

CCB MONITORING REPORT 2017 – 2020

NATURAL HIGH FOREST REHABILITATION PROJECT ON DEGRADED LAND OF KIBALE
NATIONAL PARK, UGANDA



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Project Title	Natural High Forest Rehabilitation Project on degraded land of Kibale National Park
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Project Location	Uganda, Kabarole district
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Project Lifetime	1st January 2009 to 31 December 2068
GHG Accounting Period	1st January 2009 to 31 December 2068; 60-year total period

Monitoring Period of this Report	01 March 2017 to 29 February 2020
History of CCB Status	Validation and first verification date: 26 November 2015 Second verification date: 23 June 2017 Undergoing 3rd verification.
Gold Level Criteria	Biodiversity: the project has planted 4,195 hectares since 1995 (170 hectares during this monitoring period) of forest that potentially develops into High Conservation Value Forest. The project has maintained the areas planted and regenerated since 1994, which have developed into a closed canopy forest, providing a habitat for important forest species. The forest has been established as part of the wider Kibale National Park landscape that holds High Conservation Value Forest. The number of tree species in the planted forests and the regeneration of climax species have both increased within the monitoring period.

Table of Contents

The page numbers of the table of contents below shall be updated upon completion of the report.

1	Summary of Project Benefits	4
1.1	Unique Project Benefits.....	4
1.2	Standardized Benefit Metrics	6
2	General	10
2.1	Project Goals, Design and Long-Term Viability	10
2.2	Stakeholder Engagement.....	13
2.3	Management Capacity	16
2.4	Legal Status and Property Rights	17
3	Climate.....	18
3.1	Net Positive Climate Impacts	18
3.2	Offsite Climate Impacts (Leakage).....	18
3.3	Climate Impact Monitoring	18
3.4	Optional Criterion: Climate Change Adaptation Benefits	18
4	Community	18
4.1	Net Positive Community Impacts	18
4.2	Other Stakeholder Impacts	21
4.3	Community Impact Monitoring	22
4.4	Optional Criterion: Exceptional Community Benefits	31
5	Biodiversity	32
5.1	Net Positive Biodiversity Impacts	32
5.2	Offsite Biodiversity Impacts.....	34
5.3	Biodiversity Impact Monitoring	34
5.4	Optional Criterion: Exceptional Biodiversity Benefits	45
6	Additional Project Implementation Information.....	46
7	Additional Project Impact Information.....	46

1 SUMMARY OF PROJECT BENEFITS

This section highlights some of this project's important benefits. Section 1.1 (Unique Project Benefits) should be aligned with a project's causal model and is specific to this project. Section 1.2 (Standardized Benefit Metrics) is the same quantifiable information for all CCB projects. This section does not replace the development of a project-specific causal model or the monitoring and reporting of all associated project-specific impacts (positive and negative) in Sections 2-5 of this document.

1.1 Unique Project Benefits

Outcome or Impact	Achievements during the Monitoring Period	Section Reference	Achievements during the Project Lifetime
1) Native forest planted and maintained	- The project has planted an area of 170 hectares - The project has protected 4,195 ha of planted forest and 2,593 ha of natural regeneration area - 184 km of internal and external firelines were slashed and maintained - A total of 343 fire patrolmen were deployed - no fire incidences in the project area	2.1,	- 4,195 ha planted and 2,593 naturally regenerated (since 1994) - 461 km of internal and external firelines were slashed (record since 2010) - >343 fire patrolmen were deployed (not recorded before 2017-2020 monitoring) - 9 fire incidences in the project area that affected 193 ha of planted forest (record since 2010)
2) Created and protected habitat for a variety of threatened wildlife species (such as red colobus, chimpanzee, African golden cat, etc.)		5.1	
3) Protection of forest ecosystem from exotic species in the park	- 97,956 exotic trees debarked. - <i>Lantana camara</i>: -5,643,630 m2 uprooted or slashed	5.1	- 169,574 exotic trees removed or debarked (records since 2008). - <i>Lantana camara</i>: - 6,438,000 m2 uprooted or slashed debarked (records since 2008)
4) Reduced Human Wildlife conflicts	- Established more than 10 km of new elephant trenches and maintained	4.1	- The project established more than 40 km of new elephant trenches and

	64 km of existing trenches along the park boundary where the project is situated. - Supported 3 community groups to plant and manage unpalatable crops (tea) along the park boundary		maintained 92 km of existing trenches along the park boundary where the project is situated. - Supported 3 community groups to plant and manage unpalatable crops (tea) along the park boundary
5) Protection of the park against poaching and overextraction of NTFP's	- Built ranger outpost at Kanyante. - Employed on average 2 rangers within the project. - 16 poachers were arrested (in the whole of Kibale NP) - 1,576 traps and snares were disabled (in the whole of Kibale NP) - On average 12 active Agreements (MOU) with communities for resource from the park - supported 2 households with establishment of woodlots (15,000 tree seedlings) - distributed 15,030 tree seedlings to farmers trained on agroforestry	4.1	- Built ranger outpost at Kanyante. - Employed on average 2 rangers within the project. - 52 poachers were arrested (in the whole of Kibale NP, records since 2011) - 2,462 traps and snares were discovered and disabled (in the whole of Kibale NP, with the exception of 2014-2017 data, which only includes traps from the project area; records since 2011) - On average 6 active Agreements (MOU) with communities for resource from the park (records since 2011) - supported 2 households with establishment of woodlots (15,000 tree seedlings) - distributed 15,030 tree seedlings to farmers trained on agroforestry

1.2 Standardized Benefit Metrics

Category	Metric	Achievements during Monitoring Period	Section Reference	Achievements during the Project Lifetime
GHG emission reductions & removals	Net estimated emission removals in the project area, measured against the without-project scenario	221,716 tCO ₂ e	3.1	1,413,161 tCO ₂ e
	Net estimated emission reductions in the project area, measured against the without-project scenario	0	n.a.	0
Forest ¹ cover	For REDD ² projects: Number of hectares of reduced forest loss in the project area measured against the without-project scenario	n.a.	n.a.	n.a.
	For ARR ³ projects: Number of hectares of forest cover increased in the project area measured against the without-project scenario	170 ha	5.1	4,195 ha
Improved land management	Number of hectares of existing production forest land in which IFM ⁴ practices have occurred as a result of the project's activities, measured against the without-project scenario	n.a.	n.a.	n.a.
	Number of hectares of non-forest land in which improved land management has occurred as a result of the project's activities, measured against the without-project scenario	n.a.	n.a.	n.a.
Training	Total number of community members who have improved skills and/or	644	4.1	746

¹ Land with woody vegetation that meets an internationally accepted definition (e.g., UNFCCC, FAO or IPCC) of what constitutes a forest, which includes threshold parameters, such as minimum forest area, tree height and level of crown cover, and may include mature, secondary, degraded and wetland forests (*VCS Program Definitions*)

² Reduced emissions from deforestation and forest degradation (REDD) - Activities that reduce GHG emissions by slowing or stopping conversion of forests to non-forest land and/or reduce the degradation of forest land where forest biomass is lost (*VCS Program Definitions*)

³ Afforestation, reforestation and revegetation (ARR) - Activities that increase carbon stocks in woody biomass (and in some cases soils) by establishing, increasing and/or restoring vegetative cover through the planting, sowing and/or human-assisted natural regeneration of woody vegetation (*VCS Program Definitions*)

⁴ Improved forest management (IFM) - Activities that change forest management practices and increase carbon stock on forest lands managed for wood products such as saw timber, pulpwood and fuelwood (*VCS Program Definitions*)

Category	Metric	Achievements during Monitoring Period	Section Reference	Achievements during the Project Lifetime
	knowledge resulting from training provided as part of project activities			
	Number of female community members who have improved skills and/or knowledge resulting from training provided as part of project activities	At least 22, however this is not distinctly documented	4.1	Not possible to recollect from past records
Employment	Total number of people employed in of project activities, ⁵ expressed as number of full time employees ⁶	238 full time equivalent per month	4.1	Not recorded in full time equivalent
	Number of women employed in project activities, expressed as number of full time employees	No detailed records available, employee information available in hardcopy at project office	4.1	Records not available
Livelihoods	Total number of people with improved livelihoods ⁷ or income generated as a result of project activities	- On average 283 people from local communities were employed per month by the project. - 72 income generating projects were implemented with groups varying from 1 to >20 members, with overall value of UGX 254,529,420 (+/- €62,000.-)	4.1	- On average 278 people from local communities were employed per month by the project (record since 2002). - 72 income generating projects were implemented with groups varying from 1 to >20 members, with overall value of UGX

⁵ Employed in project activities means people directly working on project activities in return for compensation (financial or otherwise), including employees, contracted workers, sub-contracted workers and community members that are paid to carry out project-related work.

⁶ Full time equivalency is calculated as the total number of hours worked (by full-time, part-time, temporary and/or seasonal staff) divided by the average number of hours worked in full-time jobs within the country, region or economic territory (adapted from UN System of National Accounts (1993) paragraphs 17.14[15.102];[17.28])

⁷ Livelihoods are the capabilities, assets (including material and social resources) and activities required for a means of living (Krantz, Lasse, 2001. *The Sustainable Livelihood Approach to Poverty Reduction*. SIDA). Livelihood benefits may include benefits reported in the Employment metrics of this table.

Category	Metric	Achievements during Monitoring Period	Section Reference	Achievements during the Project Lifetime
				254,529,420 (+/- €62,000.-)
	Number of women with improved livelihoods or income generated as a result of project activities	Various women groups have been beneficiary. No detailed records available		Various women groups have been beneficiary. No detailed records available
Health	Total number of people for whom health services were improved as a result of project activities, measured against the without-project scenario	n.a.	n.a.	n.a.
	Number of women for whom health services were improved as a result of project activities, measured against the without-project scenario	n.a.	n.a.	n.a.
Education	Total number of people for whom access to, or quality of, education was improved as a result of project activities, measured against the without-project scenario	n.a.	n.a.	n.a.
	Number of women and girls for whom access to, or quality of, education was improved as a result of project activities, measured against the without-project scenario	n.a.	n.a.	n.a.
Water	Total number of people who experienced increased water quality and/or improved access to drinking water as a result of project activities, measured against the without-project scenario	n.a.	n.a.	n.a.
	Number of women who experienced increased water quality and/or improved access to drinking water as a result of project activities, measured against the without-project scenario	n.a.	n.a.	n.a.

Category	Metric	Achievements during Monitoring Period	Section Reference	Achievements during the Project Lifetime
Well-being	Total number of community members whose well-being ⁸ was improved as a result of project activities	Not measured	4.1	Not measured
	Number of women whose well-being was improved as a result of project activities	Not measured	4.1	Not measured
Biodiversity conservation	Change in the number of hectares significantly better managed by the project for biodiversity conservation, ⁹ measured against the without-project scenario	170 ha planted	5.1	6,788 ha (= 4,195 ha planted and 2,593 naturally regenerated)
	Number of globally Critically Endangered or Endangered species ¹⁰ benefiting from reduced threats as a result of project activities, ¹¹ measured against the without-project scenario	Chimpanzee (<i>Pan troglodytes</i>)	5.1, 5.4	Chimpanzee (<i>Pan troglodytes</i>)

⁸ Well-being is people's experience of the quality of their lives. Well-being benefits may include benefits reported in other metrics of this table (e.g. Training, Employment, Health, Education, Water, etc.), but could also include other benefits such as empowerment of community groups, strengthened legal rights to resources, conservation of access to areas of cultural significance, etc.

⁹ Biodiversity conservation in this context means areas where specific management measures are being implemented as a part of project activities with an objective of enhancing biodiversity conservation.

¹⁰ Per IUCN's Red List of Threatened Species

¹¹ In the absence of direct population or occupancy measures, measurement of reduced threats may be used as evidence of benefit

2 GENERAL

2.1 Project Goals, Design and Long-Term Viability

2.1.1 Implementation Schedule (G1.9)

Date	Milestone(s) in the project's development and implementation
15th May 1994	- project activity start date
January 1995	- Start planting (see overview of planting compartments and year of establishment in the table in § 5.3.1)
2003-2008	- Face contracted the certification Société Générale de Surveillance (SGS) to validate and verify Kibale, based on SGS' GHG Validation and Verification program
6 September 2011	- VCS Validation and first verification (crediting period start date under VCS is 1st January 2009)
26 November 2015	- Revenue sharing agreement - VCS second verification - CCB Validation and first verification
23 June 2017	- 3 rd VCS verification - Second CCB verification date
October 2017	- Funding of first Community income generating activities (see § 4.3.1)
28 May 2018	- Start of the first agroforestry training under the agroforestry pilot (see § 4.3.1)
January 2019	- Purchased 2 motorcycles for fieldwork and patrolling
May 2019	- Purchased project vehicle for fieldwork and project management
November 2019	- Finished construction of ranger outpost at Kayante.
December 2019	- Signed MoU with Kibale Association For Rural and Environmental Development (KAFRED) on riverine forest restoration. Pending results. (See Plan of Activities 2020-2023)
January 2020	- Agreement with University of Eastern Finland to support research on fruit feeding butterflies (indicator species for forest condition) in the project area. Pending results. (See Plan of Activities 2020-2023)
Presently	- Undergoing 4 th VCS verification - Undergoing 3 rd CCB verification date

2.1.2 Minor Changes to Project Design (Rules 3.5.6)

Additional CCB activities were initiated based on experiences from past project implementation. These concern activities regarding the focal issues:

Human Wildlife Conflict:

The objective of the project is to have an effective elephant deterrent trench to contain animals in the Protected Area along 70% of the park boundary, where people are living along the project area, by 2024. At the same time, the project wants to achieve that 10% of the households along the park boundary near the project area would have planted unpalatable crops.

The project has already managed to establish 80% (excluding the areas where a trench cannot be established, e.g. due to the presence of solid rock, river or swamp). The remaining trenches are expected to be dug within the following monitoring period. It has proven difficult to stimulate the planting of unpalatable crops along the park boundary. This was mainly due to poor market conditions for tea, the main crop that was intended to be planted. Only in 2019 a group of local farmers have been found interested to plant tea along the project boundary. Areas where no trenches can be established were therefore mainly targeted for beekeeping. Beekeeping is promoted along the boundary of the park, where beekeeping groups are being supported with equipment through the revenue sharing fund and MoUs are made with these beekeeping groups allowing them to access the outer boundary of the national Park to place their beehives.

Wildfires: The objective of the project is to support establishment of woodlots at household in the 12 neighbouring Parishes by 2024. However, only in 2019, two households have been supported in the establishment of woodlots. Due to low interest in woodlot establishment with indigenous species, often associated with the small size of an average field, the project impact has been low till date. In 2018 we started a pilot, training farmers to take up agroforestry and, besides improving sustainable land use, integrate more trees in their field. In this setup there is much less competition for land between crops and trees (they could even be mutually beneficial). This activity also ties in with the other project impacts identified, where the project aims to provide skills and build capacity to increase community resilience and local business development. The monitoring results can be found in § 4.3.1.

Additionally, we included an additional indicator under the focal issue wildfires. Next to the establishment and maintenance of firelines, regular patrolling is very important in the prevention and early detection of wildfires. This indicator is the number of fire patrolmen employed by the project. This number provides additional insight in the project's effort to control wildfires. The indicator type is 'output'. The indicator and the monitoring results can be found in § 4.3.1.

2.1.3 Project Description Deviations (*Rules 3.5.7 – 3.5.10*)

There has been a change in project proponents. The primary project proponent was Face the Future. Since August 2019, Greenchoice, a Dutch green energy company, took over the role of main project proponent from Face the Future (see Verra Project Registry and the VCS Monitoring report 2017-2020 v1).

Greenchoice has been investing in forest projects since 2004.

Already since 2012, Greenchoice is supporting the Kibale restoration project by:

- Providing funding for tree planting
- Buying carbon offsets from the project

Due to organisational changes at Face the Future, Greenchoice decided to strengthen their commitment to the project by becoming the main project proponent.

Face the Future still carries out the project management, on behalf of Greenchoice. There are therefore no changes in the project management and activities. Nothing has changed for the local stakeholders.

2.1.4 Risks to the Project (G1.10)

For the largest part risks to biodiversity benefits run parallel to the risks for climate benefits, which is covered in the VCS AFOLU Non-Permanence Risk Report.

Additional risks are:

- Biodiversity:
 - o Poaching. Mitigation measures and indicators are discussed in section 5.1. and 5.3
 - o Unsustainable extraction of park resources: Mitigation measures and indicators for NTFP's are discussed in section 5.1 and 5.3
- Community:
 - o Crop raiding: Mitigation measures and indicators for crop raiding and trenches are discussed in section 4.1 and 4.3
 - o Decrease in employment: Indicators for employment are discussed in section 4.3

2.1.5 Benefit Permanence (G1.11)

In order to maintain and enhance the climate, community, and biodiversity benefits beyond the project lifetime, the measures taken to protect the forest are:

- fire management, exotics eradication (section 5.3)
- decreasing human wildlife conflicts, local community development (i.e. through funding income generating activities, local business development, access to resources, capacity building) (section 5.3)

2.1.6 Grouped Projects

Not applicable

1) New Project Areas and Communities (G1.13)

Not applicable

2) Project Zone Map (G1.13)

Not applicable

3) Eligibility Criteria for Grouped Projects (G1.14)

Not applicable

4) Scalability Limits for Grouped Projects (G1.15)

Not applicable

5) Risk Mitigation for Grouped Projects (G1.15)

Not applicable

6) Changes to Management (G4.1)

Not applicable

2.2 Stakeholder Engagement

2.2.1 Stakeholder Access to Project Documents (G3.1)

Full documentation is available, no changes. See PDD

2.2.2 Dissemination of Summary Project Documents (G3.1)

Summaries of the monitoring report (hardcopies translated in local language) have been distributed to key community representatives during the stakeholder consultation meetings (see section 2.2.7). Additionally, a translation of the auditor's verification report was made and distributed to the communities (through the community representatives). Furthermore, both reports are available on request at the project's office in Mainaro.

2.2.3 Informational Meetings with Stakeholders (G3.1)

Stakeholder consultation / feedback meetings were organized to inform community representatives about monitoring results.

Communities were informed about the meetings directly by the project staff, and key community representatives were invited for the consultation meetings during routine visits (i.e. due to the various project activities there is regular contact between the project staff and the surrounding local communities). Due to restrictions caused by COVID-19, contrary to the previous stakeholder consultation meetings, the meetings did not take place at the village centers themselves but were held at a central location and only key community representatives were invited (travel to and from the meeting was facilitated by the project). The communities were informed about the change in project proponents in the local stakeholder consultation meetings.

Again, after the reception of the auditor's verification report the community representatives were invited and hardcopies of a translation of the auditor's verification report were distributed.

Relevant project updates are also distributed through radio and newspapers.

2.2.4 Community Costs, Risks, and Benefits (G3.2)

No changes, see PDD. Even though there has been a change in project proponents, there are no changes in the project management, program, or activities. There is no change in how communities are impacted by the project.

2.2.5 Information to Stakeholder on Verification Process (G3.3)

The audit dates are communicated to the communities during the workshops.

2.2.6 Site Visit Information and Opportunities to Communicate with Auditor (G3.3)

The attendants will also be informed about the special circumstances as a result of COVID-19, where the audit will take place remotely. They will be informed that, should they wish to have the opportunity to communicate directly with the auditor, about the project and its impacts, they may indicate so during the consultation workshop and leave their contact information. This will be recorded and shared with the auditor.

2.2.7 Stakeholder Consultation (G3.4)

A stakeholder consultation plan was made in which the VCS and CCB monitoring results were presented, as well as the change in project proponents.

Due to the COVID-19 restrictions, the meetings target village Chairmen and Parish Chiefs who are at the frontline to guide the Community on the projects to be undertaken within the Parish. The District Local Council and Chairpersons were invited for the meetings.

Format for Meeting with Stakeholders

Targeted Areas	Invited Persons	Activities	Comments
INCREASE STAKEHOLDER PARTICIPATION IN THE RESTORATION PROGRAM			
Local Government Feedback			
Local Governments: Bunyangabu District Kamwenge Districts Kabarole Districts	Share feedback with District Chairperson, District Natural Resource Officer, District Community Development Officer UWA Park Warden CC	03 meetings held at respective District Local Council Offices.	Meetings held at different District headquarters for the 03 Districts around the Project area.
Subcounty feedback			
Parishes: Bunyangabu - Kakooga - Kadindimo	02 Parishes, 01 Parish Chief.	01 meeting	Meeting held in respective Districts, at parishes touching the Park boundary: 01 meeting combining Kakooga and Kadindima parishes: 06 Chairmen and 01 Parish Chief.
Kabarole - Isunga - Nyabweya	03 Parishes, 01 Parish Chief	02 meetings	02 meetings for Kabarole; combine parishes of Burambira &

Burambira			Nyabweya. 01 meeting at Isunga: 12 Chairmen and 01 Parish Chief
Kamwenge - Bigodi - Bujingobe - Rugonjo - Rubaba - Nyabitusi - Kyabandara	06 Parishes, 03 Parish Chiefs	03 meetings	03 meetings for Kamwenge; 17 Village Chairmen, 03 Parish Chiefs

2.2.8 Continued Consultation and Adaptive Management (G3.4)

No changes, see PDD.

The continued communication is achieved through having regular meetings organized by the Community Conservation Unit. Each village is visited every quarter. The Warden Forest Restoration PDD communicates through the Warden Community Conservation and the feedback of communities on the project is also provided to the Warden Forest Restoration. Attendance lists are kept of meetings with community representatives for sharing of monitoring results.

Feedback from local stakeholders during ongoing consultation processes, predominantly feeds influences decision making in:

- the targeting of human-wildlife conflict measures, such as the establishment of trenches, placement of beehives and unpalatable crops.
- Targeting and evaluation of community income generating activities. During regular follow up visits, the UWA-FACE team evaluates the effectiveness of the income generating activities, beneficiary needs and challenges (also see §4.3.1).

The change in project proponents has been communicated with the local communities during the local stakeholder consultation meeting. Since this change has not affected the goals or management of the project, or the community revenue sharing programs of the project in any way, the communities are not impacted by this change. No adaptive management is required.

2.2.9 Stakeholder Consultation Channels (G3.5)

No changes, see PDD. See section 2.2.7 and 2.2.8 for the description of stakeholder consultation process undertaken during the verification.

2.2.10 Stakeholder Participation in Decision-Making and Implementation (G3.6)

See PDD for a description of the participatory processes that are applied and have been applied during design and implementation of the project.

Additional to these existing processes, as described in §4.3.1 and the UWA-FACE's Plan of Activities 2020-2023, the project intends to establish a committee, in which the local communities are represented, that will evaluate and select income generating activity proposals, coming from individual community members or groups.

2.2.11 Anti-Discrimination Assurance (G3.7)

No changes, see PDD

2.2.12 Grievances (G3.8)

No grievances received

2.2.13 Worker Training (G3.9)

No changes, see PDD

2.2.14 Community Employment Opportunities (G3.10)

No changes, see PDD.

2.2.15 Relevant Laws and Regulations Related to Worker's Rights (G3.11)

No changes, see PDD.

2.2.16 Occupational Safety Assessment (G3.12)

No changes, see PDD.

2.3 Management Capacity

2.3.1 Required Technical Skills (G4.2)

Although there has been a change in project proponent, from Face the Future to Greenchoice, Face the Future still manages the project on behalf of Greenchoice. Also, there are no changes within the implementation partner UWA that render changes in on the ground management and expertise. The required technical skills capacities of the staff are maintained.

2.3.2 Management Team Experience (G4.2)

See 2.3.1.

2.3.3 Project Management Partnerships/Team Development (G4.2)

No changes, see PDD

2.3.4 Financial Health of Implementing Organization(s) (G4.3)

As described in the PDD, the project has already been implemented for the largest part. Funding for the restoration of about 85% of the area for planting has been secured and the planting has been implemented.

There has been a change in project proponents, from Face the Future to Greenchoice (see § 2.1.3). Greenchoice is a Dutch energy company supplying sustainable electricity and gas. Greenchoice compensates the CO2 emissions of its customers' gas consumption by supporting tree planting and forest protection initiative (in 2019 146,000 tCO2 were compensated). More information on its financial health and investment in forest projects can be found in the annual sustainability report:

<https://jaarverslag.greenchoice.nl/>

2.3.5 Avoidance of Corruption and Other Unethical Behavior (G4.3)

No changes, see PDD

2.3.6 Commercially Sensitive Information (Rules 3.5.13 – 3.5.14)

No information has been excluded from the public version of the monitoring report.

2.4 Legal Status and Property Rights

2.4.1 Recognition of Property Rights (G5.1)

No changes, see PDD

2.4.2 Free, Prior and Informed Consent (G5.2)

No changes, see PDD.

2.4.3 Property Right Protection (G5.3)

No changes, see PDD

2.4.4 Identification of Illegal Activity (G5.4)

Poaching and illegal NTFP extraction. Mitigation measures and indicators are discussed in section 5.1. and 5.3

2.4.5 Ongoing Disputes (G5.5)

No changes, see PDD

2.4.6 National and Local Laws (G5.6)

No changes, see PDD

2.4.7 Project Benefit Crediting (G5.9)

No changes, see PDD

3 CLIMATE

3.1 Net Positive Climate Impacts

3.1.1 Net Impact (CL2.2, CL3.1, CL3.3)

See VCS Monitoring Report Kibale 2017-2020_v1.0

3.2 Offsite Climate Impacts (Leakage)

3.2.1 Leakage Mitigation (CL3.2)

See VCS Monitoring Report Kibale 2017-2020_v1.0

3.3 Climate Impact Monitoring

3.3.1 Climate Impact Monitoring Results (CL4.1)

See VCS Monitoring Report Kibale 2017-2020_v1.0

3.3.2 Dissemination of Monitoring Plan and Results (CL4.2)

See VCS Monitoring Report Kibale 2017-2020_v1.0

3.4 Optional Criterion: Climate Change Adaptation Benefits

3.4.1 Activities and/or Processes Implemented for Adaptation (GL1.3)

n.a.

3.4.2 Adaptation Monitoring (GL1.4)

n.a.

4 COMMUNITY

4.1 Net Positive Community Impacts

4.1.1 Community Impacts (CM2.1)

Community Group	Community members/smallholders farming/living along the border of the National Park from all 12 parishes in vicinity of the project area
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Impact	Human Wildlife Conflict impacts
Type of Benefit/Cost/Risk	This indirect actual impact concerns the risk of crop raiding by elephants and mitigation of this risk by establishing and maintaining elephant trenches and planting of unpalatable crops. Although Human wildlife conflicts are also part of the baseline scenario and it is not straightforward that the project activities increase crop raiding incidences by elephants (see CCB PDD section CM1 & 2 and B1 &2), the human wildlife conflict is one of the main focal issues that was selected by the community representatives in the SBIA process.
Change in Well-being	Increased protection from crop raiding: - Established more than 10 km of new elephant trenches and maintained 64 km of existing trenches along the park boundary where the project is situated. Elephant trenches have been established at 85% of the boundaries of the parishes along the park boundary in the vicinity of the project area (where a trench can be established). This resulted in 0 crop raiding events by elephants in areas with a trench. However, elephants still have areas where they can cross, where no trench can be established (e.g. swamp, river or rocky area). At these sites, crop raiding is a serious problem and the remaining high total number of raidings indicates that the pressure seems to be increasing in those areas (i.e. Isunga, Kiziba, Nyabweya). - 19 beekeeping groups established along the park boundary in the vicinity of the project area. - Supported 3 community groups to plant and manage unpalatable crops (tea) along the park boundary Substantial overall positive change in the human wildlife conflict situation is difficult to determine based on the data we have available. While the trenches are confirmed by UWA staff to be effective, the overall number of crop raiding incidents have increased compared with the previous monitoring period. The project will focus on identifying and mapping these crop raiding hotspots and target other elephant deterring activities (beekeeping, unpalatable crops) in these areas.

Community Group	Community members from the 12 parishes bordering the project area.
Impact	Increased number of trees on smallholder farmland / increased access to own trees
Type of Benefit/Cost/Risk	Expected direct benefit
Change in Well-being	- 2 households received 15,000 seedlings for woodlot establishment - 15,030 tree seedlings were distributed to farmers that participated in the agroforestry pilot.

Community Group	Community members from the 12 parishes bordering the project area.
Impact	Skill enhancement / capacity building
Type of Benefit/Cost/Risk	Actual direct benefit
Change in Well-being	664 people participated in training of which 630 people from the local communities. Trainings were given on tree planting, nursery management, fire management, tea growing, beekeeping, animal husbandry and agroforestry. Additionally, UWA and UWA-FACE staff was trained in carbon monitoring.

Community Group	72 community groups from the 12 parishes bordering the project area.
Impact	Income generating activities from revenue sharing funds
Type of Benefit/Cost/Risk	Actual direct benefit
Change in Well-being	- 19 beekeeping groups received 571 beehives. Protective suits have been distributed - 35 goat rearing groups received 280 goats - 12 pig rearing groups received 72 pigs - 1 group received a grinding mill

Community Group	Community members from the 12 parishes bordering the project area.
Impact	Employment
Type of Benefit/Cost/Risk	Actual direct benefit
Change in Well-being	On average 289 people (equivalent to 238 full time jobs) from the surrounding communities were employed per month for various tasks: - Tree planting and tending

	- Fire line cutting - Fire patrolling - Trench digging and maintenance - Exotics eradication - Carbon monitoring
Community Group	Community members from the Kamwenge and Kabarole districts around the project area.
Impact	Local business developed
Type of Benefit/Cost/Risk	Actual indirect benefit
Change in Well-being	Between March 2017 and February 2020, the project locally sourced €423,715.70 (or 1,777,213,058 UGX) worth of local supplies and services for the project.

4.1.2 Negative Community Impact Mitigation (CM2.2)

See 4.1.1 and the CCB PDD CM2.2, the activities implemented to decrease human wildlife conflicts and especially crop raiding by elephants are: 1) establishment and maintenance of elephant trenches along the park boundary near the project, 2) supporting and promoting beekeeping along the park boundary (specifically in those areas where no trench is present) and 3) planting of unpalatable crops (such as tea). Although Human wildlife conflicts are also part of the baseline scenario and it is not straightforward that the project activities increase crop raiding incidences by elephants (see CCB PDD section CM1 & 2 and B1 & 2), the human wildlife conflict is one of the main focal issues that was selected by the community representatives in the SBIA process.

4.1.3 Net Positive Community Well-Being (CM2.3, GL1.4)

Although crop raiding by elephants can be considered a significant negative impact on community well-being, this can only be attributed to the project activities to a limited extent. Furthermore, with the mitigating measures that the project implements, the project goes beyond the scope of its own activities. The positive impacts of the project, described in 4.1.1, are substantial and it can therefore be concluded that the net impact is positive.

4.1.4 Protection of High Conservation Values (CM2.4)

No HCVs related to community well-being were identified in the project zone

4.2 Other Stakeholder Impacts

4.2.1 Mitigation of Negative Impacts on Other Stakeholders (CM3.2)

Only positive impacts, see CCB PDD

4.2.2 Net Impacts on Other Stakeholders (CM3.3)

Only positive impacts, see CCB PDD

4.3 Community Impact Monitoring

4.3.1 Community Monitoring Plan (CM4.1, CM4.2, GL1.4, GL2.2, GL2.3, GL2.5)

Communities, community groups, other stakeholders involved

No changes occurred in communities, community groups, stakeholders. Description of the 12 parishes that are targeted by the project, bordering the project area can be found in the CCB PD v3.1.

HCVs related to community well-being shall

No HCVs related to community wellbeing were identified in the project area. See PDD

Monitoring results

The below tables provide an overview of the monitoring results of the period between 1 March 2017 and 29 February 2020. The results are presented separately for each focal issue, following the CCB monitoring plan.

Focal Issue: Human Wildlife Conflicts monitoring results

Objectives	Indicators	Result	Comment
By 2024, 10% of the H/H along the park boundary near the project area would have planted unpalatable crops to reduce human wildlife conflict	-No. of awareness meetings and training held	4	
	-Nr. of seedlings procured by H/H.	32,000	
	-Nr. of crop raiding incidences reported	see separate tables	
By 2024, 70% of the park boundary where people are living along the project area, should have effective elephant deterrent trenches to contain animals in the Protected Area in order to reduce the Human Wildlife Conflict	-Nr. of meetings held with communities	-	No specific meetings were held by the project, but this is a topic continuously addressed by UWA rangers and community wardens during community meetings.
	-Nr. of people employed to dig the trench	453	

	-Nr. of kilometres of trenches dug	10	
	-Nr. of kilometres of trenches maintained.	64	
	-Nr. of crop raiding incidences reported	see separate table	

The presence of the National Park with its wildlife and the cultivation of crops up to the boundary of the park results into crop raiding incidences of wildlife. This is mainly caused by elephants. Two interventions have been identified to address the human wildlife conflict. The most important solution is the creation of elephant trenches along the park boundary. The Park management has experience with realising those trenches in collaboration with the local community. The second solution is planting crops that are not attractive for wildlife (unpalatable crops), e.g. tea.

It has proven difficult to stimulate the planting of unpalatable crops along the park boundary. This was mainly due to poor market conditions for tea, the main crop that was intended to be planted. Only in 2019 a group of local farmers have been found interested to plant tea along the project boundary (separate tea growing training reports available, additional observations from field visits reported in see visit reports from 18-27 Nov 2019 and 20 Jan-3 Feb 2020). Areas where no trenches can be established were therefor mainly targeted for beekeeping. Beekeeping is promoted along the boundary of the park, where beekeeping groups are being supported with equipment through the revenue sharing fund and MoUs are made with these beekeeping groups allowing them to access the outer boundary of the national Park to place their beehives. These investments are part of the income generating projects

Elephant trenches have partly been funded by the project. The majority of trenches around the project area have been established (+/- 80%). The parishes Kakooga and Kyabandara are remaining but will be dug in the coming years. The main focus however has now shifted towards maintenance of the existing trenches. Also, see the UWA-Face Plan of Activities 2020-2023.

Crop raiding incidences are recorded by the Park, specifying the parish or village where the incidence took place. Incidences like these are recorded by rangers on a daily basis and the information is collected and stored in the Problem Animals database at Kibale NP office in Isunga. The incidences that took place in the monitoring period are based on those records. Combining the number of incidences with the presence of the trenches gives an indication of the effectiveness of trenches. However, to date this is not properly recorded in the database. UWA-FACE project staff indicated that these crop raiding incidences can all be attributed to crossing in areas that are rocky where no trench could be dug or shallow areas in swamps or rivers along the park boundary. They also indicate that in those areas where trenches were established during this monitoring period, incidences decreased.

As described in the previous monitoring (project implementation report) 2014-2017, the expectation was that the increased amount of trenches and introduction of other measures such as beehives and tea planting, would show a significant reduction in the number of incidences. The total number of crop raiding incidences by elephants, however, is 274, +/- 14% higher than the previous

monitoring period (240 incidences). One explanation for the higher number of crop raidings could be the increasing population size of elephants over the past years (see CCB PD and previous monitoring reports), however there is no recent data available that can substantiate a significant population increase. The animal census data (see section 5.3.1) also does not show a significant increase or decrease in (indirect) elephant sightings.

A noticeable increase in crop raiding events is in the Nyabweya parish. While in 2014-2017 there was only one incident, now 48 incidences were recorded.

Since the majority of the trenches have been completed by the project, the persistent high number of crop raiding incidences indicate that in future the project will need to increase its attention to other elephant deterring measures (such as beekeeping and planting of unpalatable crops) along the remaining vulnerable sections of the park boundary (i.e. in the parishes of Isunga and Nyabweya, and Kiziba, see table), next to maintaining the existing trenches.

Number of crop raiding incidences around the project area in the period 2008 – February 2020.

Year	Elephants	Baboons	Chimps	Lions	Other
2008	8	-	4	2	-
2009	25	1	1	-	-
2010	17	-	1	-	-
2011	29	-	1	-	-
2012	74	1	4	4	1
2013	92	-	-	-	-
2014	61	3	-	-	1
2014	41	-	-	-	1
2015	112	-	-	-	7
2016	61	-	-	1	8
2017 (till feb)	3	-	-	-	-
2017 (from march)	58	-	-	-	2
2018	120	4	1	-	3
2019	74	1	1	-	8
2020 (till feb)	19	-	-	-	1

Length of trenches dug and maintained along the project area

Year	Trench dug (km)	Trench maintained (km)
2004	2	-
2005	6	2
2007	10	6
2008	6	10
2009	6	10
2010	-	-
2011	-	-
2012	-	-
2013	-	-
2014	-	-
2015	-	-
2016	-	-

Year	Trench dug (km)	Trench maintained (km)
2017 (till feb)	0.2	-
2017 (from march)	5.8	29
2018	5	-
2019	-	35
2020 (till feb)	-	-
Total	40.56	92.09

Crop raiding incidences between March 2017 and February 2020 by elephants in parishes along the project area borders.

Parish	Total incidences	Incidences with trench present	Incidences with no trench present	% of parish with trench along the park border	Year trench established
Isunga	131	-	131	95%	2007
Nyabweya	48	-	48	98%	2009
Kadindimo	-	-	-	no trench because river and hill	n.a.
Rwimi	-	-	-	0%	n.a.
Kakooga	34	-	34	10%	2007
Bigodi	1	-	1	80%	2010, 2015, 2018
Bujongobe	11	-	11	95%	2008 and 2010
Rugonjo	4	-	4	80%	2007, 2008, 2010, 2019
Kyanbandara	24	-	24	10%	2019, remaining will be dug by UWA
Busingye	-	-	-	90%	2017, 2018
Kiziba	21	-	21	90%	2008, 2017, 2018
Rwenkuba	-	-	-	80%	2018
Total	274	0	274	Average = 80%	

Focal Issue: Revenue sharing for income generating projects

Objectives	Indicators	Results
Fund income generating projects for community groups along the boundary of the project area in the period 2015 – 2024 for a total value of 280M UGX	Nr. of proposals approved	72
	Value of proposals approved (in UGX)	254,529,420

	Nr. of projects implemented	72
	Value of proposals approved (in UGX)	254,529,420

The project aims to support income generating projects for local communities. Since the start of the revenue sharing activities, in 2014, the implementation of the revenue sharing activities, especially the community activities, has been a learning process. Experiences from deploying the community budget and implementing and monitoring various community activities have shown varying levels of success¹². Main observations are:

- Some revenue sharing activities do not deliver the expected impacts (e.g. due to animal husbandry management issues) and in some cases have unintended negative side effects (e.g. goats damaging crops or feeding in the forest, use of agrochemicals in planting of unpalatable crops)
- The revenue sharing program lacks a proper operational structure and due to the predominantly top-down approach of supporting community activities, risks a lack of long-term commitment from the beneficiaries themselves.
- The UWA-FACE team currently lacks capacity to properly follow-up on the revenue sharing activities that have been implemented

This has led to a change in insights on how to effectively implement the community activities. We conclude that in order to operate an effective community revenue sharing program we need to:

- Restructure the management structure of the community revenue sharing program
- Create more capacity on management and follow-up of the community projects
- Prioritize activities, put activities with uncertain effectiveness on hold and develop new activities in close consultation with communities and stakeholders.
- Identify/developing follow-up activities (e.g. honey marketing, lead farmer training)
- Improving monitoring (plan) of the ongoing activities.

For the 2019-2020 community revenue sharing activities we intend to focus on:

1. Gaining insight of the performance of all current community revenue sharing activities.
2. Continuing support for the activities with proven success. I.e.:
 - Beekeeping
 - Agroforestry training and pilot
3. Putting support for activities with uncertain impacts or negative side effects on hold. I.e.:
 - Animal husbandry projects: goats and pigs
 - Tea planting
4. Setting up a structure for the management of the community revenue sharing fund and implementation of community projects.
5. Develop new activities in close consultation with communities and stakeholders.

For more details, see the Plan of Activities 2020-2023.

¹² Also see visit reports from November 2019 and Jan-Feb 2020 and internship report of Julian Hain.

Focal Issue: Illegal extraction of resources inside the national park

Objectives	Indicators
By 2024, have an effective trench dug adjacent to the project area	See Human wildlife conflict focal issue
Protection against poaching and overextraction of NTFP's	See table below

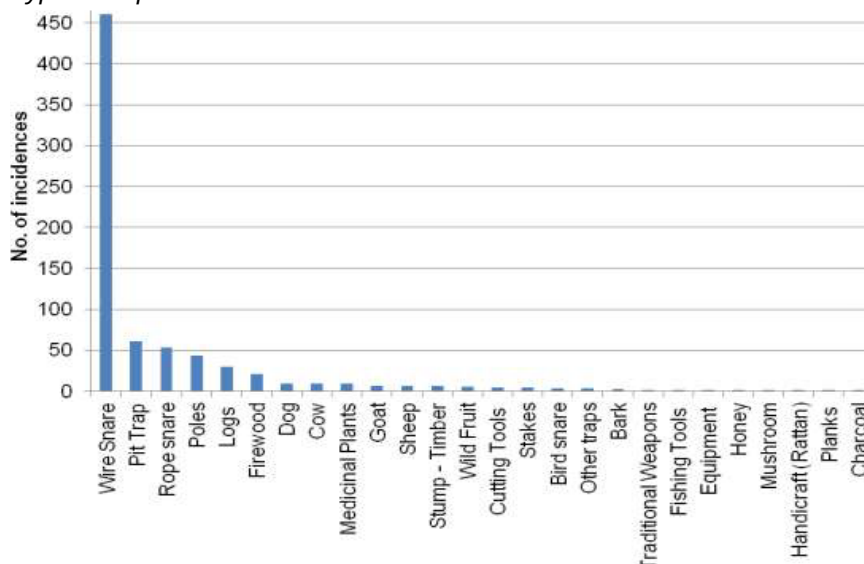
Traps discovered, arrests and MoUs for park resources

	1st monitoring period			2nd monitoring period				Current monitoring period			
	2011	2012	2013	2014	2015	2016	2017 till Feb	2017 from Mar	2018	2019	2020 till Feb
Poachers arrested	12	-	9	3	6	6	-	3	13	-	No data
Traps discovered	278*	179*	345*	29	44	10	1	475*	596*	505*	No data
Arrests for firewood, polewood and other resources	8	27	66	12	17	8	3	-	5	-	2
Agreements (MOU) with communities for resource use	3	2	2	3	3	3	2	7	11	14	14
No. of written requests for resource use approved	-	-	10	2	7	19	6	No data	No data	No data	No data

*Cumulative amount of traps discovered throughout Kibale National Park not limited to the project site alone

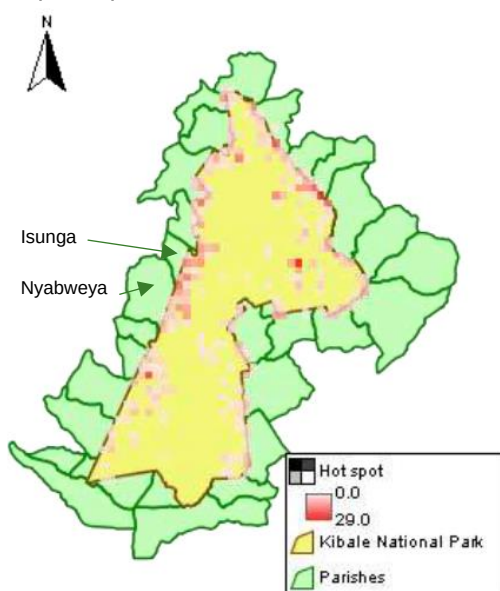
The number of arrests are obtained from Offenders database, available at the Park headquarters in Isunga.

Type of trap discovered

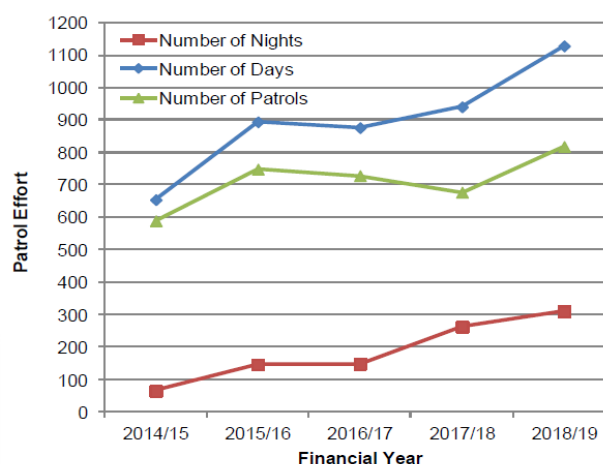


The number of traps discovered, are available from SMART (Spatial Monitoring And Reporting Tool), which includes georeferenced observations of rangers. Till date we have only received the total number of traps discovered in the whole of KNP, whereas in the previous monitoring period we were able to extract only the traps found in the project area. Overall a higher number of traps were found (comparing with the data from 2011-2013). A possible explanation could be that the overall effort of patrolling has also increased since the last monitoring period (from more than 700 patrols in 2016/2017 to more than 800 in 2018/2019; see graph below, right). The below (left) map (from UWA's Annual SMART Report 2018/19FY), provides some insight in where most traps were spotted. This map indicates that especially around border of the parishes Isunga and Nyabweya a higher number of traps were discovered. The project constructed a ranger outpost in the park near Kayante village, Nyabweya. We expect that this will contribute to increased surveillance of this part of the park and help reduce illegal activities in the area.

Trap hotspot areas



Patrol efforts



Project Impact on employment

Objectives	Indicators
Create employment for local communities around project area	Nr. of people employed from the communities adjacent to the project area

The main social impact of the project is providing employment to the local people. An overview of the number of people employed for the project is provided in the table in this section. The data are presented on a monthly basis for the second monitoring period. The average monthly employment figure in this monitoring period is 293 jobs.

Year	Month												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
2002	507	494	506	485	424	413	399	387	385	411	379	425	5,215
2003	334	361	334	294	290	307	293	299	233	254	283	309	3,591
2004	106	185	235	242	195	245	227	111	262	254	248	247	2,557

2005	278	301	342	380	387	250	231	250	378	502	492	538	4,329
2006	102	75	286	401	447	479	463	427	419	502	507	538	4,646
2007	319	383	396	338	325	284	294	258	274	323	319	299	3,812
2008	342	353	388	337	395	310	311	272	319	369	365	359	4,120
2009	388	286	264	271	294	334	289	170	178	365	368	386	3,593
2010	218	254	326	320	215	220	225	157	279	307	345	280	3,146
2011	159	180	263	252	210	250	325	380	394	742	666	807	4,628
2012	188	274	327	354	336	266	197	174	166	165	195	229	2,871
2013	180	159	146	151	156	159	181	170	150	162	170	150	1,934
2014	-	-	200	201	160	240	240	251	215	259	251	235	2,252
2015	15	15	223	199	120	149	150	-	-	-	-	100	971
2016	-	15	15	50	90	114	90	95	50	106	187	347	1,159
2017	204	230	203	235	320	276	78	106	179	323	329	431	2,914
2018	*	189	189	366	308	323	255	244	365	369	333	253	3,194
2019	240	244	293	345	399	434	311	299	394	370	383	364	4,076
2020	317	205											522

*report missing

Other Project Impacts

Objectives	Indicators	Result
Enhance tourism opportunities by establishing native forest	-Nr. of jobs for UWA tourism staff -Nr. of park visitors	See tables below
Local sourcing of project inputs to benefit the local economy	Value of purchased supplies	See tables below
Provide skills to workers and employees in order to increase local business development and employment opportunities	-Nr. of people trained on nursery management, planting, maintenance, fire management -Nr. of people trained on first aid skills -Nr. of Contracts with farmers to supply seedlings -Nr. of new local nurseries	See tables below

Tourism

	1st monitoring period			2nd monitoring period				Current monitoring period			
	2011	2012	2013	2014	2015	2016	2017	2017 (from march)	2018	2019	2020 (till feb)
UWA tourism staff	16	15	17	14	14	14	14	15	17	17	17
Nr of park visitors	NA	9,723	11,361	12,111	11,292	11,746	2,568	13,142	18,842	19,144	not yet available

The number of UWA tourism staff increased slightly since the previous monitoring period while as the number of park visitors increased significantly. There is a chance that tourism activities will be implemented in the restoration area in the future since UWA is considering establishing a tourism

sector at the Mainaro side of the park. Additionally, the project intends to contribute to the development of an education centre at Mainaro.

In that case the number of visitors for the project area will be separately recorded.

Local sourcing of project inputs

	2017 (from march)	2018	2019	2020 (till feb)	Total
Food	€ 21,268.51	€ 28,835.10	€ 33,767.31	€ 5,873.72	€ 89,744.64
Services	€ 5,443.21	€ 5,826.16	€ 26,035.96	€ 9,940.01	€ 47,245.34
Fuel and car repair	€ 10,368.74	€ 26,865.16	€ 15,617.67	€ 7,879.66	€ 60,731.23
Other	€ 30,404.66	€ 34,414.78	€ 70,410.66	€ 15,384.94	€ 150,615.03
Total	€ 67,485.12	€ 95,941.20	€ 145,831.59	€ 39,078.33	€ 348,336.24

Within the monitoring period a total value of €348,336.24 (or 1,464,928,517 UGX) worth of local supplies and services were sourced for the project, compared to a total value of €61.138 (or 232,325,083 UGX) in the previous monitoring period. The main reason is that a larger area has been planted, 72 income generating projects were implemented during this monitoring period.

Main expenses were on 'other expenses' which includes the expenses for the income generating projects (goats, pigs, beehives, beekeeping suits, etc.), tools, uniforms, polythene bags. The second largest category is fuel and vehicles repair. The main costs under the 'food' category is the food for the workers.

Skills

Monitoring period	Year	Trainings					Nursery	
		nursery management, planting, maintenance, fire management	forest carbon monitoring	First aid skills	monitoring (i.e. GIS / use of tablet)	Other skills	Nr. of contracts with farmers to supply seedlings	Rr. of new local nurseries
1st monitoring period	2011	-	-	-	-	-	12	1
	2012	-	-	25	-	-	5	1
	2013	-	-	-	-	-	-	-
	2014	-	25	-	-	-	5	-
2nd monitoring period	2014	7	-	-	2	-	-	-
	2015	10	-	-	2	-	4	1
	2016	28	-	-	-	-	8	1
	2017 (till Feb)	20	23	-	-	-	-	-
3rd monitoring period	2017 (from Mar)	408	-	-	-	2	-	-
	2018	-	-	-	-	23	-	-
	2019	83	-	-	1	5	-	-

	2020 (till Feb)	-	30	-	2	86	-	-
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People were mainly trained in tree planting, nursery management and fire management. In January 2020 training was given for the monitoring of carbon stocks inside the project area. Part of the participants attended the training for the first time, others had been participating in previous training sessions.

Furthermore, 'other skills' trainings were given on tea growing, agroforestry, beekeeping and animal husbandry (goats and pigs).

4.3.2 Monitoring Plan Dissemination (CM4.3)

The monitoring reports will be made available in hardcopy at the project office. Summaries of the monitoring report were distributed to stakeholders (see section 2.2.2). Information meetings were organized to inform communities about monitoring results (see section 2.2.3 and 2.2.7).

4.4 Optional Criterion: Exceptional Community Benefits

n.a.

4.4.1 Short-term and Long-term Community Benefits (GL2.2)

n.a.

4.4.2 Marginalized and/or Vulnerable Community Groups (GL2.4)

n.a.

4.4.3 Net Impacts on Women (GL2.5)

n.a.

4.4.4 Benefit Sharing Mechanisms (GL2.6)

n.a.

4.4.5 Governance and Implementation Structures (GL2.8)

n.a.

4.4.6 Smallholders/Community Members Capacity Development (GL2.9)

n.a.

5 BIODIVERSITY

5.1 Net Positive Biodiversity Impacts

5.1.1 Biodiversity Changes (B2.1)

Change in Biodiversity	Establishment and restoration of native forest that support and increases High Conservation Values
Monitored Change	- Established additional 170 ha of recovering forest, in connection with existing (recovering) forest. - No fire incidences in the project area during this monitoring period - Increase of the natural regeneration of shade tolerant climax species, and the decrease in tree regeneration of pioneer species in the planted forest - increase in number of tree species and the overall increase in tree biomass - Decrease in number of exotic species
Justification of Change	- Planted 170 ha of forest with native species. - Protected the planted existing restored and regenerated forest (4,195 ha planted and 2,593 naturally regeneration area) from fire. - Debarked 97,956 exotic trees and slashed and uprooted 564.4 ha of <i>Lantana camara</i> - Regeneration and tree species diversity were assessed based on the VCS carbon monitoring data. - See monitoring results in 5.3.1

Change in Biodiversity	Created and protected habitat for a variety of threatened wildlife species (such as red colobus, chimpanzee, African golden cat, etc.)
Monitored Change	- Overall population estimate of chimpanzees in KNP increased. - A range expansion of chimpanzee communities towards the southwest sectors of the park in the areas of Kakooga, river Nsonge and Kyabandara was observed. - There were a higher number of observations of forest dwelling species such as l'Hoest's monkey, red duiker, blue duiker, bush pig and giant forest hog, which may indicate further recovery and development of the forest.
Justification of Change	- This change is gradual, but is expected to become more apparent over time. - See monitoring results in 5.3.1

The obvious increase of the natural regeneration of shade tolerant climax species, and the decrease in tree regeneration of pioneer species gives an indication that the forest canopy is closing and that the planted forests are developing into natural forests as it is growing older. Also the species composition, the increase in number of tree species and the overall increase in tree biomass gives a clear indication that the planted and natural regenerated areas moving gradually towards its original natural state with similar high conservation values as the surrounding natural forests in Kibale NP. These trends were also found while analysing the data from the 2017 and 2014 campaign.

The high number of regeneration of climax tree species in the 1997 planting year is probably caused by the fact that during this year many climax tree species were planted in the project area. At the same time the canopy in these 1997 compartments are currently closing, which provides an ideal condition for climax species to regenerate. Compared to the 2017 findings the number of climax species for the 1997 planting year remained high, which might give an indication that these compartments have entered the next phase of forest succession in which the climax species are getting a more dominant role in the forest composition.

5.1.2 Mitigation Actions (B2.3)

No changes, see sections B2.3 and B4.2 of the CCB PDD.

The main actions to ensure maintenance and enhancement of biodiversity as a whole and HCVs in specific are:

- Planting of trees
- Removal of exotics
- Prevention of fire
- Patrolling
- Research and monitoring

5.1.3 Net Positive Biodiversity Impacts (B2.2, GL1.4)

As described in 5.1.1 and in the CCB PDD, there is a considerable positive impact of the project on biodiversity. The VCS carbon monitoring data provides the most sound information indicating recovery of the native forest ecosystem. While animal census data may give a qualitative indication about the relation between forest recovery and animal species abundance, the sampling intensity (nr. of transects and frequency of monitoring) is too low to do a more quantitative assessment. The project has recently signed an agreement with researchers from University of Eastern Finland and Makerere University to support a fruit-feeding butterfly (indicator species for forest condition) monitoring project in the project area, with the intention to continue monitoring at least every 3 years. We expect that this will provide us with additional data on the impact of the project on recovery of a valuable ecosystem and the biodiversity it supports.

5.1.4 High Conservation Values Protected (B2.4)

No HCVs related to biodiversity in the project zone are negatively affected by the project. Moreover, the restoration and natural regeneration taking place in the project area, further enhances the HCV attributes (see § 5.1.1).

5.1.5 Invasive Species (B2.5)

No invasive species are used. See PDD.

5.1.6 Impacts of Non-native Species (B2.6)

Not applicable

5.1.7 GMO Exclusion (B2.7)

No changes. See CCB PD

5.1.8 Inputs Justification (B2.8)

Not applicable

5.2 Offsite Biodiversity Impacts

5.2.1 Negative Offsite Biodiversity Impacts (B3.1) and Mitigation Actions (B3.2)

No negative offsite biodiversity impacts as a result of the project activity have been identified. See PDD.

5.2.2 Net Offsite Biodiversity Benefits (B3.3)

Not applicable, see 5.2.1

5.3 Biodiversity Impact Monitoring

5.3.1 Biodiversity Monitoring Plan (B4.1, B4.2, GL1.4, GL3.4)

Focal Issue: Wildfires

Objectives	Indicators	Result	Comment
To have proper elephant deterrent trenches dug in 12 neighbouring parishes by the year 2024.	See Human wildlife conflict focal issue		
To support establishment of woodlots at household in the 12 neighbouring Parishes by 2024.	Nr. of households with woodlots from the project	2	seedlings requested for woodlot establishment, but no training was given

Objectives	Indicators	Result	Comment
	Nr.of seedlings distributed by project	15,000	
	Nr. of people trained in woodlot management by project	-	
	Nr. of wildfire incidences	See separate table,	
By 2024 external fire lines to be opened and maintained along the fire risky areas of the project area.	Length of fire lines established and maintained.	See separate table	
	Nr.. of fires incidences reported in the project area.	See separate table	

Fires are especially a threat to the young planted compartments. When the elephant grass is still abundant within the compartment, it is prone to fire coming in from outside the park. The data on fire management activities are provided in the tables below.

As described in § 0, only two households have been supported in the establishment of woodlots. Due to low interest in woodlot establishment, often associated with the small size of an average field, the project impact has been low till date.

In 2018 we started a pilot, training farmers to take up agroforestry and, besides improving sustainable landuse, integrate more trees in their field. In this setup there is much less competition for land between crops and trees (they could even be mutually beneficial). This activity also ties in with the other project impacts identified, where the project aims to provide skills and build capacity to increase community resilience (increased sustainable landuse and decreasing dependence on park resources) and local business development. The overall goal and objectives are described in a separate pilot project description (*UWA_FtF_Agroforestry Project.pdf*, available in softcopy).

The farmers were trained by Alan Tulip, from Kanhangi estate (<http://kahangiestate.com/>), a working model and training centre for sustainable agriculture, located near the northern border of Kibale National Park. In 2018 and 2019, Alan trained 4 groups of farmers on his estate, developed a trial agroforestry design for a proportion of their land together with each farmer and executed various follow up visits. Additionally, he provided a sperate workshop for the spouses of the farmers. Training and visit reports were made and are available in softcopy.

The following table summarizes the results of the agroforestry pilot achieved. The intention is to regularly follow up with the trained farmers and, train and facilitate those farmers that enthusiastically adopt the agroforestry techniques, to provide training, demonstration, and guidance to their neighbours. We are currently executing follow up visits to gain insight on their performance and retrieve their feedback.

Agroforestry pilot achievements

Total nr. of participants of agroforestry training	Nr. of trainings	Nr. of seedlings requested by participating farmers	Nr. of seedlings distributed by project	Species distributed	Value of implementation (UGX)
89	6	17,742	15,030	Bridelia micrantha, Grevillea robusta, Maesopsis emnii, Warburgia ugandensis	74,490,897

Length of firelines established and maintained

	1st monitoring period			2nd monitoring period				Current monitoring period			
Year	2011	2012	2013	2014	2015	2016	2017 till Feb	2017 from Mar	2018	2019	2020 till Feb
Length (km)	37	34	37	37	32	32	36	55	34	74	21
Patrol men	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	28	45	51	147	72

This table shows the length of the firelines. The firelines are maintained twice per year, one round of slashing in each dry period. Because of the establishment of new internal firelines, around the newly planted compartment areas, the length of firelines has increased from 2017 onwards.

Number of fire incidences reported in the project area

	1st monitoring period				2nd monitoring period				Current monitoring period			
Year	2011	2012	2013	2014	2014	2015	2016	2017 till Feb	2017 from Mar	2018	2019	2020 till Feb
Season	Dec-Mar	June-Aug	Dec-Mar	Jan-Feb	Mar	Oct	Jan	Jan	-	-	-	-
Compartment	701	403	410	1002, 206, 501	901	1002	1002	206	-	-	-	-
Area (ha)	3	5	2	154	3	20	2	2	-	-	-	-

A fire incident occurred in January 2017, affecting two hectares in compartment nr. 206. Although this incident is part of the previous monitoring period, we highlight the event here, because it was not recorded in the previous monitoring report (2014-2017).

Focal Issue: Exotic/Invasive Species

Objectives	Indicators	Result
To have 65% of the exotic/invasive species removed from the project area by 2024.	Nr. of trees removed or debarked 2017-2020	97,956
	Area (m2) uprooted of lantana camara.	1,362,670
	Area (m2) slashed of lantana camara.	4,280,960

	Compartment Nr. where exotic/invasive species have been removed.	101, 102, 103, 104, 107, 108, 205, 206, 1002, 1601, 1602, 1603, 1702
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Since the project is located in a National Park, UWA's policy is to remove exotics from the project area. Compared to last monitoring period, significant progress has been made with the removal of *Lantana camara* – infested compartments of in total 136.3 hectares have been treated with the uprooting and 428 ha with slashing of this exotic species. In addition, 97,965 trees (mainly *Senna spectabilis*) have been debarked. This is a direct project impact. In the previous Plan of Activities (update 2016), the total amount of exotic trees to be removed in the period up to 2024, was set at 160,000 trees. In the previous monitoring periods (2011-2014 and 2014-2017) the total number of trees removed is 18,511. With the 97,956 exotics removed in the current monitoring period, the total number is 116,467 exotic trees, which is 73%. The target for the removal of *Lantana camara* up to 2024 was set at 100 hectares. With the current cleaning of 564.4 hectares, this target has long been achieved (644%). However, due to the vigorous regrowth of *Lantana*, the removal of this species will unfortunately remain a point of attention, especially in the younger restoration plots. Additional to the ongoing removal of *Lantana*, we intend to explore several ideas, such as setting up a community pilot project to produce bio-briquettes from the cut plants, or planting live stakes (cuttings of branches) of fast-growing indigenous species (with large leaves) within *Lantana* infested areas that could quickly form a shade canopy overshadowing the *Lantana*.

Number of trees removed or debarked and area of Lantana camara removed

Year	Nr. of exotic trees	Area of lantana uprooted (ha)	Area of lantana slashed (ha)
2008	16510		
2009	30784		
2010	5813		
2011	6,083		
2012	8,245		
2013	1,653		
2014	-		
2015	2,530		
2016	-	60.4	
2017 (till feb)	-	19.0	
2017 (from march)	59,920	14.4	28.02
2018	25,952	32.5	165.855
2019	12,084	85.6	184.221
2020	-	3.7	50
Total	169,574	215.7	428.096

Biodiversity monitoring

Objectives	Indicators	Result
To conduct animal census in Kibale National Park to establish trends by 2024	-Nr. of wildlife censuses conducted	4
	-Nr. of each animal species counted (chimps, elephants, buffalos, duikers and primates)	See separate table, below
To have all the degraded areas in KNP restored by 2024.	-Nr. of hectares planted.	See separate table, below
	-Nr. of seedlings planted.	See separate table, below
	-Nr. of tree species planted	See separate table, below
	-Amount of forest carbon sequestration	See VCS carbon monitoring report
To eliminate and control the exotics/ invasive species in KNP by 2024.	-Nr of exotic trees and tree species removed or debarked	See table Exotic/Invasive species
	-Size of area (m2) cleared for specific species such as Lantana camara.	See table Exotic/Invasive species
To monitor the change of tree species composition in the restoration area	Nr. of new tree species dispersed	See separate table, below
To monitor the ecological succession of the planted and natural regenerated area	- Tree regeneration per stratum in the project area.	See separate table, below
	- Species composition in tree regeneration per stratum in the project area.	
	- Tree biomass growth (above and below ground) per stratum in the project area for all trees above 50mm in DBH.	
	- Tree species composition per stratum in the project area for all trees above 50mm in DBH.	
	A tree is classified as regeneration only if the DBH is less than 50 mm and height is more than 10 cm.	
	The stratum is defined by planting year and regenerated area.	

Wildlife census

Wildlife censuses have been undertaken in KNP since 2001 at five-year intervals. Only the censuses conducted in 2005, 2010 and 2016 and 2019 by UWA allow for the extraction of observation data that overlap with the project area (planting compartments and regeneration area). The census in 2019 was funded by WCS, with the main purpose of estimating the abundance and population density of Chimpanzees in KNP. The below table provides an overview of the species that were observed in the planting compartments and regeneration areas as well as the number of individuals observed per species, in 2005, 2010 and 2016.

The data only allow for general conclusions, since the monitoring methodology is applicable to the park, while for this report a subset of transects within the restoration area is used.

The observation data of chimpanzees shows a significantly higher number of indirect observations (nr of nests). The Kibale NP Chim census report confirms that based on the population estimates from 2005 and 2019, chimpanzee population seems to have increased. Furthermore, of special relevance to the project they observed that there has been a range expansion of chimpanzee communities towards the southwest sectors of the park in the areas of Kakooga, river Nsonge and Kyabandara. This seems to confirm that the chimpanzees include the restored forests in the project area for their habitat.

Nr of observations of other primate species such as the red-tailed monkey and black and white colobus have increased. In 2019 the first l'Hoest's monkeys were observed during the census in the project area. The nr of observation of red colobus and grey cheeked mangabeys remained fairly constant. Mainly the number observations of baboons decreased. One should keep in mind though that all the primate species in KNP live in groups, which can sometimes be very large, which can often explain large differences in number of individuals.

Other marked observations are the higher number of observations of red duiker, blue duiker, bush pig and giant forest hog, which are all forest dwelling species. The observations and individuals for elephants remain more or less constant compared to 2017.

Nr. of species and individuals (per species) observed

Species	2005 census		2010 census		2016 census		2019 census	
	Nr of observations	Nr of individuals	Nr of observations	Nr of individuals	Nr of observations	Nr of individuals	Nr of observations	Nr of individuals
Baboon	8	84	22	444	15	225	6	38
Baboon dung*	-	-	-	-	5	1	1	1
Black and white colobus	13	91	17	139	3	12	12	78
Black mamba	-	-	-	-	1	1	-	-
Blue duiker	2	2	5	5	-	-	4	3
Blue duiker dung*	-	-	-	-	2	1	20	19
Blue duiker footprints	-	-	-	-	1	1	1	1
Blue monkey	1	10	2	7	1	1	-	-
Buffalo	-	-	4	8	1	1	-	-
Buffalo dung*	8	2	12	2	4	1	18	18
Bush pig	-	-	6	12	1	1	-	-
Bush pig dung *	20	3	1	1	1	1	11	11
Bush pig footprints	-	-	-	-	2	3	14	16
Bushbuck	1	1	9	12	-	-	-	-
Bushbuck dung *	-	-	-	-	-	-	1	1
Bushbuck footprints	-	-	-	-	1	2	-	-
Chimpanzee	-	-	9	46	4	19	-	-
Chimpanzee call	-	-	-	-	-	-	3	9
Chimpanzee dung*	-	-	-	-	-	-	3	3
Chimpanzee nests*	85	77	39	35	53	48	153	148
Civet cat	-	-	2	2	-	-	-	-
Elephant	-	-	5	23	6	26	-	-

Elephant dung*	82	5	137	8	95	6	94	6
Elephant footprints	-	-	-	-	11	19	-	-
Giant forest hog	-	-	1	3	1	3	-	-
Giant forest hog footprints	-	-	-	-	-	-	4	11
Giant forest hog dung*	-	-	1	1	-	-	-	-
Grey cheeked mangabey	7	42	9	86	10	115	7	53
L'Hoest's monkey	-	-	-	-	-	-	3	17
Red colobus	13	172	22	235	17	270	13	250
Red duiker	-	-	8	9	2	2	-	-
Red duiker dung	-	-	-	-	-	-	18	17
Red tailed monkey	24	192	20	182	22	176	48	347
Squirrel	-	-	2	2	-	-	-	-
Vervet monkey	-	-	2	36	-	-	-	-
Warthog footprints	-	-	-	-	1	1	-	-
Waterbuck	-	-	-	-	1	1	-	-

* Observations based on dung or nest counts. The nr. of estimated corresponding individuals was corrected by standard production rates of dung or nests (nr./day) from literature (i.e. Wing and Buss, 1970; Plumptre et al., 1995.; Plumptre and Reynolds, 1997)

Forest planted

The number of hectares planted in the second monitoring period (2014 – 2017) are covered in Phases 14 to 17, altogether 170 hectares.

Number of hectares and seedlings planted

Phase	Planted (ha)	Seedlings planted
Phase 1	1,400	560,000
Phase 2	974	389,600
Phase 3	355	142,000
Phase 4	404	161,000
Phase 5	80	32,000
Phase 6	105	42,000
Phase 7	100	40,000
Phase 8	105	42,000
Phase 9	100	40,000
Phase 10	370	148,000
Phase 11	3	1,040
Phase 12	4	1,040
Phase 13	25	40,000
Phase 14	25	40,000
Phase 15	25	40,800
Phase 16	50	81,050
Phase 17	70	130,000
Total	4,195	1,930,530

Number of tree species planted

Pioneer	Intermediates	Climax
Albizia coriaria	Cordia africana	Uvariopsis congensis
Bridelia micrantha	Cordia millenii	
Croton macrostachyus	Ficus mucuso	
Spathodea campanulata	Prunus africana	
	Warburgia ugandensis	

Number of new species dispersed in PSPs in the second monitoring period

Year	Species
2011	Rauvolfia vomitoria, Mimusopsis spps, Erythrina abyssinica, Maytenus lanceolata, Arizona spp.
2012	Prunus africana, Bridelia micr, Funtumia africana, Maesa lanceolata, Albizia zygia, Melitia dura
2013	Antidesima lanceolata, Albizia zygia, Spathodea campanulata, Celtis africana, Diospyros mesp, Funtumia africana, Eudenia
2014	Eudenia spp, Afromamas spp., Maesa lanceolata, Diospyros mesp, Funtumia africana, Sapium ellipticum
2015	Bridelia micrantha, Sapium ellipticum, Tabonomontana johnsonii, Rauvolfia vomitoris, Securinoga virosa, Albyzia zygia, Antidesima, Funtumia africana, Diospyros abyssinica, Spathodea campanulata, Warburgia ugandensis, Celtis durandii, Eudenia, Strombozia, Erythrina abbysinica, Prunus africana, Kigeria africana, Celtis africana, Olea welwichii, Uvariopsis congensis, Chrosophyllum albidum
2016	Securinoga virosa, Bridellia micrantha, Fantumia africana, Albizia zygia, Antidesma, Sapium elipiticum, Tabonomontana, Arizonia abysinica, Eudenia, Diospyros abysinica, Allophylus, Celtis durandii, Celtis africana, Parinari, Spathodea campanulata, Olea welwichii, Baranite, Prunus africana, Mimusops bagshawei, Markhamia platycalix, Colar gigantia, Chrisophyllum albidum, Looia brownii, Kigelia africana, Teclea nobilis, Banquet deaderum, Erythrina abysinica, Caloncoba, Uvariopsis congensis
2017	N.A.
2018	Warbugia ugandensis, Antidesima, Funtumia africana, Eudenia, Monodora , Arizonia, Diospyros, Tabonomontana, Celtis africana, Myteinace andata, Parinari, Celtis durandii, Uvariopsis, Baranite, Ficus mucuso , Nibotania , Aphania , Dombea , Makaranga , Coffea , Melitia dura, Rauvolfia vomitoria, Aningeria , Prunus africana, Blighia
2019	Albizia zygia, Diospyros mespilfomis , Blighia unigigata, Flueager virosa , Rothomanai , Ficus spp., Eudenia, Tabonamontana, Antidesma, Banquet dendrum, Funtumia africana, Colar gigantia, Looia brownii, Celtis durandii, Warbugia, Allophylus, Ficus ouslaris , Celtis africana, Brideria micrantha, Uvariopsis congensis, Ficus orithuyiolis
2020	N.A.

The table above provides an overview of which naturally regenerating species are encountered in the permanent sample plots. For 2017 the data was not recorded. For 2020 the data is not yet

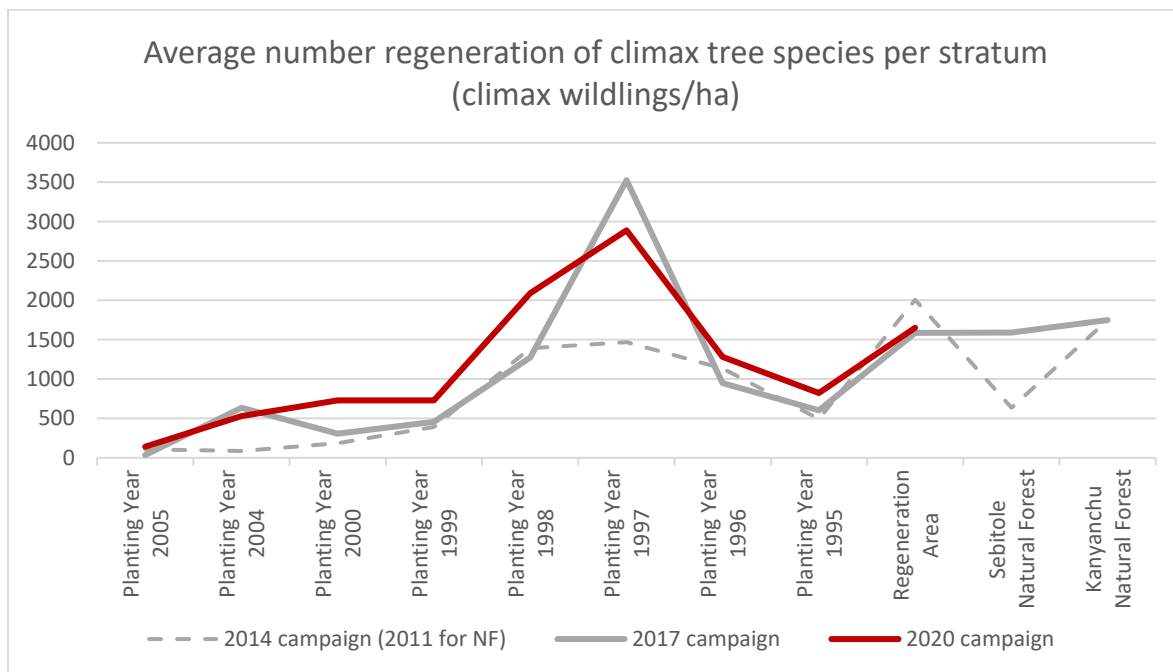
available. There is a total of 36 species that has been dispersed in the permanent sample plots. When compared to the previous monitoring period, there are 15 new species that were not recorded before.

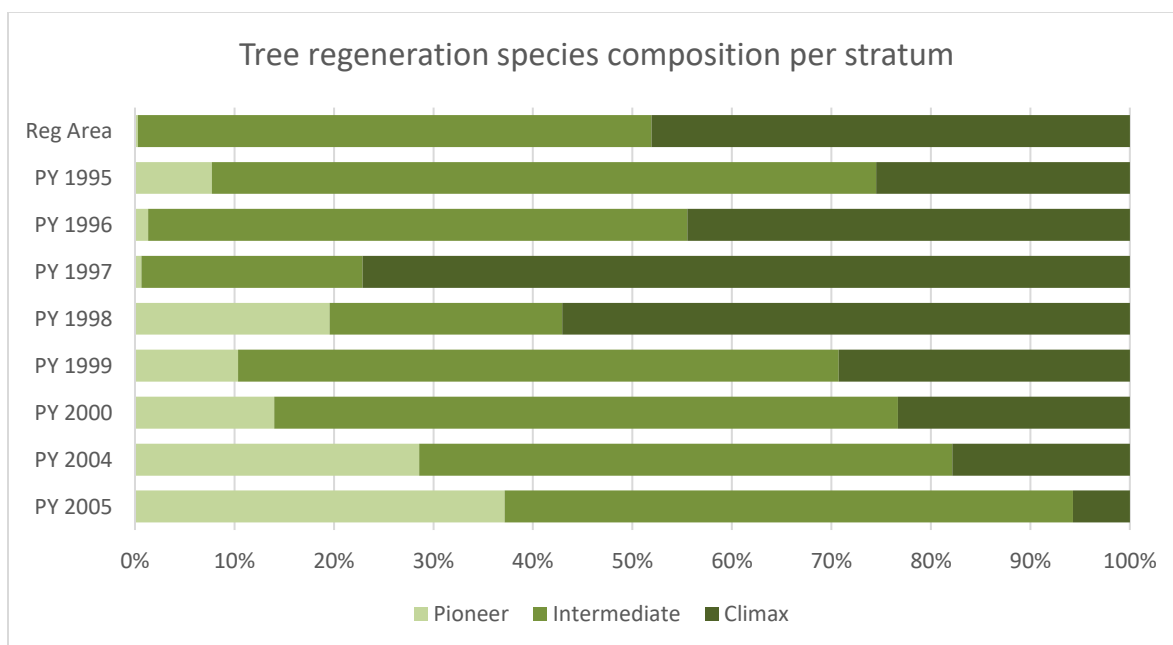
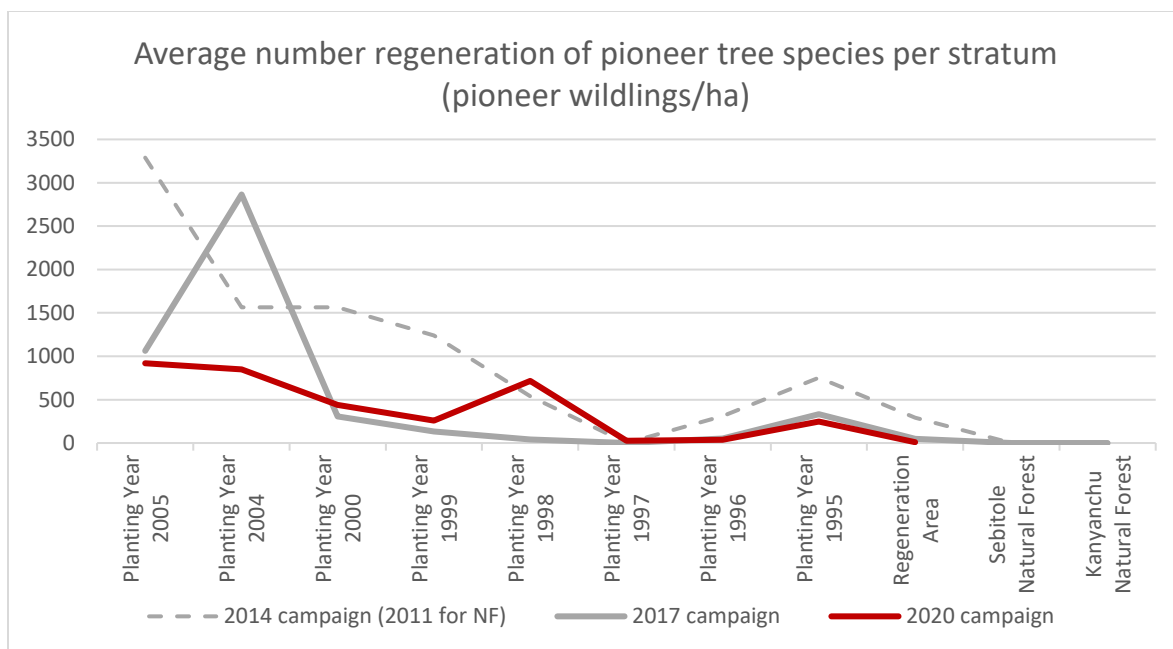
Ecological succession of the planted compartments and natural regenerated areas

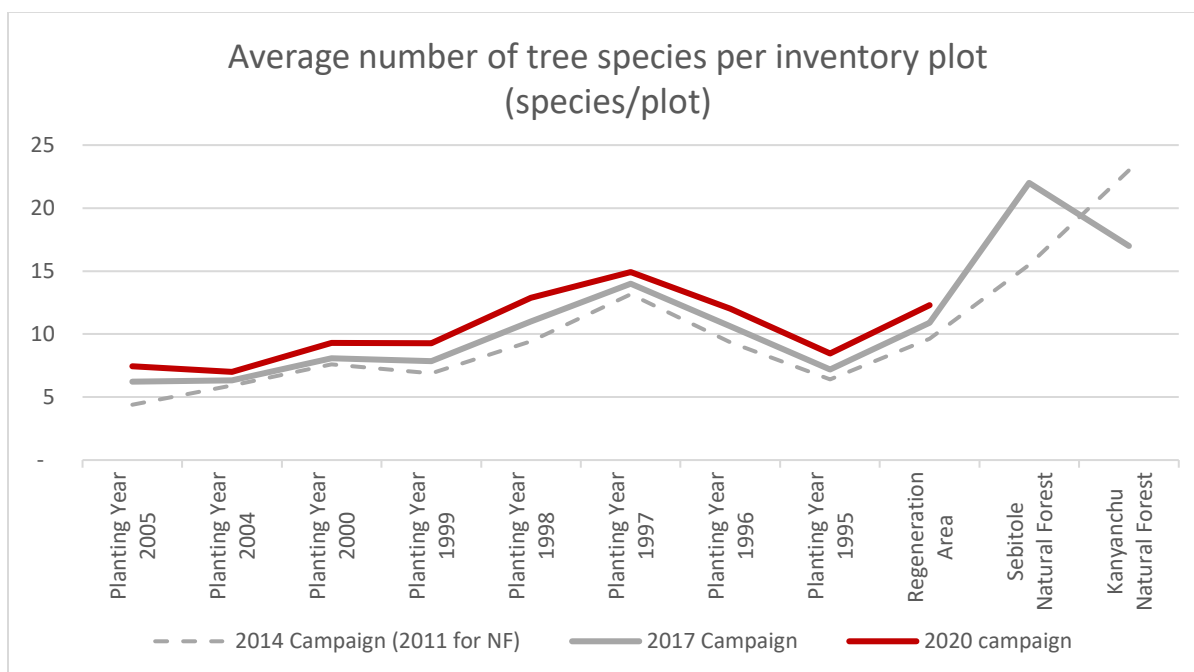
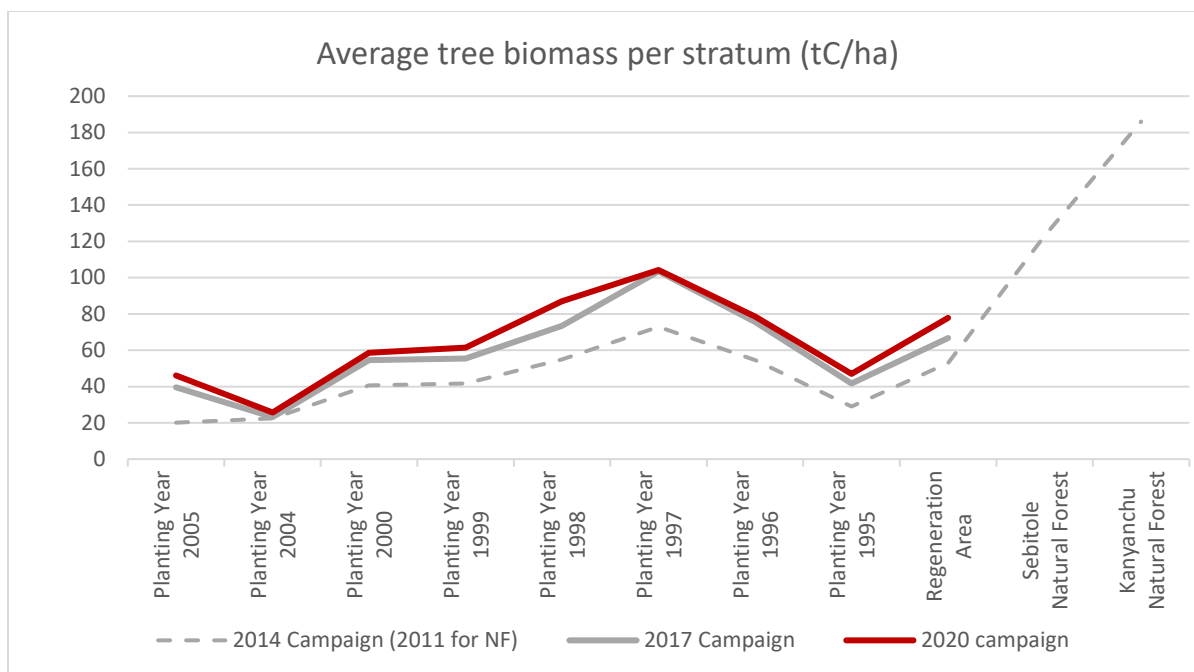
The five graphs below give an overview of the ecological succession per stratum in the planted compartments and the regenerated area. The data for these graphs is derived from the VCS carbon monitoring campaign during which tree growth and tree regeneration have been assessed on 282 different permanent sample plots distributed over the project area. The data used for this analysis is derived from the 2020, 2017, 2014 and 2011 carbon monitoring campaigns.

Some clear trends can be seen in the presented data indicating that the tree biodiversity in the project area is increasing as the planted forests grow older. The obvious increase of the natural regeneration of shade tolerant climax species, and the decrease in tree regeneration of pioneer species gives an indication that the forest canopy is closing and that the planted forests are developing into natural forests as it is growing older. Also the species composition, the increase in number of tree species and the overall increase in tree biomass gives a clear indication that the planted and natural regenerated areas moving gradually towards its original natural state with similar high conservation values as the surrounding natural forests in Kibale NP. These trends were also found while analysing the data from the 2017 and 2014 campaign.

The high number of regeneration of climax tree species in the 1997 planting year is probably caused by the fact that during this year many climax tree species were planted in the project area. At the same time the canopy in these 1997 compartments are currently closing, which provides an ideal condition for climax species to regenerate. Compared to the 2017 findings the number of climax species for the 1997 planting year remained high, which might give an indication that these compartments have entered the next phase of forest succession in which the climax species are getting a more dominant role in the forest composition.







5.3.2 Biodiversity Monitoring Plan Dissemination (B4.3)

The monitoring reports will be made available in hardcopy at the project office. Summaries of the monitoring report are distributed to stakeholders. Information meetings are being organized to inform communities about monitoring results.

5.4 Optional Criterion: Exceptional Biodiversity Benefits

5.4.1 Trigger Species Population Trends (GL3.3)

Trigger Species	Chimpanzee (<i>Pan troglodytes</i>)
With-project Scenario	The forest restoration and fire prevention activities are expected to benefit chimpanzees by increasing/protecting their habitat and food availability. As described in 5.1.1, Overall population estimate of chimpanzees in KNP increased, from 921 to 1001 individuals, according to the latest survey performed by UWA and WCS. They observed a range expansion of chimpanzee communities towards the southwest sectors of the park in the areas of Kakooga, river Nsonge and Kyabandara, which are part of the project area. Additionally, the provision of more suitable habitat for chimpanzees may reduce conflict with surrounding communities. Other National Parks and Forest reserves in Uganda that deal with deforestation, degradation and fragmentation of forest, where chimpanzees are present, experience strong conflicts and negative attitudes between the remaining chimpanzees and the adjacent communities. Enlarging the range of chimpanzees in Kibale may contribute to prevention of conflict and peaceful co-existence of chimps and humans. Trends in (direct and indirect) chimp observations in the project area can be found in section 5.3.1.
Trigger Species	Ashy Red Colobus (<i>Piliocolobus tephrosceles</i>)
With-project Scenario	Kibale National Park may contain the only viable subpopulation of Ashy Red Colobus (IUCN Red List) Similar to the chimpanzee the red colobus is expected to benefit from the forest restoration and fire prevention activities by increasing/protecting their habitat and food availability. Trends in (direct and indirect) chimp observations in the project area can be found in section 5.3.1.

5.4.2 Effectiveness of Threat Reduction Actions (GL3.4)

See descriptions under 5.3.1 and 5.4.1. Additional to the restoration and protection of habitat for these trigger species, the project both directly and indirectly contributes to the protection and conservation efforts of UWA. Examples are:

- UWA-FACE revenue sharing from the sales of carbon
- Construction of a ranger outpost near Kayante village
- Employment of two rangers at the project
- Addressing Human-wildlife conflicts
- Supporting community income generating activities

6 ADDITIONAL PROJECT IMPLEMENTATION INFORMATION

7 ADDITIONAL PROJECT IMPACT INFORMATION

