

CEPF Final Project Completion Report

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| Organization Legal Name: | Fauna & Flora International |
| Project Title: | From Bee-burners to Beekeepers: Supporting Community Beekeeping Organization in Príncipe |
| Grant Number: | CEPF-100798 |
| CEPF Region: | Guinean Forests of West Africa |
| Strategic Direction: | 1 Empower local communities to engage in sustainable management of 40 priority sites and consolidate ecological connectivity at the landscape scale |
| Grant Amount: | |
| Project Dates: | July 01, 2017 - November 30, 2019 |
| Date of Report: | February 07, 2020 |

IMPLEMENTATION PARTNERS

List each partner and explain how they were involved with the project.

Fundação Príncipe: Key implementing partner with vital local visibility and strong relationships with stakeholders/government officials. Involved in all aspects of project including implementation of activities, provision of staff, office facilities, admin support and equipment purchase

Príncipe's Regional Government: Supported creation of the regional bee protection law. Economy department engaged in meetings with bee cooperative COOPAPIP (Cooperativa dos Apicultores da Região Autónoma do Príncipe). All departments/secretaries supported project through awareness campaigns including Law, Infrastructure, Education and Forestry department (for the bee rescue). Support from Príncipe's regional President (Mr José Cassandra), who met with COOPAPIP to resolve challenges

Here be Dragons (HBD): Donated beekeeping material (USD 19,660.52) and land (1 ha) for COOPAPIP's collective apiary at Praia Boi. Provided commercial agreements with hotels and tourist destination Roça Paciência, buying and re-selling COOPAPIP products. Contributed free medical support for planning travel to Mozambique learning exchange, and trained 3 project staff in first aid

MICAIA Foundation: Responsible for travel logistics for Mozambique learning exchange (hotel reservations, transport, technician monitoring and community contact). Fuel and staff time provided at no cost, an estimated project contribution of USD 1250 (600 km road travel, 6 driver workdays, 7 technician workdays)

CONSERVATION IMPACTS

Summarize the overall impact of your project, describing how your project has contributed to the implementation of the CEPF ecosystem profile.

Significant results were achieved in the following areas:

A. A dramatic reduction in incidences of the burning of bees in Príncipe has been achieved through engagement with beekeepers, provision of support to COOPAPIP, approval of the regional bee protection law and creation of beekeeping guidelines. The benefits of this are expected to include a rise in wild bee populations and associated pollination services, both for forests and agricultural systems.

B. The project has strengthened the livelihoods and wellbeing of cooperative members and their households, through provision of income from sustainable beekeeping. Longer-term benefits are expected to include increased food and income security for beekeepers and their wider communities.

C. Increased civil society capacity has been achieved through the strengthening of management and administrative systems. The project enhanced the ability of COOPAPIP and Fundação Príncipe to plan and deliver their missions. Expected benefits include ecological and economic sustainability for COOPAPIP and the enhanced capability of Fundação Príncipe to deliver improved conservation projects.

Planned Long-term Impacts – 3+ years (as stated in the approved proposal)

| Impact Description | Impact Summary |
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Planned Short-term Impacts – 1 to 3 years (as stated in the approved proposal)

| Impact Description | Impact Summary |
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| By mid-2019, members of 9 communities on Príncipe will be actively engaged in the COOPAPIP and so have improved access to livelihoods activities that generate additional income compared to baseline. | The project partially achieved its target, engaging 7 communities within COOPAPIP. Initially the 31 COOPAPIP beekeepers represented 10 communities. However, not all were actively engaged, and following restructuring the number of members was reduced to 11, representing 7 communities. These active members generated substantial income through beekeeping. |
| Best practice guidelines for sustainable beekeeping and associated agroforestry are developed implemented on Príncipe (from baseline of 0) | The project partially achieved its target, producing 1 guideline document from a baseline of 0. A beekeeping manual based on project experiences was created and is included as attachment "Manual de apicultura do Príncipe". The guidelines for agroforestry were not created since this component of the project was dropped in June/July 2019. This challenge is discussed above and against final deliverable 2.1. |
| 1 local NGO based on Príncipe (FPT), throughout engagement with FFI will have improved capacity to handle institution and project management, and a more efficient organisational governance structure | The project achieved the target increase of 1 from a baseline of 0. The CSTT assessments for Fundação Príncipe in January 2018 and September 2019 demonstrated an overall increment of 22.5 points. There were improvements in all areas, but particularly strategic planning (+10 points), human resources (+5 points), and financial resources (+5 points). For supporting details see attachments "FP final CSTT" and "FP & COOPAPIP CSTT and GTT report". |
| 1 local CSO (COOPAPIP) functions as an effective community led cooperative, generating significant income to support its continued running over the longer term | The project achieved the target increase of 1 from a baseline of 0. COOPAPIP is currently functioning as a community-led cooperative with 11 members from 7 different communities, including 3 women (two of which are on the board). 20% of the value of all sales of honey and wax products is retained by the cooperative to support organisational costs. During the project period this amounted to 56,498 Santonian dobras |

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| | (EUR 2,306 or USD 2,557), which is a significant amount in the local context. The current bank balance of COOPAPIP is USD 700 and the projections included within the recent business plan indicate sufficient financial sustainability for continued running over the longer term. For supporting details see attachments "COOPAPIP Tracking Document", "COOPAPIP assembly 08-08-2019", & "REGIMENTO INTERNO DA COOPERATIVA DOS APICULTORES DO PRINCÍPE". |
| 2 CSOs (FPT and COOPAPIP) are promoting themselves regionally and nationally through community outreach | The project achieved the target increase of 2 from a baseline of 0. A variety of community outreach activities were conducted by COOPAPIP during the project, and a post-project awareness assessment indicated high levels of engagement. In particular, 91% of respondents were aware of the project, 76% were aware of the law, 50% could explain details of the law, and 37% had participated in direct discussions of beekeeping with COOPAPIP members. The profile of Fundação Príncipe with local communities and the regional government was improved through their recognition as an implementing partner, and the inclusion of the Fundação Príncipe logo in all project materials (e.g. poster, stickers, etc). Posts about project activities were regularly made of the Fundação Príncipe Facebook page, whose followers increased from 3021 to 5700 during the project period. For supporting details see attachments "Awareness Assessment Report". |
| 9 communities on Príncipe will be actively engaged in sustainable management of forest resources through good beekeeping practice and support agroforestry practices which promote widespread bee pasture | The project did not achieve its target of 9 communities actively engaging in sustainable management of the PNP buffer zone. The buffer zone agroforestry component of the project was revised then eventually dropped following CEPF monitoring visit in early June 2019 and agreement with FFI in July 2019. Agroforestry in the buffer zone was not feasible due to multiple factors, including land ownership (the beekeepers don't have properties inside the buffer zone and attempts to initiate a community apiary were unsuccessful), lack of clear regulations and rules relating to agroforestry systems inside the buffer zone, low support from government, and lack of consensus about the species to be planted). This challenge is discussed above and against final deliverable 2.1. |
| 1 local CSO (COOPAPIP) has significantly enhanced organisational capacity | As per the previous impact, the project achieved the target increase of 1 from a baseline of 0. The Civil Society Tracking Tool (CSTT) assessments for COOPAPIP in January 2018 and September 2019 demonstrated an overall increase of 6.5 points. This was due to improvement in financial resources, management systems and strategic planning. There was a decrease in relation to human resources, but this was due purely to reinterpretation of a question about staff being paid through the cooperative, rather than a material change. For supporting details see attachments "COOPAPIP final CSTT" and "FP & COOPAPIP CSTT and GTT report". |
| At least two demonstrative agroforestry areas are in place (increased from a baseline of 0 ha) | The project did not achieve the target of two demonstrative agroforestry plots. Two 400m ² agroforestry plots were identified outside of the buffer zone of PNP in March 2019 (Bela Vista and Aeroporto) and agreements put in place to pilot bee-friendly agroforestry, but this component of the project was dropped in June/July 2019. This challenge is discussed above and against final deliverable 2.1. |
| By project end, at least 30 members of COOPAPIP are directly benefiting from beekeeping and agroforestry activities, of which 10 will be women, an increase from 0 at project start | The project partially achieved its target, with 11 members of COOPAPIP currently benefiting from beekeeping, including 3 women. During the project, a total of 24 past and current members of COOPAPIP, including 5 women, benefited directly from beekeeping by receiving income from sales of honey. The €3,980 generated from sales was shared between the members according to their level of engagement. Following restructuring during the project, COOPAPIP now has 11 active members, of which 3 are women. Of the three positions of |

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| the COOPAPIP Board of Directors, two are occupied by women - the Treasurer and Secretary of the Board. |
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Describe the successes or challenges of the project toward achieving its short-term and long-term impact objectives.

Impact 1 – reducing incidence of damage from bad beekeeping practice.

In 2017 Fundação Príncipe and COOPAPIP supported Regional Government to create a bee protection law in Príncipe. A tool to prevent bee-burning, this law has potential for future national impact in São Tomé. Regulating beekeeping activity and manufacture of bee products, its success was evaluated in project activities: 76% of Príncipe’s inhabitants learned of the law during the project and 50% could describe at least one of its rules (see “Awareness Assessment Report”). 52 local community members were educated on bee swarm capture, 31 former bee-burners converted to beekeepers and 12 illegal bee activities reported, showing far reaching impact of the law and project. It is estimated at least 385 wild beehives were saved from burning due to conversion to sustainable beekeeping, though the creation of the law also resulted in challenges due to the exclusivity of COOPAPIP (see unexpected impacts)

Impact 2 – increased presence of native species in buffer zone.

One aim was to associate honey production with agroforestry to restore degraded areas, guarantee bee-pasture and improve food security through greater horticultural yield. This was planned inside a buffer zone of the Parque Natural Obô do Príncipe (PNP). Activities 2.1 to 2.4 were delayed due to the time needed for beekeeping to succeed and land management ambiguity (PNP required a management plan and 10 year commitment for agroforestry within the buffer zone, with a lack of clear buffer zonation maps). To advance activities, areas outside the buffer zone were selected, arrangements made with land owners, a list of risk assessed focal species created and implementation began. However, in agreement with CEPF, this component and related activities were cancelled in June 2019 due to time constraints and ongoing issues with available plot sites and species. There remained clear interest in this from beekeepers, planting flowers and horticultural species supporting bee pasture around one apiary.

Impact 3 – Communities have strengthened livelihoods.

COOPAPIP members initially had basic or no experience of beekeeping and beekeeping guidelines for Príncipe were therefore a key project output. 31 beekeepers were trained and 121 swarms captured with the recruitment of 2 beekeeping technicians and implementation of daily training. An improved honey house enabled high-quality products, and 3 new wax products provide income from a product previously discarded. Beekeeping is now a livelihood in Príncipe with 8 COOPAPIP members owning 4 apiaries (24 productive hives). Over 930 kg of sustainable honey has been harvested, generating income for COOPAPIP members and community members. However, this learning took time contributing to cancellation of the agroforestry.

Understanding the biology and behaviour of Príncipe’s bees, and increasing permanence of swarms also took time. Challenges of beehive management resulted in development of a swarm capture protocol, increased knowledge on beehive management (eg hive placement) and training in pest control. Final success rates of swarm capture was 19%, an achievement considering success rates are 40-50% for experienced beekeepers (project consultant experience, Brazil). This knowledge enables long-term continuation of beekeeping livelihoods. Decisions on workplan activities were taken by majority vote with all COOPAPIP members (initially 31). Participative approaches brought challenges in

communication and agreement, resulting in delays in decisions and inefficiencies in activities (eg lack of organisation in swarm captures). This was overcome by empowering beekeeping technicians as leaders, frequent meetings with COOPAPIP and the Board, and a change in apiary placement to improve management (from 1 community-managed apiary to 4 small group managed apiaries near beekeepers' homes). Support was provided to review key documents (see Impact 5 below), decreasing membership but enhancing engagement.

Impact 4 – Populations of bees are stable or increasing

As described, the bee protection law was a strong tool preventing damaging practices (see Impact 1 above and "Behaviour change report"). Monitoring protocol for wild bee populations was established late in the project, but will be available for COOPAPIP and the Government, and monitoring is expected to continue.

Impact 5 – Local civil society capacity is boosted

Lack of experience running a cooperative and low education were significant challenges. Enhanced organisational capacity was achieved through daily follow up and training (eg in payment systems and accounting) plus support in revision of key documents and procedures (eg statutes, rules of procedure and marketing plan). 2 technicians and 2 beekeepers with international experience increased the capacity of COOPAPIP, and financial sustainability was achieved through creating a realistic business plan, project funded materials (eg vehicle, honey house and beekeeping equipment) and a 20% COOPAPIP profit per sale. COOPAPIP now generates income for 11 members including 3 women. It has no debt and is financially sustainable for at least a year according to the business plan.

Non-active members and strong personalities with dubious interests compromised some decisions, causing delays and conflicts (both internally, and with the project and government). However, this prompted active members to take the lead and review membership and roles, and the project supported internal and governmental meetings, document preparation and organisation - good relationships with government ensured support for the process. Enhanced organisation and financial sustainability of COOPAPIP later helped solve conflict over vehicle ownership, with agreement reached between FFI, Fundação Príncipe and COOPAPIP with the Government as witness.

Were there any unexpected impacts (positive or negative)?

The creation of the law to protect the bees was one of the first activities of the project, developed with the Regional Government. Due to the beekeeping challenges explained above, there was a time lag between the closure of the trade of burned honey and the sale of sustainably produced honey, due to the delay in starting legal production by COOPAPIP. This resulting absence of honey available in Príncipe for over 6 months meant both the Government and communities of Príncipe became frustrated with COOPAPIP and with the law, but this was overcome once honey sales resumed.

The improved quality of the honey also raised unexpected suspicion from the local population. Honey is used in Príncipe mostly as a medicine (in beverages or wound dressings) and dark honey with impurities is seen to have greater medicinal properties than the lighter, sustainably produced honey. COOPAPIP and the project needed to educate people that the new honey was not filtered, diluted with water or mixed with sugar, and was safer to be used as medicine due its high food hygiene standards. This information is highly valuable to COOPAPIP, who now

know they should invest in propolis production to be sold and used as a medicine in Príncipe in future.

The bee protection law states that only certified beekeepers associated with a cooperative can legally produce and sell bee products in Príncipe. As the only beekeeping cooperative in Príncipe, COOPAPIP essentially has a monopoly on beekeeping operations, creating an opportunity as there is no local competition. This also meant however that the project was highly dependent on the success of COOPAPIP as an organisation. The project was restrained to train and work only with COOPAPIP members. Despite challenges, the project supported COOPAPIP to become a successful organisation (see sections below). We also had authorisation from the Government and CEPF to perform training with 4 non-COOPAPIP members at the end of the project (from June 2019). Príncipe now has 31 trained beekeepers, 11 of whom are effective members of COOPAPIP. To further increase these numbers it is necessary to make alterations on the current law to allow individual beekeepers to start beekeeping before joining COOPAPIP, or to allow the creation of additional cooperatives and to allow businesses to sell honey. The project delivered recommendations for adjustments on the law to the Government to secure the long-term impact of a well-regulated honey trade (for more information see "Project meeting with Government 29 July 2019" document). An unexpected positive impact was the awareness and education campaign which showed that non-direct approaches such as posters and radio had the highest levels of engagement and are a valuable and cost-effective way of reaching large numbers of people on Príncipe. This information is fundamental to direct future activities here.

PROJECT COMPONENTS AND PRODUCTS/DELIVERABLES

Describe the results from each product/deliverable:

| Component | | Deliverable | | |
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| # | Description | # | Description | Results for Deliverable |
| 1 | A model of beekeeping based on community and forest apiaries is in mainstream practice | 1.1 | 30 wild bee swarms successfully captured and transferred to hives by project end. | This deliverable was adjusted to "30 wild bee swarms", according to the extension request approved on 30th August 2019. In total, 24 wild bee swarms were successfully captured and transferred to hives from 121 attempts (success rate: 19.8%). Details of individual capture attempts are included in attachment "COOPAPIP Tracking Document". The success rate is viewed as reasonable given the conditions and lack of prior knowledge and experience of the beekeepers in swarm capture. |
| 1 | A model of beekeeping based on community and forest apiaries is in mainstream practice | 1.4 | 30 community members with beekeeping skills by September 2018 as demonstrated by pre and post training assessments | The project performed 6 training sessions for 31 individuals in total. Trainings covered the following: introduction to beekeeping (7-days); sustainable beekeeping techniques (3 distinct units of 2-weeks, 2-months, and 2-months); the Trans-larv method for creating new queens (4-days); and natural production of queens (2-days). Attendees included 27 individuals from COOPAPIP (22 men, 5 women), and 4 individuals from outside of COOPAPIP (3 men, 1 women). Consultancy reports – including pre & post training assessments (submitted with previous reports to CEPF) - indicate the improved beekeeping skills acquired by participants. |
| 1 | A model of beekeeping based on community and forest apiaries is in mainstream practice | 1.2 | Active local beekeepers are equipped with suitable safety equipment by the end of the project (estimated at 21) | All 11 active beekeepers are equipped with suitable safety equipment (beekeeping suits, gloves, smokers, ropes and climbing equipment), and COOPAPIP has extra equipment for new beekeepers or replacements. Details of all materials provided to COOPAPIP during the project period are included in attachment "COOPAPIP - Declaration of Receipt of materials". The 11 active beekeepers reflect the final number of members left after the internal restructuring of COOPAPIP, as voted by its members at their assembly on 8th August 2019 (for minutes of this assembly see attachment "COOPAPIP assembly 08-08-2019", hence the lower number than originally projected. |
| 1 | A model of beekeeping based on community and forest apiaries is in mainstream | 1.3 | By end June 2019, one honey house is enabling the production of marketable | The honey house construction was finalised in early June 2019 and the inauguration ceremony was performed on 30th September 2019, alongside the final project presentation. The house is fully equipped to produce honey and beeswax products, and is being managed by COOPAPIP. |

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| | practice | | honey and beeswax products | |
| 1 | A model of beekeeping based on community and forest apiaries is in mainstream practice | 1.5 | One report is produced and distributed, documenting the trialling of 4 types of hive in year 1 (Basket/Log/KTB/Modern) , at the end of year 1 | Report was produced and submitted during a previous project period (July 2018). |
| 1 | A model of beekeeping based on community and forest apiaries is in mainstream practice | 1.6 | At least three beekeepers from the cooperative engage in exchange and networking opportunities in Sao Tome or Southern Africa by mid-2018 as demonstrated by exchange and networking reports | Two COOPAPIP members and the Project Manager conducted a learning exchange to a beekeeping project in Mozambique during November 2018 and a further member attended a community producers networking and marketing event in São Tomé during May 2019 (see attachment "COOPAPIP networking meeting Sao Tome 07-05-2019"). |
| 1 | A model of beekeeping based on community and forest apiaries is in mainstream practice | 1.7 | By the end of 2018, COOPAPIP has a distinct brand, marketing strategy and business plan | Achieved in September 2019, at project end. COOPAPIP's new logo and communication material, marketing strategy, and business plan were approved by cooperative members on 7th September 2019 (for meeting minutes see attachment "COOPAPIP assembly 07-09-2019". The logo and other documents are included as annexes in the attachment "REGIMENTO INTERNO DA COOPERATIVA DOS APICULTORES DO PRINCIPE". |
| 2 | CANCELLED - Improved agro-forestry methods are being implemented | 2.1 | By the end of the project, 2 demonstration sites for beefriendly | Two agroforestry areas were identified, with the support of Consultant Felipe Mendes, and agroforestry species were assessed with remote input from CEPF and the FFI Agriculture Technical Specialist. A request for extension of the Project was submitted and approved by CEPF in May 2019, |

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| | by at least 2 communities | | agroforestry areas are active on Príncipe as per demonstration site report with photos | with the main aim being the completion of delayed agroforestry activities, adjusting to focus agroforestry plots around the two individual apiaries, rather than the PNP buffer zone. This component was however canceled during the CEPF monitoring visit in early June 2019 and agreed by FFI in July 2019, due to time constraints and ongoing issues related to available sites and species for the plots (see also challenges section earlier in this report). Part of the related agroforestry funds were reallocated to cover attendance to the CEPF Mid-Term Assessment (MTA) event in October in Monrovia, Liberia (27th Oct-1st Nov 2019). |
| 2 | CANCELLED - Improved agro-forestry methods are being implemented by at least 2 communities | 2.2 | 2 land managers agree to agroforestry activities by the end of the project as per the signed agreements with 2 land managers | Two land managers agreed and signed agreements with the project relating to agroforestry plots. However, this component was canceled (see 2.1 above). A document was signed between Fundação Príncipe and the plot owners confirming the end to the partnership on agroforestry and mutually affirming that there were no issues or outstanding obligations by either party (included as attachment "Signed documents cancelling agroforest agreements"). |
| 2 | CANCELLED - Improved agro-forestry methods are being implemented by at least 2 communities | 2.3 | At least 15 beefriendly plant species suitable for agroforestry have been identified in a list by the end of the project | A list of 20 beefriendly plant species was developed with input from the FFI Agriculture Technical Specialist and presented and approved by CEPF in April 2019. However, this component was later canceled (see 2.1 above). |
| 2 | CANCELLED - Improved agro-forestry methods are being implemented by at least 2 communities | 2.4 | (By the end of 2019, a report on seedling production at one community nursery shows production of indigenous (and other) seedlings) | This component was cancelled (see 2.1. above) |
| 3 | Community producer | 3.1 | (By 2019, local | A regional law was created and approved in September 2017 with the support of the COOPAPIP |

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| | organisations are engaged in biodiversity-related governance on Principe supported by regional government | | beekeepers have contributed directly to policy development , by participating in at least 6 local discussion meetings per year as per meeting minutes) | beekeepers. Subsequently, COOPAPIP beekeepers have continued to contribute to policy development through engagement in discussions with representatives of the Regional Government. These have included specific meetings called by government to discuss issues relating to the law, and COOPAPIP assembly meetings that were attended by a government representative. Nine such meetings were conducted in 2018 and 12 in 2019. Minutes of a recent meeting are included as attachment "COOPAPIP meeting with government 02-08-2019" and previous minutes were submitted during earlier project periods. |
| 3 | Community producer organisations are engaged in biodiversity-related governance on Principe supported by regional government | 3.4 | (By mid-2019, at least 15 people have received practical beekeeping education at one educational hive as per the pre- and post-training evaluations) | During August 2018 the educational hive was used to deliver practical beekeeping education to 30 school children during an environmental education camp, and to ~120 people at the COOPAPIP stall at the fair. Supporting documents for these activities were submitted with a previous report (January 2019). |
| 3 | Community producer organisations are engaged in biodiversity-related governance on Principe supported by regional government | 3.2 | CANCELLED "By 2019, the "Responsible Principe" Standard has been awarded to COOPAPIP" This is cancelled because the Sustainable Principe Standard is a government initiative, which is currently dormant. | The Responsible Principe Standard was discontinued by the Regional Government and this deliverable was consequently cancelled, in agreement with CEPF. |
| 3 | Community producer | 3.3 | (At least 50% of | Through environmental awareness activities under Component 3 we estimate that at least 3,668 |

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| | organisations are engaged in biodiversity-related governance on Principe supported by regional government | | Principe residents (n=3,500) have received information on bee related laws by the end of 2018 as demonstrated by pre- and post-project reports on levels of awareness in Principe) | people have learned about the bee law during the project, and at least 4,250 people have engaged with project activities. A questionnaire based survey was conducted on a representative sample of the population (N=197) to assess awareness about the bee law and engagement with the project (see attachment "Awareness Assessment Report"). The results indicate that 76% of respondents had learned about the bee law during the project period, and 50% were able to describe at least one of the rules from the law. |
| 3 | Community producer organisations are engaged in biodiversity-related governance on Principe supported by regional government | 3.5 | Minutes of meetings with government to support development and implementation of bee protection law on Principe | As described for deliverable 3.1, minutes of meetings between COOPAPIP beekeepers and representatives of government have been submitted during earlier project periods. Further minutes of meetings since the last interim report are attached here as "COOPAPIP meeting with government 02-08-2019". Minutes of a further meeting between the project team and Secretary of Economy to discuss issues relating to the cooperative are also attached as "Project meeting with government 29-07-2019". |
| 4 | Men and women on Principe have access to increased financial income and improved plant yields | 4.1 | (By mid-2018, both men and women are actively engaged in COOPAPIP and associated agroforestry (30% women) as per the membership lists and meeting minutes) | Currently there are 11 active members of COOPAPIP, of which 3 are women (for details, see attachment "COOPAPIP assembly 08-08-2019"). |
| 5 | 2 local institutions on Principe are functioning | 5.1 | (By mid-2019, COOPAPIP has a clear | Since 8th August 2019, COOPAPIP has a new statutes (included as attachment "CONSTITUICAO DA COOPERATIVA DOS APICULTORES - 2019") and Internal Rules and Procedures document, which |

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| | effectively and delivering conservation activities in support of the PNOP | | governance as documented by its governance structure and is operating according to their agreed strategic plan and written internal protocols) | includes a marketing plan, business plan, internal regulations, and regulations of the honey house (see attachment "REGIMENTO INTERNO DA COOPERATIVA DOS APICULTORES DO PRINCÍPE"). The internal procedures such as those relating to payments, meetings, and work-planning are being followed by members. |
| 5 | 2 local institutions on Principe are functioning effectively and delivering conservation activities in support of the PNOP | 5.2 | (By mid-2019, FPT has more diversified income streams that support delivery of their revised strategy as demonstrated by proposals submitted and signature page of secured grant agreements) | As of September 2019, Fundação Príncipe had a diverse portfolio of 13 grants, with none of them contributing more than 27% of the annual budget (Blue Action Fund = 27% and HBD = 24%). This represents a substantial improvement from the start of project, as demonstrated by the civil society tracking tool (for details see attachments "FP final CSTT" and "FP & COOPAPIP CSTT and GTT report"). The signature pages of secured grant agreements are included in the attachment "Fundação Príncipe grant agreements". |
| 6 | CEPF project management and monitoring for compliance | 6.1 | Institutional Capacity of the Principe Trust has increased as evidenced through changes in the Civil Society Tracking Tool, Gender tracking Tool and FFI health check for Principe Trust | Civil society tracking tool and gender tracking tool assessments for Fundação Príncipe were conducted in January 2018 and September 2019. The CSTT index increased by 22.5 points, from 58 to 80.5, and the GTT index increased by 3 points, from 4 to 7. The initial assessment documents were submitted during previous project periods and the final documents are included here as attachments "FP final CSTT" and "FP final GTT". A comparison of assessments is presented in the attachment "FP & COOPAPIP CSTT and GTT report". "FFI health check for Principe Trust" is also attached. |

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| 6 | CEPF project management and monitoring for compliance | 6.2 | Institutional capacity of the COOPAPIP evaluated through the use of the Civil Society Tracking Tool, Gender tracking Tool and FFI health check | The CSTT Tracking Tool showed an increase of 6.5 points on the general COOPAPIP's score during the project (2017 – 2019). The decrease in the score of Human Resources reflects a change in the understanding of how a cooperative should work related to the development of the business plan and remuneration. On both assessments (initial and final) the members declared that the number of people on the organisation is enough to deliver its mission, but on the final assessment they declared that COOPAPIP should pay directly to employees. Therefore, the first option, "There is no paid staff" was chosen, decreasing the score in 4 points. There was, however, an increase in other scores due to project activities through improvements to the "Management of the organisation", "Prioritisation of actions for conservation" and "Change Public Policies". Regarding gender issues, a small increase was noted (0 to 1) due to the inclusion of a gender statement in official documents. |
| 6 | CEPF project management and monitoring for compliance | 6.3 | Safeguard policies for for Involuntary Restrictions are effectively evaluation, implemented and follow up reports are prepared every 6 months to CEPF | The Process Framework for Involuntary Restrictions was developed, implemented, and evaluated at every 6 month period (the framework document was submitted during a previous reporting period). No problems were identified for the duration of the project, and this was supported by the lack of grievances relating to the project that were reported through the FP grievance mechanism. |
| 6 | CEPF project management and monitoring for compliance | 6.4 | CEPF financial and programmatic reports submitted on time and accurately | Reports were submitted and approved. |
| 6 | CEPF project management and monitoring for compliance | 6.5 | Report focusing on the project impacts is completed online at the project end | Completed |
| 6 | CEPF project management | 6.6 | Two signed sub-grant | Completed sub-grant documents for Fundação Príncipe and COOPAPIP have been previously |

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| | and monitoring for compliance | | agreements, one each with FTP and COOPAPIP | shared with CEPF. A signed sub-grant agreement extension for COOPAPIP is included here as attachment "COOPAPIP sub-grant agreement extension". Also included are documents to confirm the transfer of the COOPAPIP vehicle and the balance of COOPAPIP sub-grant line I02 from Fundação Príncipe and COOPAPIP (attachments "COOPAPIP vehicle transfer" and "COOPAPIP I02 balance transfer"). Details of previous transaction from COOPAPIP sub-grant line I02 are included in attachment "COOPAPIP declaration of receipt of materials". |
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Describe and submit any tools, products or methodologies that resulted from this project or contributed to the results.

Príncipe's beekeeping manual – Beekeeping guidelines created using project experience and designed for Príncipe. This can be used as a basis to support the development of beekeeping on São Tomé.

Regional bee protection law – Text of the law approved in Príncipe, with rules for bee protection and beekeeping activities. The document can be adapted by future projects.

Behaviour change report – Includes the natural bee population survey methodology created by the project based on observations of beehives in natural habitat, using point counts.

Environmental education and awareness materials – PDF file containing two awareness posters – regional law and benefits of sustainable honey production; sticker and t-shirt template and the theatre play created by the project and performed by students.

Hive feasibility report – Describes the trials of different models of beehives in Príncipe with pros and cons of each one and the selection of Langstroth beehives as a model to adopt.

COOPAPIP Tracking Document – Excel containing the finance and payment control tool used by the project to support COOPAPIP. The file includes payment of costs, rate of contribution to COOPAPIP and to reporters of swarms, and payment rates for members.

REGIMENTO INTERNO DA COOPERATIVA DOS APICULTORES DO PRINCIPE – Includes the vision and mission of COOPAPIP, governance and rules of procedure. Annexes include an operations manual for a honey house, a simple marketing plan and a business plan that can be adapted by other projects seeking to market sustainably harvested natural resources.

LESSONS LEARNED

Describe any lessons learned during the design and implementation of the project, as well as any related to organizational development and capacity building.

Consider lessons that would inform:

- Project design process (aspects of the project design that contributed to its success/shortcomings)

- Project implementation (aspects of the project execution that contributed to its success/shortcomings)
- Any other lessons learned relevant to the conservation community

To avoid the problems described in the 'Summary questions' section, the timing of the creation of the bee protection law could have been better aligned with the start of reliable honey production and sales via COOPAPIP – the development of a new draft law was under public consultation at the end of 2016. Ideally the legislation would have been reviewed and formalised towards the middle or end of the project period. This would have given sufficient time to develop beekeeping practices in Príncipe, guarantee honey supply to the population and engage more people by demonstrating proof of concept before the prohibition of bee-burning. Experience during the project suggests the law could also have encompassed a wider range of models for the production and sale of sustainably harvested honey, including formally recognised cooperatives and independent beekeepers.

The project plan underestimated the time necessary for the capacity building of COOPAPIP, based on an initial understanding that existing cooperative members were engaged and had beekeeping experience. Despite enthusiastic support, beekeeping was essentially non-existent so techniques for colony transfer and knowledge on the management of domesticated bees was learned from scratch. Cooperatives in São Tomé and Príncipe can present governance challenges, and it was an unforeseen risk for the success of the project to rely so closely on the success of a relatively new cooperative. For future projects, if expecting to work with cooperatives in São Tomé and Príncipe, it would be beneficial to perform a pre-evaluation of the organisation, provide initial capacity building and targeted support in the first months of the project, and then perform periodic evaluations of capacity and progress, before going further with other project activities. An alternative approach could have been to work directly with individual beekeepers, until the necessity for a cooperative structure (or alternative governance mechanism) was raised by them, to reduce the risk of cooperative governance issues affecting all project components.

The project was ambitious to expect three new and complex subjects (cooperativism, beekeeping, and agroforestry) to be understood and put into practice by one group of people in a relatively short time frame. In practice members of the cooperative and the project team were overloaded with new information and project activities, which ultimately resulted in the delay, redesign and eventual dropping of the agroforestry project component. The project would have benefited from the involvement of more local staff beyond the two beekeeping technicians, to specifically support the development of COOPAPIP and provide technical agroforestry input. With the benefit of hindsight the project may have been best conducted in two overlapping stages over a longer time period, the first focused on cooperative management and beekeeping, the second following on from this with a primary focus on developing bee-friendly agroforestry at a larger scale.

The use of multiple strategies and strong engagement with stakeholders was key to achieving success with the environmental education programme and awareness campaign. All the materials were produced in partnership and were reviewed by local people, using simple language, pictures and sometimes the local language (eg. the project name "Bumbu D'Iê" means Bees of Príncipe in Lingu'ia) to facilitate local comprehension of the project message. The experience of Fundação Príncipe staff with environmental education and the good relationship with the Regional Government were fundamental when reaching out to schools and local

radio, and when performing project presentations. Empowering COOPAPIP to take the lead and deliver the presentations appeared to result in a better reception of the project message in the 17 communities, than if delivered by non-Príncipeian staff. This also promoted more engagement between communities and COOPAPIP in the long-term.

SUSTAINABILITY/REPLICATION

Summarize the successes or challenges in ensuring the project will be sustained or replicated, including any unplanned activities that are likely to result in increased sustainability or replicability.

Significant work was carried out to support COOPAPIP throughout the life of the project and as a result it is now a successful, functioning cooperative supported by the Government and local communities. As they are benefitting from the economic rewards of beekeeping, the beekeepers are keen to continue protecting the bees and exploring possible profitable bee by-products. Engagement with the private sector (HBD) has broadened the market for products and as frequent buyers, they will contribute to the sustainability of COOPAPIP. Communities are aware of the law and the importance of the bees and are promoting the growth of COOPAPIP apiaries and production through reporting swarms. The Government is currently enforcing the law with the support of the communities so the legal mechanisms created during the project will continue.

To enable replication it is important that the current law is adjusted to give new beekeepers the opportunity to be trained and to enable the production of honey by individuals for personal consumption, without the obligation of being a COOPAPIP member. Instead of competition, COOPAPIP could use the amendment in the law to sell beekeeping training and equipment, and to charge a fee to process products through COOPAPIP facilities. This suggestion was positively received by the Government, who will continue to work in partnership with Fundação Príncipe to conduct the necessary revisions to the law, applying the lessons learnt from this project. The beekeeping manual created by the project will encourage continued learning beyond the project. It can be adopted by new members of COOPAPIP or individual beekeepers, can be used as a study material, and can possibly be used to replicate beekeeping aspects of the project on São Tomé.

The success of captures was a challenge as beekeepers did not have any training in the biology and behaviour of bees on Príncipe Island or in the essentially untested method of transferring wild bees to beehives. This led to significant learning around the ideal timing for swarm captures, pest management and working with Langstroth hives in humid and hot conditions. According to the experience of consultant Felipe Mendes, the success rate was reasonable given the conditions, lack of prior knowledge and lack of experience of the beekeepers, and with the training provided a continuous improvement on success rate is expected. A natural method of queen production and the 'trans-larv' method of queen production were taught by the project consultant in March and April 2019 and initial trials were performed aiming to multiply the beehives, but no success was seen within the project period. As a long-term strategy, further study on how to split hives should be completed and the beekeepers should continue with the techniques until a genetic line of bees suitable for these techniques can be found.

SAFEGUARDS

If not listed as a separate project component and described above, summarize the implementation of any required action related to social, environmental or pest management safeguards.

Safeguards:

Forestry: For the agroforestry component, which was eventually cancelled, we assessed the risk posed by invasive species based on World Agroforestry Centre (ICRAF) categories. See documents "Risk Mitigation Plan for Potential Invasive Species" and "Agroforestry Species Evaluation Matrix".

Health and safety: A range of actions were taken to ensure the health and safety of workers, and no incidents were reported during the project period. The team was trained using an "Emergency Protocol" and an "Accident Report Form". A "Safety Checklist" was posted at the storage unit for project equipment. The following specific measures were taken and supporting documents for some items are included in the "Health and Safety measures" attachment:

- **Bee stings:** First aid training provided to 12 beekeepers by a hospital doctor; refresher training provided by the HBD nurse to the two beekeeping technicians; an EpiPen was available in case of severe allergic reaction; first-aid kits were available in the car and honey house; 30 beekeeping suits provided and available for all active beekeepers.
- **Location of apiaries:** Guidelines produced and shared, and signage warning people of potential danger. See attachments "Health and Safety measures – Documento 1, Documento 4, and Placas apiarios"
- **Manual handling (lifting heavy hive parts/equipment):** "Health and Safety measures – Regras de segurança"
- **Working at height or in unusual situations:** climbing equipment available and guidelines on tree climbing produced. See "Health and Safety measures – Documento 2"
- **Working in public places:** Guidelines produced. See "Health and Safety measures – Documento 4"
- **Travel, including transport of live bees:** See "Health and Safety measures – Regras de segurança"
- **Working alone and/or in remote places including in agricultural settings:** See "Health and Safety measures – Regras de segurança"
- **Extracting and processing honey ensuring hygiene:** Specific honey processing guidelines in place. See "Health and Safety measures – Documento 3".
- **Fire (such as when lighting, using or extinguishing a smoker):** one fire extinguisher available at honey house; guidelines include specific instructions to handle smokers and prevent fire in the forest.

Involuntary Restrictions

A process framework for involuntary restrictions was developed. Participatory implementation was encouraged through:

- **Participatory research** to guide the decisions about the types of hives to be adopted in Principe,
- **Open project presentations and meetings,**
- **Minutes of meetings submitted to Regional Implementation team through reports, and shared with government and COOPAPIP,**
- **Involvement of government representatives in meetings,**

- **Open discussions about roles were conducted during COOPAPIP assembly meetings, including men and women,**
- **Notifications of the meetings were given beforehand in partnership with COOPAPIP via: the Fundação Príncipe office; SMS messages to people with phones; and by word of mouth. The meetings were held in accessible places (city centre) or the at the Honey house (Ponta do Sol), using the project car to facilitate transport of participants.**

Conflict resolution and complaint mechanism:

- **An institutional grievance mechanisms was created and agreed by Fundação Príncipe and used by the project, and contact to project manager could be made by phone or face to face at the office. Conflicts and project related issues arising before the formal mechanism was established were reported to the Regional Implementation Team (project reports, site visit and e-mail).**

Implementation Arrangements:

- **Posters, leaflets and a grant roll-out meeting provided information to stakeholders on the purpose, goals, scope and intended activities of this project. When conflicts about the funds and sub-grant of the project were raised the Regional Implementation Team was informed, and extra meetings arranged both with COOPAPIP and government participation to resolve issues.**
- **Regular stakeholder meetings (COOPAPIP and government) and contact with communities provided a forum for issues to be shared and resolved in a timely and transparent manner.**

ADDITIONAL COMMENTS/RECOMMENDATIONS

Use this space to provide any further comments or recommendations in relation to your project or CEPF.

A small underspend of USD 358 occurred (and was reported through the last quarterly financial report).

ADDITIONAL FUNDING

Provide details of any additional funding that supported this project and any funding secured for the project, organization or region as a result of CEPF investment.

Total additional funding (US\$)
\$20,910.52

Type of funding

Provide a breakdown of additional funding (counterpart funding and in-kind) by source, categorizing each contribution into one of the following categories:

- A. Project co-financing (other donors or your organization contribute to the direct costs of this project)
- B. Grantee and partner leveraging (other donors contribute to your organization or a partner organization as a direct result of successes with this CEPF-funded project)

- C. Regional/portfolio leveraging (other donors make large investments in a region because of CEPF investment or successes related to this project)

B - Here Be Dragons (HBD): Donation of beekeeping material of (USD 19,660.52) and concession of a small area of land (1 ha)

B - MICAIA Foundation: The organisation did not charge for car fuel or staff time, with an estimated costs contribution of USD 1250.00 (600km road travel, 7 project technician's workdays and 6 driver's workdays).

INFORMATION SHARING AND CEPF POLICY

CEPF is committed to transparent operations and to helping civil society groups share experiences, lessons learned and results. Final project completion reports are made available on our website, www.cepf.net, and may be publicized in our e-newsletter and other communications.

1. Please include your full contact details (name, organization, mailing address, telephone number, email address) below.

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