

Kariba REDD+ Project, Zimbabwe

Project Implementation Report (PIR)

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Cover page information

Name	Kariba REDD+ Project
Location	Northern Zimbabwe, provinces Matabeleland North, Midlands, Mashonaland West and Mashonaland Central
Project start date	July 1, 2011
GHG accounting period & lifetime	July 1, 2011 – June 30, 2041
Project Implementation period covered by this PIR	July 1, 2011 – January 31, 2014
History of CCB Status	Validation Approved - CCB Standards Second Edition, Climate Adaptation & Biodiversity Gold Level (February 8, 2012)
Edition of CCB Standards used under this verification	Second Edition, December 2008
Summary of climate, community and biodiversity benefits generated	The project has proven successful in reducing deforestation in the project area. Since project start, over 5.6 million tCO₂e of greenhouse gas emissions have been avoided through the reduction of deforestation. The climate benefits are also certified under the Verified Carbon Standard (VCS). With regards to community benefits, the project includes a wide range of activities, which have direct positive effects on communities. Farmers are trained for conservation agriculture and necessary material inputs are provided. Community gardens are established and provided improved nutrition. Until January 2014, over 1'300 participants benefited from several workshops, and 11 community gardens have been established in the area. The project also promotes beekeeping as an alternative and environmental friendly source of income. To-date, nine beekeeping workshops have been held across the project area, with a total of 233 participants and over 650 beekeeping starter kits handed out. Schools and hospitals are supported through the provision of direct inputs. Further activities including sustainable fuelwood plantations and brick making are planned and subject to the availability of funding. During a survey in January 2014, most interview partners reported to be satisfied or very satisfied with the project only 2.5% reported to be not satisfied. For employees and direct beneficiaries, the project has a positive impact on livelihoods, food security, children's education and healthcare. No participant reported to be restricted in his use of the forest for basic livelihoods or cultural needs. No grievances have been received to-date through the survey or other channels. The more indirect social effects of the project have been assessed in a community survey covering all participating RDCs in January 2014. In the

survey, 280 community members, 77 direct beneficiaries and 15 employees were interviewed.

The project's biodiversity benefits include a reduction of the poaching pressure on wildlife through regular patrolling, in close cooperation with the local RDCs. Until January 2014, roughly 350 team-days were spent patrolling, and over 600 snares have been removed from the bush, which means a substantial relieve of the pressure on the local wildlife. As part of the project's biodiversity monitoring, 171 tree species have been identified and many threatened wildlife species have been sighted. The most common ones include Elephant, Common Hippo and Southern Ground Hornbill. Also, about 25 Painted Dogs have been reported by RDC scouts. To-date, no Black Rhino has been encountered during the monitoring.

Gold Level
criteria used

The *Kariba REDD+ Project* maintains two CCBS Gold Level criteria, Climate Change Adaptation Benefits and Exceptional Biodiversity benefits. The project's activities provide substantial contributions to climate change adaptation through its activities in conservation farming and beekeeping. Conservation farming techniques are more drought-adapted than conventional agriculture and beekeeping provided alternative livelihoods, which is a broadly accepted measure to adapt to climate change. Both conservation farming and beekeeping have been successfully promoted by the project during the first implementation phase. The exceptional Biodiversity Benefits are based on the broad range of endangered animals, which occur in the project area. Species include Painted Dog, Elephant, Lion, Southern Ground Hornbill and others.

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II. General Section

G1. Original Conditions in the Project Area

General information

For G1.1, please refer to the CCBS PDD.

G1.2 The types and condition of vegetation within the project area.

There have been no changes in the types and condition of vegetation in the project area apart from what is described in the monitoring section. Please refer to the CCBS PDD for the original description and to the Climate Section of this PIR for a full update, including an analysis of recent deforestation in the project area in CL1.1.

G1.3 The boundaries of the project area and the project zone

Project area and project zone have not changed since validation. As a clarification, the Songo Wildlife Management Area is part of Binga RDC and thus part of the validated project area. Since there is a leaseholder in the Songo area, this required a specific agreement with the leaseholder, as reflected in the CCBS PDD.

Please refer to the CCBS PDD for full reference.

Climate Information

G1.4 Current carbon stocks within the project area(s), using stratification by land-use or vegetation type and methods of carbon calculation (such as biomass plots, formulae, default values) from the Intergovernmental Panel on Climate Change's 2006 Guidelines for National GHG Inventories for Agriculture, Forestry and Other Land Use (IPCC 2006 GL for AFOLU) or a more robust and detailed methodology.

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Since PDD stage, an updated full carbon stock assessment has been carried out during this monitoring period, using permanent sampling plots (PSPs) and Landsat satellite imagery inline with the project's CCBS monitoring plan.¹ Historic observation of forest cover loss, stratification of forest areas and change monitoring was based on imagery coming from Landsat 5 TM, Landsat 7 ETM+ and Landsat 8 OLI sensors. The stratification based on satellite imagery was trained based on ground truth data collected. The classification key for the two strata was the following:

Landcover	Canopy cover at 5m tree height
Woodland	=> 50%
Open Woodland	10-49 %
Non-Forest	< 10 %

Forests are stratified concerning their structural characteristics, not their land use or regeneration history or ecological attributes. This is necessary to generate strata actually separable from satellite imagery. Species composition, land use or regeneration history and other ecological features are difficult or impossible to capture over large areas with sufficient precision with satellite imagery and GIS. The biomass inventory campaign showed good homogeneity of the carbon stocks within the strata, which proves their contribution to accurate carbon stock assessments.

Based on 2011 satellite imagery and the carbon density derived from the PSPs, the estimated carbon stock at project start has been updated compared to the PDD, where literature values for carbon densities were used. The PSPs are stratified into two forest strata, Woodland and Open Woodland. Grassland and other non-forest land covers are conservatively assumed to have a carbon density of zero. The method follows methodology VM0009 v1.1 of the Verified Carbon Standard (VCS), has been described in detail in the project's VCS project description (PD) and audited independently. This approach is more accurate than the Tier 1 approach applied in the CCBS PDD. The result of this carbon stock assessment for the time of the project start is shown below in Table 1. The carbon stock in the project area at project start was about 206 Mega tonnes equivalent carbon dioxide (MtCO₂e).

Changes in the project's carbon stock over time and related emissions are based on repeated remote sensing analyses and the use of updated carbon densities whenever available. For full reference, refer to this PIR's climate section and the calculation of the project's climate impacts, which is provided in the supporting documents. Also the validated VCS PD is provided in the supporting documents.

¹ The project's CCBS Monitoring Plan is available online under: [https://s3.amazonaws.com/CCBA/Projects/Kariba_REDD%2B_Project/130624_Monitoring+Plan_Kariba_CCBS_final+\(1\).pdf](https://s3.amazonaws.com/CCBA/Projects/Kariba_REDD%2B_Project/130624_Monitoring+Plan_Kariba_CCBS_final+(1).pdf)

Table 1: Carbon stock in the project area at project start.

Stratum	Carbon density in tCO ₂ e / ha	Total carbon stock in tCO ₂ e
Woodland	437.0	120'636'541
Open Woodland	169.1	86'068'071
Non-Forest		0.0
Total		206'704'612

Please refer to section G2.3 for the historic deforestation rate and setting of the project baseline.

Community Information & Biodiversity Information

G1.5 A description of communities located in the project zone, including basic socio-economic and cultural information that describes the social, economic and cultural diversity within communities (wealth, gender, age, ethnicity etc.), identifies specific groups such as Indigenous Peoples⁸ and describes any community characteristics.

Updated information on the local communities has been collected during the project's monitoring process. Please refer to the results of the social impact survey provided in the supporting documents for full reference. A full description of the communities is given in the CCBS PDD.

G1.6 A description of current land use and customary and legal property rights including community property in the project zone, identifying any ongoing or unresolved conflicts or disputes and identifying and describing any disputes over land tenure that were resolved during the last ten years (see also G5).

There have been no disputes since the validation. For full reference, refer to the CCBS PDD.

G1.7 A description of current biodiversity within the project zone (diversity of species and ecosystems) and threats to that biodiversity, using appropriate methodologies, substantiated where possible with appropriate reference material.

An assessment of the current biodiversity in the project zone has been implemented as part of the project's monitoring process. Please refer to the results of the wildlife and anti-poaching monitoring provided in the supporting documents for these updated information. For full reference, refer to the CCBS PDD.

For G1.8, please refer to the PDD.

G2. Baseline Projections

For section G2.1 - G2.2, please refer to the CCBS PDD.

G2.3 Calculate the estimated carbon stock changes associated with the 'without project' reference scenario described above.

The “without project” reference scenario has been updated from the CCBS PDD by applying the VCS methodology VM0009 v1.1, which is a more accurate approach than the Tier 1 approach applied in the CCBS PDD. The reference scenario is based on an analysis of a multi-temporal time series of Landsat 5 TM satellite images of 2000, 2003, 2009 & 2011. As mentioned in section G1.4, grassland and other non-forest land-use classes are conservatively assumed to have a carbon density of zero. Therefore, the project’s baseline emissions presented below result only from the project area, which are classified as forest at the time of project start. For full reference, including selected carbon pools², please refer to the project’s validated VCS PD, which is provided in the supporting documents.

The result of the project’s baseline model is shown below in Figure 1. Following the VCS approach, the reference scenario consists of the linear deforestation model shown in the graph, which is consistently more conservative than the logistic model.

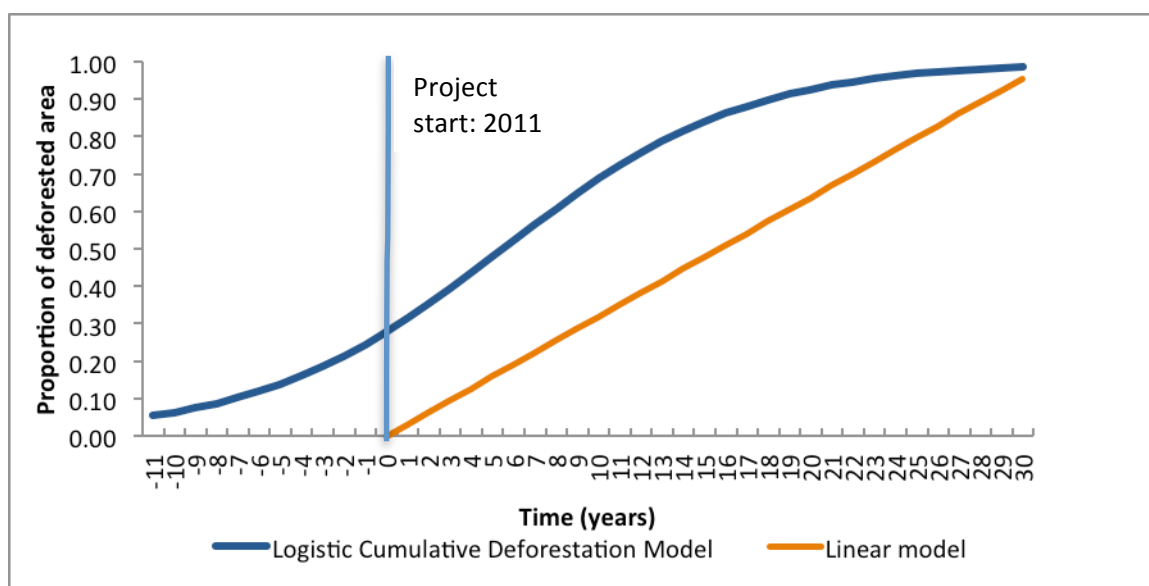


Figure 1: Baseline deforestation model of the project.

² Selected carbon pools are above- and belowground tree & shrub biomass, and standing deadwood. Long-lived wood products are selected but not relevant. Soil carbon has been conservatively omitted.

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The resulting development of the project's carbon stock under the baseline scenario is shown in Table 2. For full reference, refer to the spreadsheet showing the baseline model, which is provided in the supporting documents.

Table 2: Development of the project's carbon stock under the baseline scenario.

Year	Carbon stock in tCO₂e	Cumulative linear model deforestation
2011	206'704'612	0.00000
2012	200'114'075	0.03188
2013	193'523'538	0.06377
2014	186'933'002	0.09565
2015	180'342'465	0.12754
2016	173'751'928	0.15942
2017	167'161'391	0.19130
2018	160'570'854	0.22319
2019	153'980'318	0.25507
2020	147'389'781	0.28695
2021	140'799'244	0.31884
2022	134'208'707	0.35072
2023	127'618'170	0.38261
2024	121'027'633	0.41449
2025	114'437'097	0.44637
2026	107'846'560	0.47826
2027	101'256'023	0.51014
2028	94'665'486	0.54203
2029	88'074'949	0.57391
2030	81'484'413	0.60579
2031	74'893'876	0.63768
2032	68'303'339	0.66956
2033	61'712'802	0.70144
2034	55'122'265	0.73333
2035	48'531'729	0.76521
2036	41'941'192	0.79710
2037	35'350'655	0.82898
2038	28'760'118	0.86086
2039	22'169'581	0.89275
2040	15'579'045	0.92463
2041	8'988'508	0.95652

In line with the CCBS PDD, non-CO₂ GHGs are included in the project's climate impact monitoring, using the approach described in the validated PDD.

For G2.4 – G2.5, please refer to the CCBS PDD.

G3. Project Design and Goals

For G3.1, please refer to the CCBS PDD.

G3.2 Describe each project activity with expected climate, community and biodiversity impacts and its relevance to achieving the project's objectives.

IMPROVED AGRICULTURE

Conservation Farming (CF) was first introduced and implemented in 2012 after conducting numerous inception meetings covering the wards, which were to be started with, followed by a total of 48 workshop/trainings, which included training-of-trainers, and nutritional garden establishment. These workshops were followed by a selection of beneficiaries done entirely by the communities themselves who selected 1'000 beneficiaries across all 4 project areas who were registered to receive sufficient inputs to grow maize, sorghum and cow peas for a 25x25m field.

The first season under CF was seen as a great success with an estimated 20-30% increase in yield across the board, compared to the traditionally grown crops.³ The impact of this activity in the communities in the first season was seen to be very positive as witnessed by estimated 300 of community members who were not beneficiaries, also adopting the farming method on their own accord upon seeing the visual difference in quality of crops grown by the CF farmers. Some of the verbalized encouragement of CF which implied profound support to this activity came from one chief who was initially skeptical, but had a change in opinion when he realized the only members of his community who received a decent yield were those farmers who had adopted this CF method of farming and felt that "CF was one of the very means to alleviate the poverty situation within rural communities".

2013 was then the second season of implementing CF and the number of beneficiaries was increased by 40 new community members now giving a total of 1'040 registered beneficiaries. Once again all theses registered beneficiaries we supported with enough inputs to this time increase the field size to 50x50m. It is naturally expected that the quality of the crops will at very least be of the same quality as 2012 or probably better. In total there are now over 1'300 beneficiaries including eleven nutritional gardens.

It is the intention of the project to continue expanding this activity to more and more members of the communities with inputs, conduct more training workshops and increase the extension work and support to farmers implementing the CF method as it is recognized as having the potential to impact individual households, improve food security, increase wealth and reduce deforestation through reducing the need to clear more land in search of

³ This was assessed by weighing randomly selected cobs from both traditional fields and fields under CF.

more fertile soils (shifting agriculture) and assisting in establishing markets for the products.

BEEKEEPING

Beekeeping was recognized during the baseline survey as another activity, which adds value to standing forests and provides the potential for local community members to receive an income without causing deforestation. To date 9 workshops on introduction to beekeeping, hive construction and basic hive management have been conducted. There are over 200 beneficiaries across all four project areas and over 650 beekeeping startup kits handed out (Kenyan Top Bar Hives, KTB). An estimated total of approximately 4'000 kg of honey was produced from 2012 to 2013 which was mostly sold to local markets. Adoption of this activity has been very positive however the number of colonized hives in some areas has been lower than in others and it was realized that this was due to some of the hives top bars not being cut accurately enough during the construction process causing the bees to desert. These hives are all hand made during the training workshops and to rectify this problem we have re-cut 1352 new top bars (replacing top bars in 54 hives) and handed these out to the beekeepers in time for the swarming season from April to June (a second swarming season occurs from October to December). The *Kariba REDD+ Project* aims to continue enhancing this activity through additional trainings, support of materials and assistance in establishing markets for the honey.

FUELWOOD PLANTATIONS

This activity has not yet been implemented. To date the focus has been on multiple other long-term benefit activities for the communities and focused the funds and our attention on more immediate direct benefits so the communities can realize project benefits sooner. We will start the development of these plantations once our longer term projects such as CF farming are established in the majority of the project area and require less attention therefore making more sense to focus on other activities. Also once more funding is available from the sale of credits this would assist in speeding up the process.

SOCIAL FORESTRY

Under this activity, grass roots research has been implemented. For this, through discussions between OGM and the community members, various trees looked after for traditional or cultural reasons have been identified. These trees are all fruit trees, which are not normally threatened by deforestation as they provide a source of nutrition in different seasons.

A total of roughly 30 traditional shrines has been identified and mapped in the project area. A traditional shrine is a culturally sacred area ranging from an area of woodland, to rivers, streams or particular pools in rivers or streams which are used for either burials, ceremonies or spiritual purposes. These areas are typically not threatened by deforestation.

We have found that there are more beneficial and efficient ways to use our resources and therefore decided to leave this activity where it stands for now.

FIRE MANAGEMENT

This has been an important activity since the project start date with 12 fire-fighting training workshops and over 24 community fire awareness meetings having been conducted with the 2013 National fire awareness week having been launched in the Hurungwe project area and 12 community fire-fighting committees formed. These fire-fighting committees have also been supported with fire-fighting suppression tools.⁴ In addition to this, CGA has also repaired and maintained in excess of 1'200 km of bush roads in 2012 and 2013 respectively across all four project areas, which assist as fireguards. It was also along these same roads for almost the same distance where our early burning (controlled fire burns) was carried out, covering an estimated 70% of the distance of roads repaired (thus approximately 800km), where both sides of the roads were burned, allowing the fire to burn for a distance of 20m to 150m away from the roads. It was estimated by our OGM that there has been about a 20-25% reduced occurrence of fires. This was estimated by comparing previous years in the same areas where ordinarily the entire areas would have been burnt compared with the witnessed unburned areas since the commencement of this activity. Thus, although there were still numerous fires, it was witnessed that by the *Kariba REDD+ Project* awareness campaigns and the early burning activities the above mentioned percentage of reduced fire incidences or unburned area was achieved. This estimation was achieved through professional judgment of our experiences OGM team, rather than following a systematic assessment. The project's positive impact was further supported by a safari operator in one of the project areas who notified CGA that he had noticed a remarkable increase in biodiversity particularly in the small mammals, reptiles and insects.

The project aims to continue enhancing this activity through continued road maintenance and early burning, continued fire awareness and firefighting training and support with tools.

ALTERNATIVE AND SUSTAINABLE BUILDING MATERIAL (BRICK MAKING)

This activity has not yet been implemented. To date the focus has been on multiple other long-term benefit activities for the communities and focused the funds and our attention on more immediate direct benefits so the communities can realize project benefits sooner. We will start the development of this activity once our longer term projects such as CF farming are established in the majority of the project area and require less attention therefore making more sense to focus on other activities. Also once more funding is available from the sale of credits this would assist in speeding up the process.

ON THE GROUND MANAGEMENT TEAMS (OGM)

Due to financial restrictions the project started with three OGM teams consisting of one team leader, one field assistant/tracker, one game scout and two camp attendants covering the project areas. This was increased to include a fourth team during 2013 consisting of the same team members as mentioned above. The new team is still under training and being assisted by one of the other teams before handing over completely. So the project has now four OGM Teams covering the four project areas. Each team has successfully managed to

⁴ A list of distributed fire tools is provided in the supporting documents.

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fulfill its obligations as per the supplied reports to the CGA head office on a regular basis and delivers an update on all the project activities and the recording and addressing of any problems identified on the ground as part of the “Adaptive Management Plan” should this be the case. The teams’ obligations include the following:

- Maintenance of boreholes and water pumps provided
- Prevention of fire through means already highlighted under the section on fire management above.
- Maintaining roads for accessibility as already highlighted under the section on fire management above.
- Constantly facilitating the relations to the local authorities.
- Receiving feedback and grievances from the local communities.
- Carrying out the proper monitoring requirements according to the requirements of CCBS and VCS.

The project aims to enhance the above obligations through increased communications, workshops and awareness to the local authorities and local communities.

COMMUNITY AND PROJECT SUSTAINABILITY FUND

This activity is still being scaled up, however to date 26 schools and 8 clinics have been supported with stationary, exercise books, teaching boards and basic medical supplies to meet the requirements of treating common illnesses and injuries. The purchase and distribution of these medical supplies was done in accordance with the legal requirements by engaging the provincial and district health officers (rather than a project health officer⁵) who provided guidance and assistance with the nature of medical supplies needed for purchase and distribution. Research has also been done into environmental conservation teaching material as well as teaching material to deal with illiteracy. In addition to these activities, the project has also resuscitated and maintained 10 boreholes. This activity is impacting many lives with an estimated 2’500 people now having access to safe drinking water. This activity is currently ongoing as it is recognized as a priority by the council and communities.

NEWSLETTER

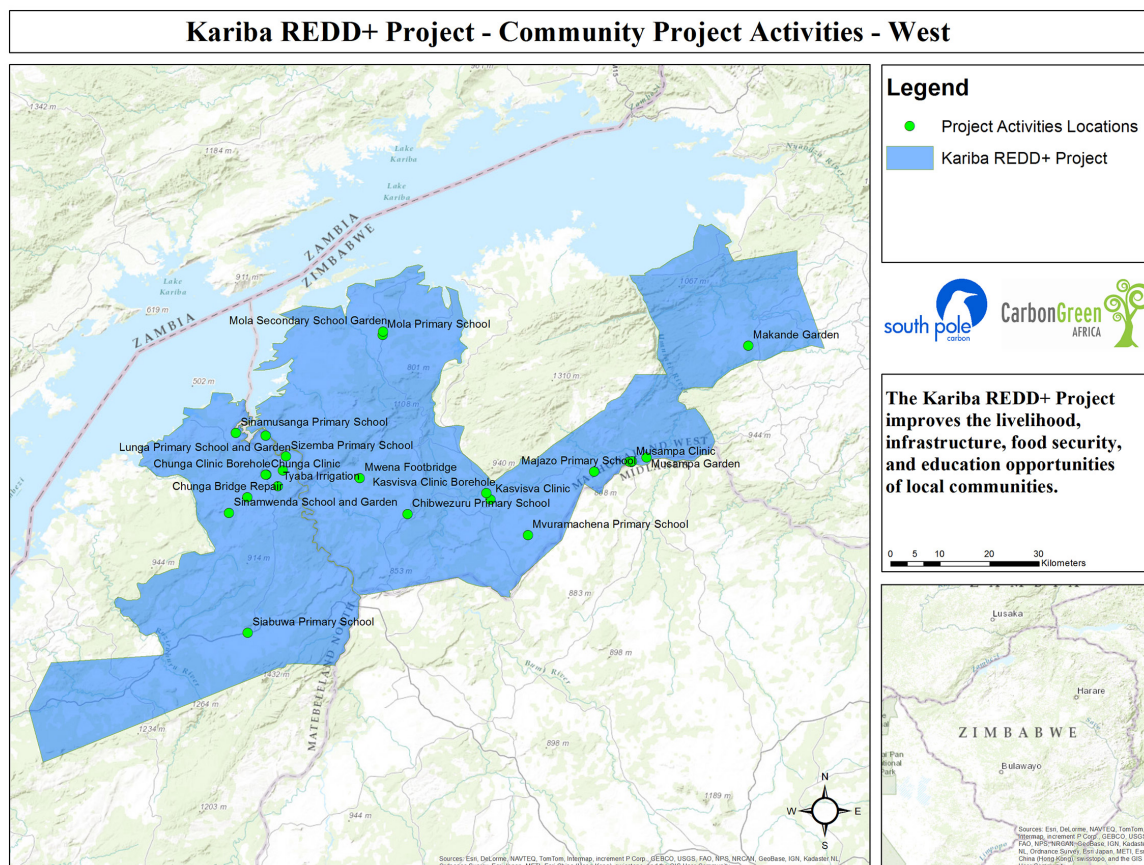
Since 2012 the project has been publishing a monthly letter for distribution to the RDC’s and local communities. To date 15 issues or 60 newsletters, one per project area per month have been published. These newsletters have covered topics such as general project progress, environmental awareness, grievances if any, vacancies if any and general topics. These newsletters have been published in English, Shona and Tonga and have been distributed to the RDCs and local communities by the CGA OGM teams.

⁵ A „Healthcare officer“ has been mentioned in the project’s PDD (p. 35). During the project’s implementation, it has been found to be more efficient to engage the existing structure of provincial and district health officers. These health officers carry out activities on behalf of the project and report back to the project through the respective area OGMs.

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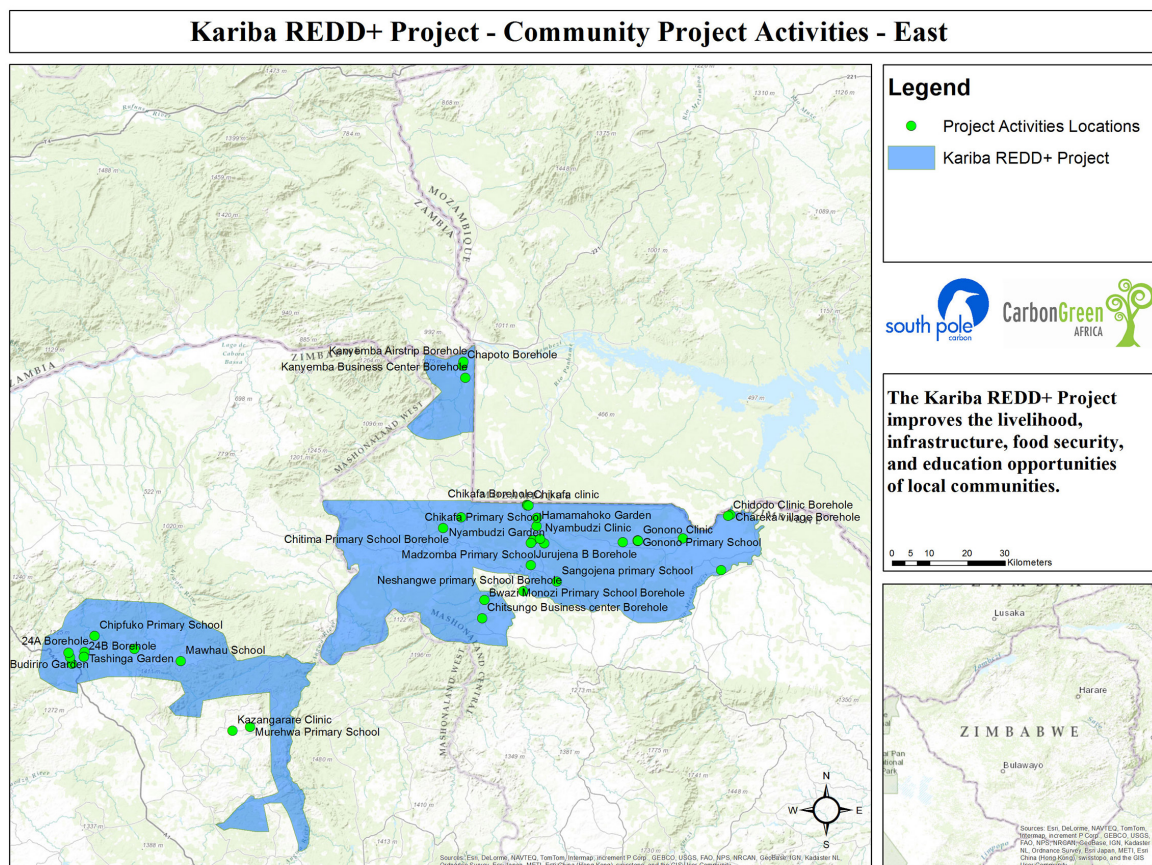
G3.3 Provide a map identifying the project location and boundaries of the project area(s), where the project activities will occur, of the project zone and of additional surrounding locations that are predicted to be impacted by project activities (e.g. through leakage).

For a map on the project boundaries and the leakage area, please refer to the CCBS PDD. The below maps show the local distribution of the different project activities and the beneficiaries since project start.

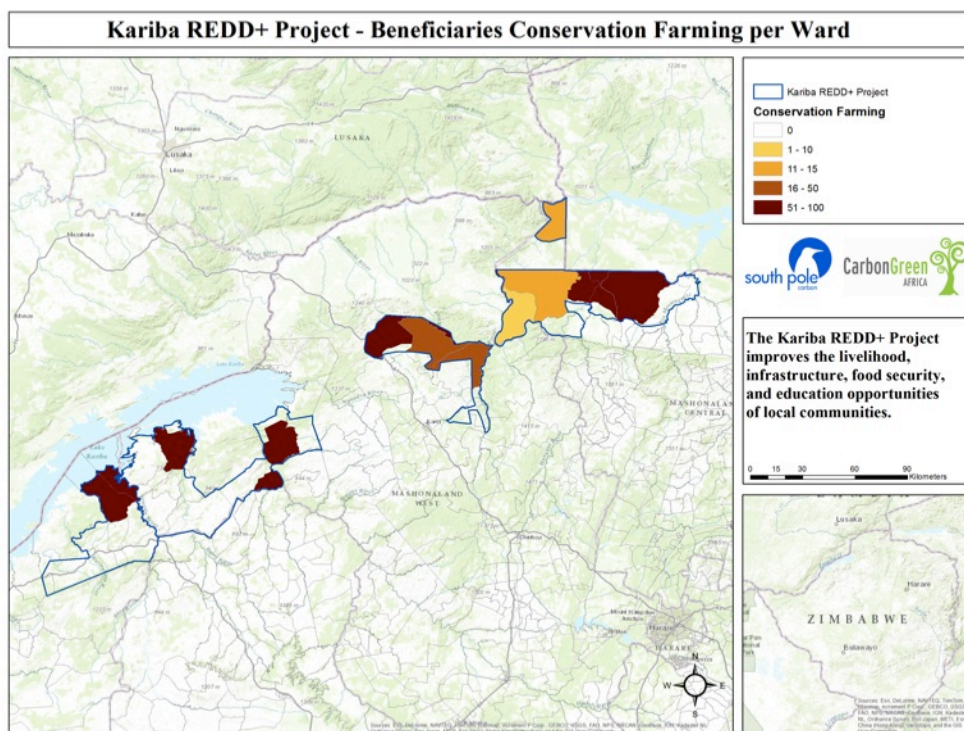


Map 1: Location of community project activities (supported schools and clinics, boreholes, bridges etc.) implemented until January 2014 in the Western part of the project.

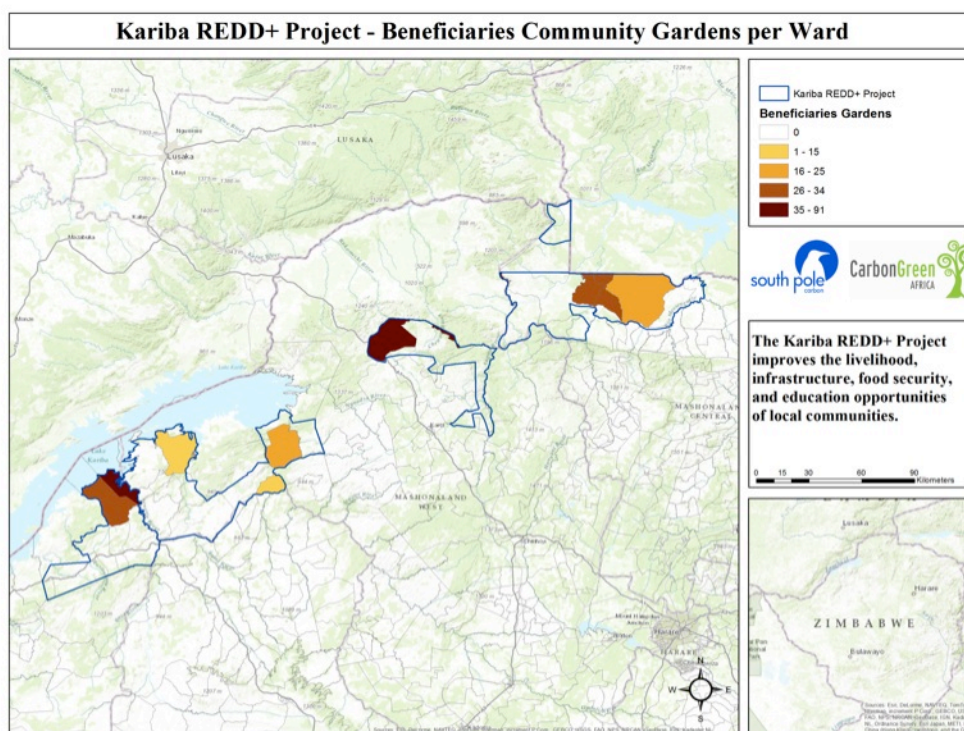
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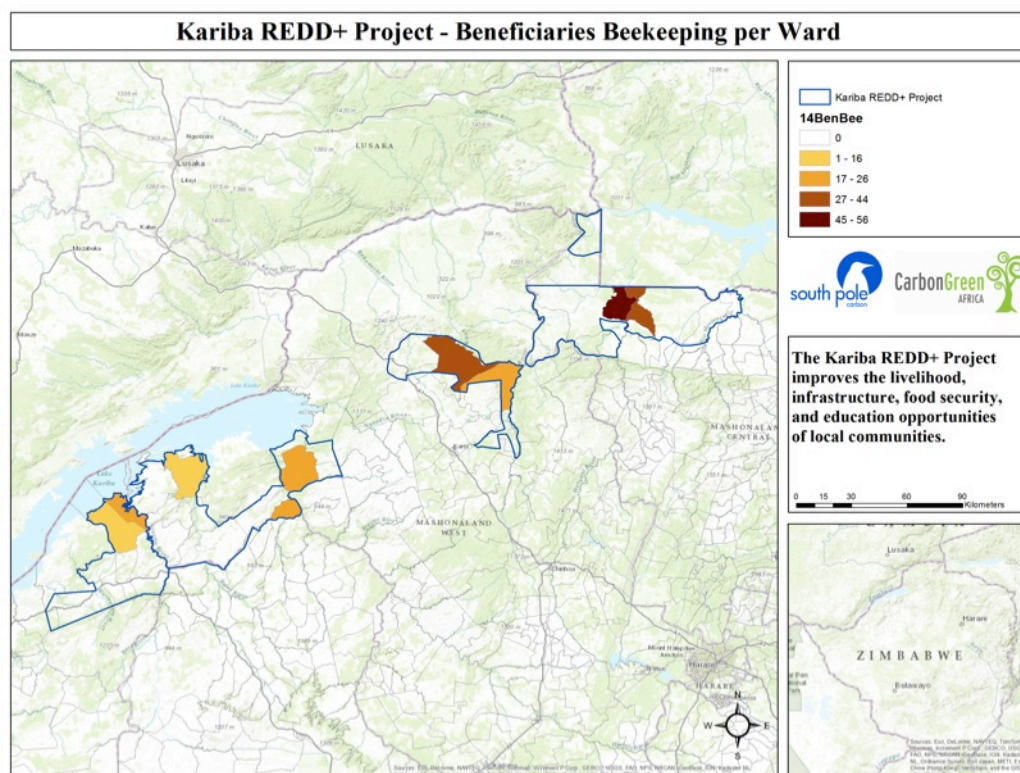
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Map 3: Distribution of beneficiaries of conservation farming activities implemented until January 2014 per ward.



Map 4: Distribution of beneficiaries of community gardens implemented until January 2014 per ward.



Map 5: Distribution of beneficiaries of beekeeping activities implemented until January 2014 per ward.

G3.4. Define the project lifetime and GHG accounting period and explain and justify any differences between them. Define an implementation schedule, indicating key dates and milestones in the project's development.

Both the project lifetime as well as the GHG-accounting period is set at 30 years, starting from July 1, 2011, ending on June 30, 2041.

This is a deviation from the CCBS PDD, which harmonizes the project's lifetime under CCBS with the validated lifetime under the VCS. Evidence for substantial activity on the ground in July 2011 and even earlier is provided in the supporting documents.

G3.5 Identify likely natural and human-induced risks to the expected climate, community and biodiversity benefits during the project lifetime and outline measures adopted to mitigate these risks.

For a description of the project's fire management activities, please refer to section G3.2.

Other risks have been discussed as part of CGA's adaptive management process (minutes of the January 2014 meeting are provided in the supporting documents).

Risks identified during the adaptive management process include lack to following topics:

Lack of community commitment in three community gardens

In three (out of eleven) community gardens (Mola, Sinamwenda and Luunga), the lack of community commitment resulted in a low use and productivity of the garden. This often was because in these communities' focus was laid on their personal gardens, rather than on the communal one. In order to address this, the three gardens are currently relocated to close-by schools, which will use the garden for educational benefits and to produce food for the students. Typically, school gardens are very well received and managed in the area, that's why it was decided to relocate the gardens to schools.

Incorrect top bars of beehives

As part of the adaptive management, faulty bee hives where discovered. The issue was wrongly dimensioned top bars. As mitigation, new top bars have been cut and distributed to the affected beekeepers.

No newly emerging risks with regard to climate change have been identified.

For G3.6, please refer to the CCBS PDD.

G3.7 Describe the measures that will be taken to maintain and enhance the climate, community and biodiversity benefits beyond the project lifetime.

The project activities are designed to be financially self-sufficient in the long run. By opening new sources of income, and after initial investments have been made and capacity reaches a certain level, the local population will be able to continue the project activities and willing to do so as it generates additional income, e.g. through the production of honey and increase agricultural yields. Thus we expect continued project activities to continue far beyond the lifetime of the project. In addition, the financial architecture of the *Kariba REDD+ Project* includes a Community and Project Sustainability Fund. This fund will ensure that the basic project activities will be continued for at least a total of 100 years. An update on the fund's status in January 2014 is provided in the supporting documents.

G3.8 Document and defend how communities and other stakeholders potentially affected by the project activities have been identified and have been involved in project.

For this monitoring period, a summary of the PIR is translated into each Shona and Tonga, and made available to the public through the CCBS website and through the local RDC offices. In addition, local communities are notified of the auditor's site visit 30 days before the site visit.

A plan for ongoing communication and consultation between the project and affected communities is included in the project's adaptive management plan, an updated version of

which is submitted in the supporting documents. In addition to this process, the project's OGM team is in continuous contact with the local communities about the project during site visits, meeting with chiefs and other leaders, and through field staff. Through this rather informal communication, the project team receives most comments from local communities. As a result of these comments, several improvements and adjustments to the project have been implemented, as part of the adaptive management approach (cf. section G3.5). Since the project start date in June 2011 to date, the *Kariba REDD+ Project* has not received any formal grievances from any community member as a result of the project. There have only been numerous requests for additional support, awareness, training and more inputs, none of which can be recorded as a grievance. The project's social impact monitoring confirms this finding (cf. CM1.1).

G3.9 Describe what specific steps have been taken, and communications methods used, to publicize the CCBA public comment period to communities and other stakeholders and to facilitate their submission of comments to CCBA.

For this monitoring period, a summary of the PIR is translated into Shona and made available to the public through the CCBS website and through the local RDC offices. In addition, local communities are notified of the auditor's site visit 30 days before the site visit. No comments have been received as a result of this outreach.

In more detail the dissemination was done as follows: one copy of the full PIR was sent to each council office with an additional copy sent to the council satellite office in Binga giving a total of five copies. As for the PIR summaries, one copy was sent to each council office, one copy to each chief and one copy to each ward councilor giving a total of 50 copies sent out. All these copies were delivered as hard copies in person by the OGM who followed up with an explanation of the need to submit any grievances through the communications channels outlined in the Adaptive Management Plan being either directly to council, OGM or CGA head office. The documents were distributed during February 14-24, 2014.

G3.10 Formalize a clear process for handling unresolved conflicts and grievances that arise during project planning and implementation. The project design must include a process for hearing, responding to and resolving community and other stakeholder grievances within a reasonable time period.

The established communications channels and grievance procedures have been explained and understood by all the stakeholders and community members through the development and implementation of the project and through the personal relationship developed between these stakeholders and the OGM teams. Together with the constant presence of the OGM teams working and interacting daily with the community members, there is also constant opportunity for any person to either verbally or in writing, submit any grievance or bring to our attention any grievance. Members of the communities have been encouraged to submit any grievances in writing as the preferred way for recording and documenting purposes. To date no grievances have been received only requests for additional inputs and more help.

G3.11 Demonstrate that financial mechanisms adopted, including projected revenues from emissions reductions and other sources, are likely to provide an adequate flow of funds for project implementation and to achieve the anticipated climate, community and biodiversity benefits.

The project's revenues will derive from the sale of carbon certificates. The project activities are scaled with the available revenue, which provides the project with flexibility with regards to the market situation. In order to ensure long-term longevity of the project, a fix share of the sales revenue is hold back in the Kariba REDD+ Trust. An updated financial plan is provided in the supporting documents.

G4. Management Capacity and Best Practices

G4.1 Identify a single project proponent, which is responsible for the project's design and implementation. If multiple organizations or individuals are involved in the project's development and implementation the governance structure, roles and responsibilities of each of the organizations or individuals involved must also be described.

Carbon Green Africa (CGA) is a private company founded to implement and manage the *Kariba REDD+ Project*. Carbon Green Investments (CGI), the official project proponent, holds the majority of CGA. CGI contracts CGA as local project implementer and overseer. CGA's mandate is to work with council and community to ensure that the community project activities and direct inputs are correctly implemented and assist in the ongoing maintenance of these. CGA is also required to do the biodiversity monitoring and conservation in conjunction with each council, as well as the monitoring of social and climate impacts.

Environment Africa is no longer involved in the project. This decision was made in order to focus the project's resources more strongly and thus increase efficiency. As a result of this, CGA now engages more strongly with the local government staff and entities that work alongside the council already and who are trained in most areas we require. Examples include the local Agritex or health officers. This change decreased the project's administration cost and allows the project to channel more funds to the project activities and communities. It will also allow the project to engage more specialized staff or entities to train and support particular project activities.

G4.2 Document key technical skills that will be required to implement the project successfully, including community engagement, biodiversity assessment and carbon measurement and monitoring skills. Document the management team's expertise and prior experience implementing land management projects at the scale of this project.

The only staff changes since validation are the leave of Environment Africa (EA) and of Warren Thorne. The field officers based in the communities who were trained with the

necessary technical skills and employed under EA have continued with their employment in the project therefore no technical skills have been lost, which means no negative effect on the project. Warren Thorne is fully replaced by Pieter Bezuidenhout, Rob Lee, Chris Moore and external organizations (see below), which have the technical skills for namely biodiversity assessments and fire control, for which Warren was planned at PDD stage. Several new project staff has been hired since validation and are thus not mentioned in the PDD:

- Rory Muil - Project General Manager and OGM for Binga
- Rob Lee - Project Technical Manager
- Ken Worsley - OGM for Nyaminyami
- Japie Smit - OGM for Mbire
- Jerry Matiza - OGM for Hurungwe

The government personal that the project has engaged includes Agritex staff, which also has the trained skills for farming, gardening and beekeeping. There is one Agritex officer in each ward. Also involved is the Environmental Management Agency (EMA), which brings to the project fire management expertise as well as general environmental management issues. They have one or two officers in each district. The staff of these organizations is fully hired and paid by the organizations themselves. However, CGA supports their operations through e.g. provision of fuel for transportation where necessary.

G4.3 Include a plan to provide orientation and training for the project's employees and relevant people from the communities with an objective of building locally useful skills and knowledge to increase local participation in project implementation.

The validated training plan has been implemented in the monitoring period. This is despite the change in the project team, where Environment Africa is no longer included in order to reduce complexity and increase efficiency. An updated training plan for the next years is provided in the supporting documents.

The OGM members and their teams have all received sufficient training to fulfill their obligations in their various employment positions. All of the training was done hands-on or as in the case of the OGM team leaders and their team members all have previous experience working with communities in the project areas in one form or another, which was enhanced by the hands-on training. All the employees are familiar with their rights as laborers. With regards to the biomass sampling, this training was done under the professional guidance of the environmental consulting company Black Crystal.

Safety of our field teams is of great importance to us particularly when it comes to anti-poaching or fire fighting. For this the OGM teams conduct their activities with the assistance of the RDC game scouts who have all received training for their positions of employment even before the inception of the project. To date the project has conducted two different trainings, one lasting three weeks and the second training lasting two weeks. A total of 37 people participated in the two trainings. These trainings were basic to intermediate level and included techniques on patrolling and apprehending or arresting, map reading and GPS use, tracking and identification of animals and signs. Fire fighting training was also

conducted at ward and village level, where members of the communities received a minimum of 19 trainings across all four RDCs and were taught how to suppress fires and make fireguards. They were also assisted in establishing their own fire-fighting teams with committees. According to the implemented social survey provided in the supporting documents, the project's employees report to be sufficiently trained for their tasks.

Training and capacity building is key in our agriculture project activities, where over 1'360 farmers were provided with training (cf. section CM1.1). Also the project's newsletter serves a means for capacity building (cf. sections G3.2 and CM1.1).

The project's capacity building particularly also focuses on women and widows as potentially less privileged groups. Several widows have been encouraged to take part in the CF program, most community gardens are cultivated primarily by women – which also receive training and inputs. Furthermore, the project started a pilot activity for bread baking, which created increased income for women.

G4.4 Show that people from the communities will be given an equal opportunity to fill all employment positions (including management) if the job requirements are met. Project proponents must explain how employees will be selected for positions and where relevant, must indicate how local community members, including women and other potentially underrepresented groups, will be given a fair chance to fill positions for which they can be trained.

Employees of the *Kariba REDD+ Project* are preferably recruited from the project area. Special care is given to an adequate training (cf. section G4.3) and remuneration.

If vacancies for particular positions are available then postings of these vacancies are advertised at the council offices, community centers, clinics etc. for all the communities. Both gender, men and women are free to apply however women or underrepresented groups will be encouraged to apply and this will be indicated on the advertised vacancy posting, giving these groups an equal opportunity to fill positions which they can be further trained for in the project.

This is supported by the number of women who are widows and have already received training in CF, beekeeping and gardening and women who already have leadership roles within these projects. In some project activities we have more women than men.

Direct employees of the project are particularly targeted by the project's social impact monitoring and where surveyed in January 2014 (cf. section CM1.1, for the full survey refer to the supporting documents).

During the survey, 93.3% of the interviewed employees originated from the project area, which is a very high value. The average age was 36.4, and 100% of the interviewed employees were men. All employees received either primary (33.3%) or secondary (66.6%) education.

During the survey, all employees reported to be either satisfied or very satisfied with the project.

When comparing these numbers to the average of all interview partners in our survey, employees are more often male, younger than average (which was 40.1%) and better

educated than the average interview participant. These differences are explained by the specific requirements to the project's employees. Nevertheless, through its adaptive management process, CGA is considering ways to open up employment to more women and un-educated staff, where possible. This will be achieved by including specific encouragement to apply for women into future job postings and by preferring female over male applicants, in case qualifications are equal.

While many positions in the project require an above-average education, for simpler jobs (e.g. camp attendant), specifically less educated applicants will be preferred and trained.

G4.5 Submit a list of all relevant laws and regulations covering worker's rights in the host country. Describe how the project will inform workers about their rights. Provide assurance that the project meets or exceeds all applicable laws and/or regulations covering worker rights and, where relevant, demonstrate how compliance is achieved.

All relevant laws and regulations are listed in the CCBS PDD, and compliance is demonstrated. There have been no changes since validation.

G4.6 Comprehensively assess situations and occupations that pose a substantial risk to worker safety. A plan must be in place to inform workers of risks and to explain how to minimize such risks.

The safety of the OGM teams and other employees is very important. Obviously anti-poaching patrolling and fire fighting carry significant risk. Our OGM teams are trained by experienced members of the project team. The employees have been trained appropriately as described in section G4.3 and stated to be sufficiently trained during our social impact survey, which also covered employees. Please refer to the supporting documents for further detail.

To further formalize the project's risk management, an Employee Risk Management Plan has now been developed and will be used going forward to inform employees on the key risks related to their job and to set a reporting framework around risks for employees. The plan is provided in the supporting documents.

G4.7 Document the financial health of the implementing organization(s).

Carbon Green Investments is a privately funded project developer and implementer. The project's financial model is provided in the supporting documents. The project's activities on the ground are designed to be scalable according to the project's revenues. This allows the project to be viable, even in case the carbon revenues turn out to be significantly under the projections.

Further evidence on the project's financial health is given in the overview of the project's trust fund, provided in the supporting documents.

G5. Legal Status and Property Rights

G5.1 Submit a list of all relevant national and local laws and regulations in the host country and all applicable international treaties and agreements. Provide assurance that the project will comply with these and, where relevant, demonstrate how compliance is achieved.

The project complies with all project-related laws and acts as pointed out in the PDD. No new relevant laws or regulations were implemented since validation.

For G5.2-G5.3, please refer to the PDD.

G5.4 Demonstrate that the project does not require the involuntary relocation of people or of the activities important for the livelihoods and culture of the communities.

The project does not include any involuntary relocation.

For G5.5-G5.6, please refer to the PDD.

III. Climate Section

CL1. Net Positive Climate Impacts

CL1.1 Estimate the net change in carbon stocks due to the project activities using the methods of calculation, formulae and default values of the IPCC 2006 GL for AFOLU or using a more robust and detailed methodology. The net change is equal to carbon stock changes with the project minus carbon stock changes without the project (the latter having been estimated in G2). This estimate must be based on clearly defined and defensible assumptions about how project activities will alter GHG emissions or carbon stocks over the duration of the project or the project GHG accounting period.

The *Kariba REDD+ Project* generates a Net Positive Climate Impact due to avoided deforestation in the project area. As an update from the ex-ante climate impact estimation presented in the CCBS PDD, the project's climate impact is now assessed inline with the project's CCBS monitoring plan by applying the monitoring procedures lined out in the project's VCS PD, including as specific CCBS carbon accounting requirements the accounting of non-CO₂ GHGs and forest cover change detection also for the first year, which is not required under the applied VCS methodology.

A remote sensing analysis has been conducted in order to monitor the project's net change in carbon stock, inline with the applied VCS methodology and the validated VCS PD. The results of the forest cover analysis is provided in the supporting documents. The average annual forest loss during the monitoring period is 3.03% for Open Woodland and 0.96% for Woodland.

Based on the forest cover analysis and the established permanent sampling plots, the net change in forest carbon stocks was assessed. The total net stock change as an effect of the project is 5'631'766 tCO₂e.

Refer to the calculation of the project's climate impacts and the results of the remote sensing forest cover analysis in the supporting documents for further information.

CL1.2 Estimate the net change in the emissions of non-CO₂ GHG emissions such as CH₄ and N₂O in the with and without project scenarios if those gases are likely to account for more than a 5% increase or decrease (in terms of CO₂-equivalent) of the project's overall GHG emissions reductions or removals over each monitoring period.

Based on the deforestation analysis implemented for this monitoring period (cf. section CL1.1) and by applying the approach described in the CCBS PDD (PDD sections G2.3 and CL1.2), the project's net change in non-CO₂ GHG emissions is calculated. The net change in non-CO₂ GHG emission for this monitoring period is 8'804 tCO₂e.

Refer to the calculation of the project's climate impacts in the supporting documents for further information. The accounting for non-CO₂ GHGs is a specific requirement under the CCBS, which is not applied by the project under the VCS.

CL1.3 Estimate any other GHG emissions resulting from project activities. Emissions sources include, but are not limited to, emissions from biomass burning during site preparation, emissions from fossil fuel combustion, direct emissions from the use of synthetic fertilizers, and emissions from the decomposition of N-fixing species.

Use of synthetic fertilizers is not promoted by the project activities; decomposition of N-fixing is not raised through project activities.

CL1.4 Demonstrate that the net climate impact of the project is positive. The net climate impact of the project is the net change in carbon stocks plus net change in non-CO₂ GHGs where appropriate minus any other GHG emissions resulting from project activities minus any likely project-related unmitigated negative offsite climate impacts (see CL2.3).

The net reduction in CO₂ emissions is calculated based on the approach lined out in the CCBS PDD, using monitoring data which have been collected inline with the applied VCS methodology and as lined out in the project's validated PD and the project's CCBS monitoring plan.

The net climate impact is calculated by adding the net emission reductions of CO₂ and non-CO₂ GHGs. No other significant GHG emissions or leakage have occurred to date (see sections CL1.3 and CL2.1).

Compared to the "without project" scenario, the project has a strong net positive impact. In total, 5'640'570 tCO₂e of GHG emissions have been reduced.

Refer to the calculation of the project's climate impacts in the supporting documents for further information.

For CL1.5, please refer to the PDD.

CL2. Offsite Climate Impacts ('Leakage')

CL2.1 Determine the types of leakage that are expected and estimate potential offsite increases in GHGs (increases in emissions or decreases in sequestration) due to project activities. Where relevant, define and justify where leakage is most likely to take place.

For the project's threats due to leakage, refer to the CCBS PDD, section CL2.1. Inline with the CCBS PDD and the CCBS monitoring plan, leakage is monitored according to the requirements of the applied VCS methodology, rigorously through permanent sampling

plots, which are established in the leakage belt. The first monitoring event under the VCS has confirmed that no leakage has occurred. Any leakage detected during future VCS monitoring events would also be reported and accounted for as Climate Impacts under CCBS.

For section CL2.2, please refer to the CCBS PDD.

CL2.3 Subtract any likely project-related unmitigated negative offsite climate impacts from the climate benefits being claimed by the project and demonstrate that this has been included in the evaluation of net climate impact of the project (as calculated in CL1.4).

The project's leakage has been monitored since the project start and reported and verified under the requirements of the VCS. No leakage has been detected. Please refer to the project's verified VCS monitoring report, which is provided in the supporting documents.

CL2.4 Non-CO₂ gases must be included if they are likely to account for more than a 5% increase or decrease (in terms of CO₂-equivalent) of the net change calculations (above) of the project's overall off-site GHG emissions reductions or removals over each monitoring period.

See section CL2.3.

CL3. Climate Impact Monitoring

CL3.1 Develop an initial plan for selecting carbon pools and non-CO₂ GHGs to be monitored, and determine the frequency of monitoring. Potential pools include aboveground biomass, litter, dead wood, belowground biomass, wood products, soil carbon and peat. Pools to monitor must include any pools expected to decrease as a result of project activities, including those in the region outside the project boundaries resulting from all types of leakage identified in CL2. A plan must be in place to continue leakage monitoring for at least five years after all activity displacement or other leakage causing activity has taken place. Individual GHG sources may be considered 'insignificant' and do not have to be accounted for if together such omitted decreases in carbon pools and increases in GHG emissions amount to less than 5% of the total CO₂-equivalent benefits generated by the project. Non-CO₂ gases must be included if they are likely to account for more than 5% (in terms of CO₂-equivalent) of the project's overall GHG impact over each monitoring period. Direct field measurements using scientifically robust sampling must be used to measure more significant elements of the project's carbon stocks. Other data must be suitable to the project site and specific forest type.

The project has been monitored and reported inline with the CCBS PDD requirements and the applied VCS methodology. In line with the PDD and the CCBS monitoring plan, the

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project's monitoring followed the approach line out in the applied VCS methodology and the VCS PD, using a network of permanent sampling points combined with satellite imagery. As a conservative deviation from the CCBS PDD, soil carbon has not been monitored.

With regards to the accounting procedures for the climate impacts, these are accounted following CCBS requirements and in the same way as line out in the ex-ante estimations included in the PDD. The inclusion of non-CO₂ GHGs as well as forest cover change detection in the first year (not required under the VCS methodology) under CCBS are the differences in the accounting framework under VCS and CCBS.

For more detailed information on the remote sensing approach applied for the monitoring, please refer to the RS Annex provided in the supporting documents.

CL3.2 Commit to developing a full monitoring plan within six months of the project start date or within twelve months of validation against the Standards and to disseminate this plan and the results of monitoring, ensuring that they are made publicly available on the internet and are communicated to the communities and other stakeholders.

A full monitoring plan has been developed and published on the CCBS website.⁶ Numerous copies of the monitoring plan were printed and made available to the RDC's and distributed to the communities, in particular the chiefs and ward councilors to share with the communities by the OGM Teams.

For the Climate Impact monitoring, the *Kariba REDD+ Project* is following the requirements by the applied VCS methodology, as stated in the project's CCBS monitoring plan. The approach is further laid out in the project's validated VCS PD, which is provided in the supporting documents.

⁶ <http://www.climate-standards.org/?s=kariba>

IV. Community Section

CM1. Net Positive Community Impacts

CM1.1 Use appropriate methodologies to estimate the impacts on communities, including all constituent socio-economic or cultural groups such as indigenous peoples (defined in G1), resulting from planned project activities. A credible estimate of impacts must include changes in community well-being due to project activities and an evaluation of the impacts by the affected groups. This estimate must be based on clearly defined and defensible assumptions about how project activities will alter social and economic well-being, including potential impacts of changes in natural resources and ecosystem services identified as important by the communities (including water and soil resources), over the duration of the project. The 'with project' scenario must then be compared with the 'without project' scenario of social and economic well-being in the absence of the project (completed in G2). The difference (i.e., the community benefit) must be positive for all community groups.

The *Kariba REDD+ Project's* direct and indirect impacts on the local communities have been monitored according to the project's monitoring plan and Standard operation procedure (cf. section CM3.3).

With regards to the project's direct effects, 48 workshops in improved agriculture have been conducted, reaching a total of 1'363 participants. 11 community gardens have been established. A total of 233 participants benefited from our nine beekeeping workshops. 656 beekeeping starter sets were provided. Also, schools and clinics have been supported. The results of all indicators for the project's direct effects are provided separately in the supporting documents.

To monitor the project's indirect social effects, and extensive survey campaign has been implemented in January 2014. All results are provided in the supporting documents. A total of 372 local community members, direct project beneficiaries and employees have been reached. Interviews where necessary were conducted in the local language Shona and participants where selected randomly.

Most interview partners expressed their satisfaction with the project, as shown in Table 3.

Direct beneficiaries and employees reported consistently positive impacts of the *Kariba REDD+ Project* on their livelihoods, food security, children's access to education and healthcare, as shown in Table 4-7.

This shows the project's positive impacts in community aspects.

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Table 3: Satisfaction with the Kariba REDD+ Project.

	Community members	Beneficiaries	Employees
	%	%	%
Very unsatisfied	0.0	0.0	0.0
Unsatisfied	2.5	1.3	0.0
Indifferent	35.4	0.0	0.0
Satisfied	58.9	65.8	46.7
Very satisfied	3.2	32.9	53.3

Table 4: Reported project impact on livelihoods by beneficiaries and employees.

	Beneficiaries	Employees
	%	%
Very negatively	0.0	0.0
Negatively	0.0	0.0
No impact	2.6	0.0
Positively	80.5	73.3
Very positively	16.9	26.7

Table 5: Reported project impact on food security by beneficiaries and employees.

	Beneficiaries	Employees
	%	%
Very negatively	0.0	0.0
Negatively	0.0	0.0
No impact	1.3	13.3
Positively	75.3	73.3
Very positively	23.4	13.3

Table 6: Reported project impact on children's access to education by beneficiaries and employees.

	Beneficiaries	Employees
	%	%
Very negatively	0.0	0.0
Negatively	0.0	0.0
No impact	34.7	0.0
Positively	61.3	73.3
Very positively	4.0	20.0
N/A	0.0	6.7

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Table 7: Reported project impact on healthcare by beneficiaries and employees.

	Beneficiaries	Employees
	%	%
Very negatively	0.0	0.0
Negatively	0.0	0.0
No impact	7.8	6.7
Positively	80.5	60.0
Very positively	11.7	33.3

<i>CM1.2 Demonstrate that no High Conservation Values identified in G1.8.4-6 will be negatively affected by the project.</i>
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The project area is identified as being of the community-related High Conservation Values (HCVs) 5 (fundamental basic needs) and 6 (cultural identity).

In order to assess the project's impact on these HCVs, four specific questions have been included in the project's social impact survey (cf. section CM1.1).

In order to assess projects impacts on HCV 5, the following questions have been asked:

- "Through the project, are you, or members of your household, restricted in collecting the following forest products?" (for building material, firewood, fruits and other products separately).
- "If yes, did the project provide you with alternative sources to collecting these products in natural forests?"
- "If yes, are the alternative provided by the project attractive to you?"

The answer to the first question was "not restricted" in 100% of the cases, which left the following two questions not answered.

With regards to HCV 6, the following question was included in the survey:

- "Through the project, are you or members of your household restricted in using the forest to fulfil your cultural needs?"

Also here, the answer was "not restricted" in 100% of the cases.

Please refer to the results of the social impact survey (questions 9-12) provided separately for further reference.

CM2. Offsite Stakeholder Impacts

CM2.1 identify any potential negative offsite stakeholder impacts that the project activities are likely to cause.

The *Kariba REDD+ Project* focuses on providing to communities attractive alternative livelihoods, which reduce the pressure on local forests. Since the project relies on providing positive incentives, negative impacts on stakeholders are not expected. In addition, the large project size and the limited mobility of local communities further reduce potential negative impacts.

The only identified potentially affected stakeholders include the population of wards within participating RDCs, which do not form part of the project. In order to identify and mitigate any potentially negative impacts on these communities, there is an ongoing dialogue with these stakeholders through the RDCs councils. The RDC councils have a full council meeting at minimum four times per year. These meetings include every ward councilor, so also the councilors from wards, which are not part of the project. The councilors update the council on all activities and issues within their wards. If there are any negative impacts by the project these will be reported to the council during these meetings, and reported to CGA through the councils. To date, no negative reports have been made and only requests to extend the project, so that these offsite stakeholders can also benefit directly from the project, have been received.

For CM2.2- CM2.3, please refer to the CCBS PDD.

CM3. Community Impact Monitoring

For CM3.1- CM 3.2, please refer to the CCBS PDD.

CM3.3 Commit to developing a full monitoring plan within six months of the project start date or within twelve months of validation against the Standards and to disseminate this plan and the results of monitoring, ensuring that they are made publicly available on the internet and are communicated to the communities and other stakeholders.

A full monitoring plan has been developed and published on the CCBS website.⁷ Numerous copies of the monitoring plan were printed and made available to the RDC's and distributed

⁷ <http://www.climate-standards.org/?s=kariba>

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to the communities, in particular the chiefs and ward councilors to share with the communities by the OGM Teams.

The results of the monitoring are published in the PIR, which is not only published online for public consultation, but also distributed locally through the PIR summaries, which have been translated to Tonga and Shona and distributed in the project area. Community members have also been invited to comment on the PIR and the project (cf. section G3.8).

In addition, a Standard Operating Procedure for Community Impact Monitoring has been prepared and is provided to the auditor separately.

V. Biodiversity Section

B1. Net Positive Biodiversity Impacts

B1.1 Use appropriate methodologies to estimate changes in biodiversity as a result of the project in the project zone and in the project lifetime. This estimate must be based on clearly defined and defensible assumptions. The 'with project' scenario should then be compared with the baseline 'without project' biodiversity scenario completed in G2. The difference (i.e., the net biodiversity benefit) must be positive.

As described in the PDD, in the without project case, the wildlife populations would continue to decline sharply due to undamped deforestation and poaching. The *Kariba REDD+ Project* not only reduces the deforestation rate in the project area significantly, it also reduces the poaching pressure on wildlife through patrolling and further anti-poaching measures.

The results of the project's biodiversity impact monitoring are given in

Table 8. It shows a significant presence of wildlife in the area, including several threatened species. Namely elephants, buffalos and hippos are very commonly seen in the project area. Normalizing the number of sightings by team-days spent monitoring biodiversity shows a higher value in 2013 compared to 2012, though it is uncertain whether this effect is statistically robust. The RDC teams, while carrying out anti-poaching activities, also reported the presence of a pack of about 25 Painted Dogs in the Hurungwe area. However, these have not been covered under the project's formal monitoring to-date.

Tree diversity was assessed during a monitoring campaign in fall 2012. The monitoring campaign was fully integrated into the carbon stock assessment implemented for VCS on 142 circular or transect Permanent Sampling Plots (PSPs) of 254 m² each. During the campaign, a total of 171 tree species was identified. Of the about 5'600 identified trees, the ten most common species are shown below in Table 9. The complete analysis is provided in the supporting material. The analysis of the tree vegetation will allow detecting mid- and long-term changes of the local vegetation (e.g. due to climate change or a change in the fire or grazing regime), which will help to assess the project's biodiversity impacts and to inform the project's management.

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Table 8: Sightings and tracks of wildlife in the project area during until 31 January 2014.

Year		2012	2013	2014
Team-days spent monitoring		91	290	54
Species	Status			
Lion	VU	7	16	0
Elephant	VU	29	649	100
Black Rhino	CR	0	0	0
Common Hippo	VU	46	161	2
Cheetah	VU	0	0	0
Southern Ground hornbill	VU	2	26	5
Lappet-faced vulture	VU	2	0	0
White-headed vulture	VU	0	0	0
Painted Dog	EN	0	0	0
Buffalo		25	577	10
Leopard		3	5	2
Zebra		5	22	1
Other spp.		242	936	21
Total threatened spp.		86	852	107
Total all spp.		361	2392	141
Threatened spp. / team day		0.95	2.94	1.98
All spp. / team day		3.97	8.25	2.61

Table 9: Ten most common tree species during field campaign in 2012.

Tree species	Abundance
<i>Colophospermum mopane</i>	15.73%
<i>Julbernardia globiflora</i>	7.12%
<i>Combretum apiculatum</i>	7.02%
<i>Diospyros quiloensis</i>	6.21%
<i>Brachystegia boehmii</i>	4.97%
<i>Combretum eleagnoides</i>	3.56%
<i>Freisoldelsia obovata</i>	2.72%
<i>Combretum mossambicense</i>	2.19%
<i>Diplorhynchus condylocarpon</i>	2.19%
<i>Combretum celastroides</i>	2.08%
Total	53.79%

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The project's positive impact on biodiversity is particularly visible in its anti-poaching measures, e.g. through snares which are removed from the forest habitats. Anti-poaching patrols are implemented in close cooperation with the local RDCs. Patrols monitor wildlife, remove snares and other traps from the forest, inform local communities and, where necessary enforce the existing anti-poaching regulations. Table 10 below gives an overview over the project's anti-poaching activities to-date. During a total of over 300 team-days spent patrolling, over 600 snares could be removed from the field, which means a substantial relief of pressure on the local wildlife. Nevertheless, poached wildlife was still recorded including of poaching of threatened species, particular elephants. Elephants are typically poached by commercial poachers, which partly come from outside the project area. Poaching of other animals such as Impala is typically done by locals for subsistence. Poaching is illegal in the project area, and would also be illegal without the project.

The project is working on further reducing the pressure of poaching on the local wildlife, as a necessary complementary activity to habitat conservation, in order to further increase the project's positive impact on the local biodiversity.

Table 10: Overview of project's anti-poaching activities until 31 January 2014.

Year		2012	2013	2014
Team-days spent patrolling		70	275	0
No of snares removed		152	484	0
No of poachers arrested		13	59	0
Poached species	Status			
Lion	VU	0	0	0
Elephant	VU	16	10	0
Black Rhino	CR	0	0	0
Common Hippo	VU	1	1	0
Cheetah	VU	0	0	0
Southern Ground hornbill	VU	0	0	0
Lappet-faced vulture	VU	0	0	0
White-headed vulture	VU	0	0	0
Painted Dog	EN	0	0	0
Buffalo		0	6	0
Leopard		0	0	0
Impala		3	5	0
Other spp.		0	10	0
Total threatened spp.		17	11	0
Total all spp.		20	32	0

B1.2 Demonstrate that no High Conservation Values identified in G1.8.1-3 will be negatively affected by the project.

The identified HCV1 is a major focus of the project. Through reduced forest loss and poaching pressure the project significantly improves the habitat conditions for threatened wildlife in the area (cf. section B1.1).

B1.3 Identify all species to be used by the project and show that no known invasive species will be introduced into any area affected by the project and that the population of any invasive species will not increase as a result of the project.

The project will use species during its agricultural activities and woodlot establishments (see section G3.2). Invasive species are not used.

Species used in the *Kariba REDD+ Project* include the following:

- Garlic (*Allium sativum*)
- Peanuts (*Arachis hypogaea*)
- Chilli Peppers (*Capsicum spp.*)
- Eucalyptus (*Eucalyptus robusta* & *E. tereticornis*; fire wood, tobacco curing)
- Soy Bean (*Glycine max*)
- Jatropha (*Jatropha curcas*; oil, life fences)
- Cassava (*Manihotes culenta*)
- Moringa (*Moringa oleifera*; vegetable, fodder)
- Sugar Bean (*Phaseolus lunatus*)
- Sorghum (*Sorghum bicolor*)
- Cowpea (*Vigna unguiculata*)
- Maize (*Zea mays*)

As the project evolves, new species could be introduced, taking into account their invasive potential. No species that are likely to have a negative effect will be used. The population of any invasive species does not increase as a result of the project.

For B1.4-B1.5, please refer to the CCBS PDD.

B2. Offsite Biodiversity Impacts

For B2.1-B2.3, please refer to the CCBS PDD.

B3. Biodiversity Impact Monitoring

For B3.1-B3.2, please refer to the CCBS PDD.

B3.3 Commit to developing a full monitoring plan within six months of the project start date or within twelve months of validation against the Standards and to disseminate this plan and the results of monitoring, ensuring that they are made publicly available on the internet and are communicated to the communities and other stakeholders.

A full monitoring plan has been developed and published on the CCBS website.⁸ Numerous copies of the monitoring plan were printed and made available to the RDC's and distributed to the communities, in particular the chiefs and ward councilors to share with the communities by the OGM Teams.

The results of the monitoring are published in the PIR, which is not only published online for public consultation, but also distributed locally through the PIR summaries, which have been translated to Tonga and Shona and distributed in the project area. Community members have also been invited to comment on the PIR and the project (cf. section G3.8).

In addition, a Standard Operating Procedure for Biodiversity Impact Monitoring has been prepared and is provided to the auditor separately.

⁸ <http://www.climate-standards.org/?s=kariba>

V. Gold Level Section

GL1. Climate Change Adaptation Benefits

For GL1.1, please refer to the CCBS PDD.

GL1.2 Identify any risks to the project's climate, community and biodiversity benefits resulting from likely climate change and climate variability impacts and explain how these risks will be mitigated.

As lined out in the PDD, risks emerging from ongoing climate change are covered in the project's adaptive management process. No new risks have been identified in the adaptive management meeting in January 2014. The full minutes of the meeting is provided in the supporting documents.

For GL1.3, please refer to the CCBS PDD.

GL1.4 Demonstrate that the project activities will assist communities and/or biodiversity to adapt to the probable impacts of climate change.

As pointed out in the PDD, section GL1.3, the productivity of main crops such as maize and wheat is predicted to decrease in the project area due to increasing temperatures and reduced rainfall. Through the project's activities, the communities are assisted to adapt to these impacts of climate change and particularly also reduced productivity of crops. Namely, the introduction of beekeeping using local wild bees, direct employment, training for farmers on more drought-adapted and yield-increasing conservation farming techniques and technical support on irrigation schemes help communities to adapt a changing climate. These activities increase the income of local communities; diversify income sources and thus making communities less dependent on crops susceptible to climate-change; and increase the yield of field crops, thereby counteracting the effects of climate change.

Please refer to section CM1.1 for G3.2 for a more detailed description of the current status of the mentioned project activities.

GL2. Exceptional Community Benefits

This section has not been subject to validation. For a description of the project's impact on the poorest segments of the local communities, please refer to the CCBS PDD.

GL3. Exceptional Biodiversity Benefits

The project area of the *Kariba REDD+ Project* fulfills both vulnerability criteria GL3.1.1 and GL3.1.2. The area hosts African wild dogs (*Lycaon pictus*), which are endangered (EN) species according to the IUCN. Furthermore, the project area contains many individuals of vulnerable (VU) species, such as African elephant (*Loxodonta africana*), Lion (*Panthera leo*), Leopard (*Panthera pardus*) and Cheetah (*Acinonyx jubatus*), among others.

Endangered species are at the focus of the project's biodiversity impact monitoring. A significant population of different threatened species has been recorded since the project start in 2011. For detailed information, please refer to section B1.1.

List of supporting documents

- Calculation of the project's climate impacts ("140516_Climate Impacts.xlsx").
- Indicators for direct social effects ("140205_Social monitoring direct effects.xlsx").
- Minutes of adaptive management meeting, January 2014 ("140520_Adaptive Management meeting 31 01 14_minutes.pdf").
- Overview over financial status of project trust fund ("140205_Trust Fund overview.xlsx"). This document is confidential.
- Overview over revenue distribution and longevity fund ("140205_Community & Project Sustainability Fund Distributions.xlsx"). This document is confidential.
- Remote Sensing Annex ("140214_Kariba PIR RS Annex.docx").
- Results of RS forest cover analysis ("140625_CCBS def Verif_2011-2013 Results.xlsx").
- Results of Social Impact Survey ("140205_Kariba_REDD+_social_impacts_survey_2014.pdf").
- Results of tree field monitoring campaign ("140210_Kariba_biodiversity_tree_species_data_analysis.xlsx").
- Results of wildlife and anti-poaching monitoring ("140214_Kariba_biodiversity_wildlife_data_final.xlsx").
- Standard Operating Procedure for Biodiversity Impact Monitoring ("140106_Kariba_Biodiversity monitoring_SOP_Final.pdf").
- Standard Operating Procedure for Community Impact Monitoring ("140107_Kariba_social monitoring_SOP_Final.pdf").
- Updated financial model of the project ("140205_Kariba_Financials_Auditor.xlsx"). This document is confidential.
- Validated baseline model developed for VCS ("140210_CDM and Leakage Model_V5_CCBS.xlsx").
- Validated VCS PD of the Kariba REDD+ Project ("130816_Kariba VCS PD_V11.pdf").
- Verified VCS MR of the Kariba REDD+ Project ("130816_MR_Kariba_M1_V8.pdf").
- Further supporting material