staff and their families and our partners. The country plan is designed to reduce health risks and to allow us to continue our

mission, which aims to conserve natural habitats and wild fauna around the world. These action plans take into account a series of Covid-19 potential scenarios and are updated and adapted according to the evolution of the situation in each country. As part of efforts to create awareness of Covid-19 and generate support for biodiversity conservation during the pandemic, WCS Nigeria organized a webinar titled “*Biodiversity and Covid-19: Can We Prevent Future Outbreaks?*” in collaboration with the European Union to commemorate world environment day 2020. Over 400 people from 51 different countries registered online for the webinar and approximately 200 people participated during the event itself. See report attached. Following careful evaluation of the local Covid-19 situation in Cross River State, we were able to restart education and livelihood support to local communities following a detailed protocol developed for implementing activities in communities (see protocol attached).

Development of a Covid-19 action and protocols allowed us to gradually restart all project activities and continue to implement law enforcement actions to reduce wildlife poaching and interaction between humans and wildlife while also intensifying awareness within the local population, thereby helping to reduce the risk of future pandemics. The webinar that we organized to create awareness of Covid-19 proved to be an effective way to reach large audiences and we will use the experience to organized similar meetings and outreach programs in the future.

**15. Safeguarding**

Please tick this box if any safeguarding or human rights violations have occurred during this financial year.

If you have ticked the box, please ensure these are reported to [ODA.safeguarding@defra.gov.uk](mailto:ODA.safeguarding@defra.gov.uk) as indicated in the T&Cs.

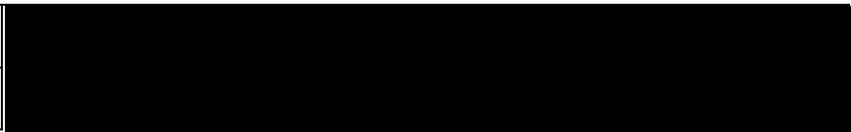
WCS has a Code of Conduct for staff and is developing a safeguarding policy to ensure that the rights of all project stakeholders including communities and individual beneficiaries are adequately protected.

**16. Project expenditure**

**Table 1: Project expenditure during the reporting period (1 April 2020 – 31 March 2021)**

Project spend (indicative) since last annual report	2020/21 Grant (£)	2020/21 Total Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)	£	£		
Consultancy costs				
Overhead Costs				
Travel and subsistence				
Operating Costs				
Capital items (see below)				
Monitoring & Evaluation (M&E)				
Others (see below)				

<b>TOTAL</b>



## Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2020-2021

Project summary	Measurable Indicators	Progress and Achievements April 2020 - March 2021	Actions required/planned for next period
<p><b>Impact</b></p> <p>Critically endangered Cross River gorillas protected by providing economic incentives (through improved livelihoods) and governance incentives (through land tenure) for rural communities to improve conservation and governance of a community-managed protected area – Nigeria’s Mbe Mountains - and a critically important adjacent forests.</p>		<p>Fieldwork for the boundary survey and mapping of the Mbe Mountains conservation area was completed during this reporting period, with data collected to produce a map of the conservation area to be registered with the Cross River State government as part of the gazettelement process. Patrols during this reporting period led to the arrest of 23 people including nine hunters and destroyed 3,709 wire snares and 16 hunting camps. There were no reports of gorillas killed in the Mbe Mountains, and there has been no net loss of forest. The project also continued to train and support cocoa farmers and women groups around Mbe to improve efficiency of existing farms and the sustainability and profitability of bush mango harvesting and marketing to increase income and reduce levels of poverty while reducing deforestation.</p>	
<p><b>Outcome</b></p> <p>Critical habitat for Cross River gorillas in the Mbe Mountains is legally recognized and effectively co-managed, to benefit 12,000 people from improved cocoa production, bush mango harvesting and watershed protection.</p>	<ol style="list-style-type: none"> <li>1) No decrease in gorilla nest counts per km and a 10% increase in the area occupied by gorillas in the Mbe Mts by end of Y4 as compared to baseline;</li> <li>2) By end of Y4, there has been no net loss of forest within the corridor and rate of forest loss in the buffer zone decreases by 30%;</li> <li>3) By the end of Y4, household wellbeing indices increase by 10% due to improved cocoa production and bush</li> </ol>	<p>WCS continued to support efforts by CAMM to improve the protected area status of the Mbe Mountains through official gazettelement of the area as a community wildlife sanctuary by the Cross River State Government, including support for boundary survey and mapping of the core conservation area. Fieldwork to collect data for the mapping of the area and marking of the boundary on the ground was completed during this reporting period, the results of which will be to produce a map of the conservation area registered with the</p>	<p>Continue to monitor progress on cocoa training and application of acquired knowledge and skills by farmers, and evaluate project impact.</p> <p>Continue to monitor progress and impact of bush mango training and application of acquired knowledge and skills by women’s groups, and evaluate project impact.</p> <p>Finalize the mapping of the Mbe Mountains conservation area and facilitate registration of the survey map</p>

	<p>mango collection compared to baseline established in Y1.</p>	<p>Cross River State government. We continued to adaptively manage the patrol program in Mbe to improve patrol effectiveness and improve the protection of Cross River gorillas. Patrols during this reporting period led to the arrest of 23 people including nine hunters and destroyed 3,709 wire snares and 16 hunting camps. Because of these patrols, there continue to be no reports of gorillas killed in the Mbe Mountains, there has been no net loss of forest. The project also continued to train and support cocoa farmers and women groups around Mbe to improve efficiency of existing farms and the sustainability and profitability of bush mango harvesting and marketing to increase income while reducing deforestation. Improved cocoa and bush mango seedlings provided to farmers and women for planting are growing well and will help increase productivity and income and reduce pressure on the forest. Support to women groups to improve bush mango storage and marketing has helped to increase their income from bush mango by over 20% as evidenced by the sales reported by the women. Conservation contracts signed between WCS, CAMM and farmers ensure that cocoa farmers and bush mango beneficiaries respect the terms of agreement for support and continue to apply sustainable practices in cocoa farming and bush mango harvesting to reduce deforestation.</p>	<p>with the Cross River state government as part of the gazettement process.</p> <p>WCS produces and shares monthly, quarterly and annual patrol reports with CAMM, Boki LGA, MCCF, and other stakeholders.</p> <p>WCS monitors progress on law enforcement and evaluates impact.</p>
<p><b>Output 1.</b> Local farmers have been trained to increase efficiency of existing cocoa farms.</p>	<p><b>1.1</b> By the end of Y2, 2,500 farmers (at least 30% women) trained in improved cocoa production.</p>	<p>The project continued to make progress towards this output. During this reporting period, a total of 415 farmers received refresher training in improved practices to increase productivity of existing cocoa farms, bringing the total trained to date to 1,158 farmers. Based on feedback from farmers and field observation by the project staff the training focused on shade management to improve survival of</p>	

	<p><b>1.2</b> By the end of Y4, the average cocoa yield/farm increases 10% from baseline established in Y1.</p>	<p>young cocoa trees, soil fertility management, and sustainable pest management methods (highlighting the dangers of using harmful chemical pesticides). The project also distributed 44,000 improved cocoa seedlings from nurseries developed by WCS to 229 farmers to replant existing old and unproductive farms to improve their productivity and reduce deforestation from farm expansion.</p>
<p>Activity 1.1 WCS and CAMM visit target communities and hold meetings to introduce project.</p>	<p>This activity was implemented in Year 1. WCS and CAMM organized consultation meetings with the nine Mbe communities to introduce the project.</p>	
<p>Activity 1.2. WCS and CAMM identify and select cocoa farmers from each of the nine Mbe communities to participate in Farmer Field Schools and receive training in improved cocoa farming; identify contact person(s) in each community to assist with organising farmers; identify suitable demonstration farms.</p>	<p>This activity was implemented in Year 1. Individual farmers were identified in each community for cocoa training and support.</p>	
<p>Activity 1.3. WCS, CRIN and CAMM agree a schedule with farmers</p>	<p>WCS worked with CAMM, CRIN and the Cross River State Agricultural Development Agency to train farmers in improved farming techniques, and purchased improved cocoa seedlings from CRIN to supply to the trained farmers for replace old, unproductive cocoa trees on existing farms.</p>	
<p>Activity 1.4. WCS conducts a BNS survey in target communities to establish well-being baseline.</p>	<p>This activity was implemented in Year 1. A Basic Necessities Survey (BNS) was conducted to establish a well-being baseline for household in the Mbe communities. A total of 602 households were surveyed. Data were collected using the software <b>Miradi</b> on handheld input devices. The baseline established will allow future evaluation of the impact of the project. A baseline governance evaluation of CAMM has also been conducted using the Natural Resources Governance Tool (NRGT). The results are guiding support for capacity building training of CAMM to strengthen the group's authority and capacity to govern resources in the Mbe Mountains.</p>	

<p>Activity 1.5. WCS and CRIN establish Farmer Field Schools</p>	<p>Based on improved understanding of cocoa production in Mbe, we decided, upon requesting and obtaining approval, to extend project support to cocoa framers beyond training, and to include providing improved cocoa seedlings (early maturing and high yielding variety) to replace old, unproductive cocoa trees to increase productivity on existing farms to reduce the need to clear more forest each year to increase cocoa production.</p> <p>Originally, support to cocoa farmers focused only on training of farmers in improved farming practices using the Farmer Field School approach. This was planned to involve ongoing on-site training by consultant cocoa experts. The change in approach significantly reduced the number of trainings to be done as well as cost, allowing us to use the balance of funds budgeted for training to provide critical inputs such as improved, fast growing, and high-yielding cocoa seedlings to farmers.</p>	
<p>Activity 1.6. WCS, CAMM and farmers agree and sign conservation contracts</p>	<p>A conservation contract has been developed between WCS, CAMM and the farmers receiving support to ensure that the project delivers the desired impact and does not have negative impact on biodiversity conservation. All 229 farmers (including 30% women) supported with seedlings by the project have signed a conservation contract.</p>	
<p>Activity 1.7. CRIN conducts training on improved cocoa production through Farmer Field Schools, overseen by WCS.</p>	<p>Farmers have been trained in improved cocoa production, but the initial focus on Farmer Field School has changed. See activity 1.5 above.</p>	
<p>Activity 1.8. WCS monitors progress on cocoa training and application of acquired knowledge and skills by farmers, and evaluates impact.</p>	<p>WCS is monitoring cocoa farmers trained under this project to assess how they apply the skills acquired to sustainably produce cocoa and</p>	

		increase income from efficient cocoa farming.																					
<p><b>Output 2.</b> Local women's groups and young men trained in improved bush mango collection, processing, storage and marketing.</p>	<p><b>2.1</b> By the end of Y4, bush mango value chain is enhanced (from processing to sale) to increase profits for 500 women and young men.  <b>2.2</b> By the end of Y4, the average wellbeing indices per household benefitting from bush mango increases 10% from baseline established in Y1.  <b>2.3</b> By the end of Y4, Conservation contracts negotiated and signed with 500 women and young men.</p>	<p>The project has supported training of 500 women in the nine Mbe communities on sustainable bush mango harvesting, discouraging the felling of bush mango trees to collect the fruits. The training highlighted the negative impact on gorillas of human presence in core gorilla habitat when harvesting bush mango and promoted practices such as collecting fruits only from the ground and limiting bush mango collection to areas outside core gorilla habitat. The women were also trained in processing and storage of bush mango seeds to improve quality. To improve access to market, the project supported the registration of the women's cooperatives with large markets in cities where prices are better. Two stores were built for the groups to assist with storing of bush mango seeds during the harvest season for sale later when prices improve. The groups were also provided with wheelbarrows and tarpaulins to facilitate transport and drying of bush mango seeds.</p> <p><b>Table 1. Registered bush mango cooperatives in the nine Mbe communities</b></p> <table border="1"> <thead> <tr> <th>Community</th> <th>Name of registered cooperative</th> </tr> </thead> <tbody> <tr> <td>Bamba</td> <td>Achi-Ote women bush mango cooperative</td> </tr> <tr> <td>Bokalum</td> <td>Future women bush mango cooperative</td> </tr> <tr> <td>Wula-Mgba Eshuo</td> <td>United women bush mango cooperative</td> </tr> <tr> <td>Wula-Ekumpuo</td> <td>Kejie bush mango cooperative</td> </tr> <tr> <td>Abo Mkpang</td> <td>Bufa Osowo women bush mango cooperative</td> </tr> <tr> <td>Abo Obisu</td> <td>Njore Osowo women bush mango cooperative</td> </tr> <tr> <td>Abo Ogbagante</td> <td>Kejie Nebale women bush mango cooperative</td> </tr> <tr> <td>Kanyang I</td> <td>Ejia-ebo women bush mango cooperative</td> </tr> <tr> <td>Kanyang II</td> <td>Kanyang women bush mango cooperative</td> </tr> </tbody> </table>	Community	Name of registered cooperative	Bamba	Achi-Ote women bush mango cooperative	Bokalum	Future women bush mango cooperative	Wula-Mgba Eshuo	United women bush mango cooperative	Wula-Ekumpuo	Kejie bush mango cooperative	Abo Mkpang	Bufa Osowo women bush mango cooperative	Abo Obisu	Njore Osowo women bush mango cooperative	Abo Ogbagante	Kejie Nebale women bush mango cooperative	Kanyang I	Ejia-ebo women bush mango cooperative	Kanyang II	Kanyang women bush mango cooperative	
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Activity 2.3. WCS provides training in improved bush mango collection, processing, storage and marketing; WCS and CAMM support women's		The project provided refresher training on sustainable harvesting of bush																					

<p>groups to identify accessible storage facilities and set up micro-enterprises.</p>	<p>mango for nine women's groups in Mbe, highlighting the dangers of poor practices such as felling trees to collect the fruits and disturbance to gorillas from human presence in core gorilla habitat when harvesting bush mango. The women were encouraged to only collect bush mango from outside the core conservation area, emphasizing the importance of protected areas for biodiversity conservation including the importance of the Mbe Mountains to the conservation of the Cross River gorilla and other endangered wildlife. Collecting only fruits that drop to the forest floor was encouraged, while discouraging felling trees to harvest fruits. As part of value addition, the women were also trained in proper drying and storage of seeds during the harvest season to improve quality and value for sale later when prices improve. To improve access to market, the project supported the registration of the women's cooperatives with large markets in cities where prices are better. The project purchased and distributed 81 wheelbarrows to the women to facilitate transport of fresh bush mango fruits and the processed seeds. Additional 108 wheelbarrows, 108 tarpaulins and 180 rain boots were purchased for further distribution.</p>	
<p>Activity 2.4. WCS monitors progress on bush mango training and application of acquired knowledge and skills by women's groups, and evaluates impact.</p>	<p>We continued monitoring women trained under this project to assess how they apply the skills acquired to increase income from bush mango.</p>	
<p><b>Output 3.</b> Protection of the Mbe Mountains is enhanced and community land tenure secured through legal recognition of</p>	<p><b>3.1</b> By the end of Y4, Mbe Mountains gazetted as a community wildlife sanctuary.</p>	<p>The project continued to make progress towards improving the protection status of the Mbe Mountains and strengthening community land tenure through legal recognition of the site as a community managed wildlife sanctuary. Fieldwork for the survey and mapping of the Mbe Mountains conservation area was completed during this reporting period and data is now available for the production and</p>

<p>127km<sup>2</sup> as a “Community Managed Wildlife Sanctuary”.</p>		<p>registration of a boundary map of the area as part of the gazettement process. The project continued to support the strengthening of CAMM through facilitating dialogue through quarterly joint meetings of three of the organs of the association. The meetings also provided a platform for discussion and development of strategies to facilitate engagement with the Cross River State government on the gazettement process.</p>
<p>Activity 3.1. WCS supports CAMM to launch the process for the official gazettement of the Mbe Mountains as a community wildlife sanctuary with the Cross River State Government; hold meetings with the MCCF and other relevant government agencies involved in the gazettement process to discuss progress.</p>	<p>Fieldwork for the survey and mapping of the Mbe Mountains conservation area was completed during this reporting period and data now available to produce a certified boundary map as part of the process to gazette the area as a community wildlife sanctuary. The project also supported quarterly joint meetings of the General Assembly, Board of Trustees and Management Committee of CAMM, which discussed strategies to facilitate engagement with the Cross River State government on the gazettement process. The meetings were also used to discuss other forest governance issues to improve the protection of the Mbe Mountains.</p>	
<p>Activity 3.2. WCS supports CAMM to follow up with the Cross River State Government to ensure legal endorsement of the Mbe Mountains as a community wildlife sanctuary.</p>	<p>WCS supported quarterly meetings of the General Assembly of CAMM to agree strategies to engage with the Cross River State Government in the gazettement process.</p>	
<p>Activity 3.3. WCS and CAMM support survey and official documentation of the area to be gazetted by the Cross River State Ministry of Lands and Housing.</p>	<p>Fieldwork for the survey and mapping of the Mbe Mountains conservation area was completed during this reporting period and data is now available for the production and registration of a boundary map of the area as part of the gazettement process.</p>	
<p><b>Output 4.</b> The effectiveness of law enforcement interventions of WCS and local</p>	<p><b>4.1</b> Regular patrols in the Mbe Mountains by WCS and CAMM reduces signs of poaching by 10% each year compared to Y1 baseline.</p>	<p>WCS continued to train and support 16 Mbe eco-guards to enforce community rules and regulations in the Mbe Mountains to protect Cross River gorillas and their habitat. Continuous training of the eco-guards has significantly improved their law enforcement capacity, consequently improving effectiveness of anti-poaching</p>

<p>communities is improved for Mbe Mountains ecosystem.</p>	<p><b>4.2</b> New bylaws for improved governance of Mbe Mountains ratified by Boki LGA and MCCF.</p> <p><b>4.3</b> Governance scores of the Mbe Mountains in Y4 increases by 20% over Y1 baselines.</p>	<p>patrols. During this reporting period, the project supported 120 anti-poaching patrols of the Mbe Mountains that led to the arrest of 23 people including nine hunters. All arrested offenders were reported to CAMM and were sanctioned as a deterrent measure. The patrols also removed 3,709 wire snares from the forest and destroyed 16 hunting camps found.</p> <p><b>Table 1. Comparison of encounter rate of hunting sign between 2019/2020 and 2020/2021.</b></p> <table border="1"> <thead> <tr> <th rowspan="2">Sign</th> <th colspan="2">2019/2020</th> <th colspan="2">2020/2021</th> </tr> <tr> <th># of Observations</th> <th>Encounter Rate/km</th> <th># of Observations</th> <th>Encounter Rate/km</th> </tr> </thead> <tbody> <tr> <td>Gunshots heard</td> <td>19</td> <td>0.005</td> <td>11</td> <td>0.002</td> </tr> <tr> <td>Wire snares</td> <td>4,664</td> <td>1.116</td> <td>3,709</td> <td>0.806</td> </tr> <tr> <td>Empty cartridges</td> <td>514</td> <td>0.123</td> <td>457</td> <td>0.099</td> </tr> <tr> <td>Hunting camps</td> <td>13</td> <td>0.003</td> <td>16</td> <td>0.003</td> </tr> </tbody> </table>	Sign	2019/2020		2020/2021		# of Observations	Encounter Rate/km	# of Observations	Encounter Rate/km	Gunshots heard	19	0.005	11	0.002	Wire snares	4,664	1.116	3,709	0.806	Empty cartridges	514	0.123	457	0.099	Hunting camps	13	0.003	16	0.003
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<p>Activity 4.1. WCS trains CAMM eco-guards in SMART and implements monthly SMART-based anti-poaching patrols jointly with CAMM.</p>	<p>The project continued to support the 16 eco-guards to implement law enforcement patrols in the Mbe Mountains. This year 120 anti-poaching patrols were completed covering 4,642 km representing greater patrol effort compared to the previous year (107 patrols completed covering 4,179 km). The patrols led to the arrest of 23 offenders including nine hunters. All arrested offenders were reported to CAMM and were sanctioned by CAMM. In addition, the patrols removed 3,709 wire snares and dismantled 16 hunting camps (Table 1). WCS provided refresher law enforcement training for the Mbe eco-guards in the field each month during patrols, including training in the use of SMART for data collection. Data from previous patrols and information collected from surrounding communities was used to plan subsequent patrols, adapting patrol strategy to improve patrol effectiveness. Using SMART, we monitored patrol effort (kilometers walked and the number of patrol days completed), as well as hunting pressure through measuring encounter</p>																														

	rate of signs such as wire snares, hunting camps, and empty shotgun shells discarded by hunters. Encounter rate of hunting signs such as wire snares, empty shotgun cartridges and gunshots heard decreased during this reporting period compared to the previous period.	
Activity 4.2. WCS supports CAMM and Boki LGA to develop new bylaws for improved governance of Mbe Mountains that are ratified by MCCF.	WCS continued to monitor the development of bylaws for the Mbe Mountains by CAMM and their official endorsement by the Boki LGA. Development of the bylaws and ratification was successfully completed in 2020.	
Activity 4.3. WCS produces and shares monthly, quarterly and annual patrol reports with CAMM, Boki LGA, MCCF, and other stakeholders.	WCS produced monthly, quarterly and annual reports based on patrol data that are shared with CAMM and other stakeholders.	
Activity 4.4. WCS monitors progress on law enforcement and evaluates impact.	Using SMART, WCS monitored patrol effort (in terms of distance walked and the number of patrol days completed), as well as human threats through encounter rate of signs such as wire snares, hunting camps, and empty shotgun shells discarded by hunters. Information from previous patrols was used to plan subsequent patrols.	

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

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<b>Impact:</b> Nigeria's Mbe Mountains ecosystems are effectively conserved, providing critical, connected habitat for the recovery of critically endangered Cross River Gorillas and sustainable livelihoods for local communities.			
<b>Outcome:</b> Critical habitat for Cross River gorillas in Nigeria's Mbe Mountains is legally recognized and effectively co-managed, benefitting 12,000 people from improved cocoa production, bush mango harvesting and watershed protection	<p><b>0.1</b> By end of Y4, there has been no decrease in gorilla nest counts per km (baseline = 0.17 nest sites per 10 km during the period 2009-2014) and the area occupied by gorillas in the Mbe Mts increases by 10% compared to baseline established in Y1.</p> <p><b>0.2</b> By end of Y4, there has been no net loss of forest within the corridor and rate of forest loss in the buffer zone decreases by 30%.</p> <p><b>0.3</b> By the end of Y4, household wellbeing indices increase by 10% due to improved cocoa production and bush mango collection compared to baseline established in Y1.</p>	<p><b>0.1</b> Eco-guard patrol SMART reports and mapping.</p> <p><b>0.2</b> Analysis of Landsat 8 images.</p> <p><b>0.3</b> Basic Necessities Surveys (BNS) of the 9 communities surrounding Mbe Mountains.</p>	<p>Benefits provided by improved cocoa techniques and sustainable bush mango collection, combined with effective law enforcement are sufficient to influence local attitudes and behaviours towards CRG and their habitat.</p> <p>Communities and Cross River State Government are willing to embrace sustainable management of their forests for conservation purposes and there are no competing commercial interests such as logging or oil palm development.</p>
<b>Outputs:</b> 1. Local farmers have been trained to increase efficiency of existing cocoa farms.	<p><b>1.1</b> By the end of Y2, 2,500 farmers (at least 30% women) trained in improved cocoa production.</p> <p><b>1.2</b> By the end of Y4, the average cocoa yield/farm increases 10% from baseline established in Y1.</p>	<p><b>1.1</b> Training reports, training course attendance certificates.</p> <p><b>1.2</b> Socio-economic survey</p>	<p>Farmers participate in training actively and fully to the end.</p> <p>Weather conditions remain favourable for cocoa.</p> <p>Market price for cocoa remains favourable keeping buyers interested.</p> <p>Conservation contracts are socially accepted and provide sufficient incentive to protect the forest.</p>
2. Local women's groups and young men trained in improved bush mango collection, processing, storage and marketing.	<b>2.1</b> By the end of Y4, bush mango value chain is enhanced (from processing to sale) to increase profits for 500 women and young men.	<p><b>2.1</b> Training reports, training course attendance certificates.</p> <p><b>2.2</b> Socio-economic survey</p>	Bush mango value chain remains profitable for collectors and incentivizes forest protection.

	<p><b>2.2</b> By the end of Y4, the average wellbeing indices per household benefitting from bush mango increases 10% from baseline established in Y1.</p> <p><b>2.3</b> By the end of Y4, Conservation contracts negotiated and signed with 500 women and young men.</p>	<p><b>2.3</b> WCS and CAMM records</p>	<p>Conservation contracts are socially accepted by the women and young men and provide sufficient incentive to protect the forest.</p>
<p><b>3.</b> Protection of the Mbe Mountains is enhanced and community land tenure secured through legal recognition of 127km<sup>2</sup> as a “Community Managed Wildlife Sanctuary”.</p>	<p><b>3.1</b> By the end of Y4, Mbe Mountains gazetted as a community wildlife sanctuary.</p>	<p><b>3.1</b> Government gazette notice</p>	<p>Government of Cross River State willing to recognise customary rights and local land tenure.</p>
<p><b>4.</b> The effectiveness of law enforcement interventions of WCS and local communities is improved for Mbe Mountains ecosystem.</p>	<p><b>4.1</b> Regular patrols in the Mbe Mountains by WCS and CAMM reduces signs of poaching by 10% each year compared to Y1 baseline.</p> <p><b>4.2</b> New bylaws for improved governance of Mbe Mountains ratified by Boki LGA and MCCF.</p> <p><b>4.3</b> Governance scores of the Mbe Mountains in Y4 increases by 20% over Y1 baselines.</p>	<p><b>4.1</b> Monthly SMART reports.</p> <p><b>4.2</b> Boki Council records.</p> <p><b>4.3</b> Natural Resource Governance Tool (NRGT) scores.</p>	<p>Improved law enforcement supported by local communities and maintains a net positive impact on local livelihoods.</p> <p>Community-created sanctions act as sufficient deterrent and reduce levels of illegal activity</p>
<p><b>Activities</b> (each activity is numbered according to the output that it will contribute towards, for example 1.1, 1.2 and 1.3 are contributing to Output 1)</p> <p><b>1.1</b> WCS and CAMM visit target communities and hold meetings to introduce project</p> <p><b>1.2</b> WCS and CAMM identify and select cocoa farmers from each of the nine Mbe communities to participate in Farmer Field Schools and receive training in improved cocoa farming; identify contact person(s) in each community to assist with organising farmers; identify suitable demonstration farms</p> <p><b>1.3</b> WCS, CRIN and CAMM agree a schedule with farmers</p> <p><b>1.4</b> WCS conducts a BNS survey in target communities to establish well-being baseline.</p> <p><b>1.5</b> WCS and CRIN establish Farmer Field Schools</p> <p><b>1.6</b> WCS, CAMM and farmers agree and sign conservation contracts</p> <p><b>1.7</b> CRIN conducts training on improved cocoa production through Farmer Field Schools, overseen by WCS.</p> <p><b>1.8</b> WCS monitors progress on cocoa training and application of acquired knowledge and skills by farmers, and evaluates impact.</p>			

- 2.1** WCS and CAMM visit target communities and hold meetings to introduce project; identify and select women's groups from each of the nine Mbe communities to participate in training on improved bush mango collection, processing, storage and marketing; identify contact person(s) in each community to assist with organising women's groups for training.
- 2.2** WCS conducts a BNS survey in target communities to establish well-being baseline.
- 2.3** WCS provides training in improved bush mango collection, processing, storage and marketing; WCS and CAMM support women's groups to identify accessible storage facilities and set up micro-enterprises.
- 2.4** WCS monitors progress on bush mango training and application of acquired knowledge and skills by women's groups, and evaluates impact.
- 3.1** WCS supports CAMM to launch the process for the official gazettelement of the Mbe Mountains as a community wildlife sanctuary with the Cross River State Government; hold meetings with the MCCF and other relevant government agencies involved in the gazettelement process to discuss progress.
- 3.2** WCS supports CAMM to follow up with the Cross River State Government to ensure legal endorsement of the Mbe Mountains as a community wildlife sanctuary.
- 3.3** WCS and CAMM support survey and official documentation of the area to be gazetted by the Cross River State Ministry of Lands and Housing.
- 4.1** WCS trains CAMM eco-guards in SMART and implements monthly SMART-based anti-poaching patrols jointly with CAMM.
- 4.2** WCS supports CAMM and Boki LGA to develop new bylaws for improved governance of Mbe Mountains that are ratified by MCCF.
- 4.3** WCS produces and shares monthly, quarterly and annual patrol reports with CAMM, Boki LGA, MCCF, and other stakeholders.
- 4.4.** WCS monitors progress on law enforcement and evaluates impact.

## Annex 3: Standard Measures

**Table 1 Project Standard Output Measures**

Code No.	Description	Gender of people (if relevant)	Nationality of people (if relevant)	Year 1 Total	Year 2 Total	Year 3 Total	Year 4 Total	Total to date	Total planned during the project
6A	Training in bush mango propagation, processing, storage and marketing	Female	Nigerian	400	0	85	197	682	500
6B	Training in bush mango propagation, processing, storage and marketing	NA	NA	1	0	2	2	5	5
6A	Training of Mbe cocoa farmers to increase productivity of existing farms	Male and female	Nigerian	0	140	603	415	1,158	1,000
6B	Training of Mbe cocoa farmers to increase productivity of existing farms	NA	NA	0	8	8	8	24	24
12A	SMART law enforcement and wildlife monitoring database	NA	NA	1	1	1	1	1	1
12A	Database of household basic necessities and wellbeing of project target communities	NA	NA	1	1	1	1	1	1

**Table 2 Publications**

Title	Type (e.g. journals, manual, CDs)	Detail (authors, year)	Gender of Lead Author	Nationality of Lead Author	Publishers (name, city)	Available from (e.g. weblink or publisher if not available online)
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NA						
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**Annex 4 Onwards – supplementary material (optional but encouraged as evidence of project achievement)**

## Checklist for submission

	Check
<b>Is the report less than 10MB?</b> If so, please email to <a href="mailto:Darwin-Projects@ltsi.co.uk">Darwin-Projects@ltsi.co.uk</a> putting the project number in the Subject line.	yes
<b>Is your report more than 10MB?</b> If so, please discuss with <a href="mailto:Darwin-Projects@ltsi.co.uk">Darwin-Projects@ltsi.co.uk</a> about the best way to deliver the report, putting the project number in the Subject line.	no
<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.	yes
<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.	no
Have you involved your partners in preparation of the report and named the main contributors	yes
Have you completed the Project Expenditure table fully?	yes
Do not include claim forms or other communications with this report.	