

**BLACK-CAPPED PETREL CONSERVATION THROUGH POVERTY ALLEVIATION IN A HAITIAN
COMMUNITY**

Report Submitted By:

Adam C. Brown
Environmental Protection in the Caribbean (EPIC)
411 Walnut Street. #6749
Green Cove Springs, FL 32043
*(EPIC) is a member group of the International
Black-capped Petrel Conservation Group*

Report Submitted To:

Betty Petersen Fund for Conservation
BirdsCaribbean
841 Worcester Street #130
Natick, MA 01760



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INTRODUCTION

The Black-capped Petrel is an endangered Caribbean seabird, whose habitat is threatened by human encroachment. This program, funded by the Betty Petersen Fund for Conservation, working with partner organizations and the community of Boukan Chat, focuses on forest conservation in the border region between Haiti and the Dominican Republic. Initiatives in sustainable agriculture, re-forestation, and youth environmental education coupled with local pride campaigns and petrel nest monitoring, create an awareness in the human communities of the connection between human land use and sustainable Black-capped Petrel populations and a means to positively influence that connection.

PROGRAM IMPLEMENTATION AND OUTCOMES

STRATEGY: TRAINING AND IMPLEMENTATION OF SUSTAINABLE AGRICULTURAL PRACTICES

ACTIVITY: SUPPORT VILLAGE SAVINGS AND LOANS PROGRAMS

TARGET OUTCOME: Continue engagement with existing Village Savings and Loan Associations (VSLAs), form new ones if appropriate

RESULT: During FY2019, Plant With Purpose successfully strengthened existing VSLAs and launched **two** new VSLAs for a total of **21** groups. These groups provide farmers the agency to learn, save, and take out loans. Through these groups, farmers cultivate long-term thinking and can invest in the futures of their land and families.

ACTIVITY: PLANTING FOR REFORESTATION AND ALTERNATIVE CROPS

TARGET OUTCOME : Grow 1,000 tree seedlings and plant in areas deemed appropriate by Plant With Purpose and VSLAs

RESULT: During the first half of the fiscal year, drought prevented the planting of seedlings. Favorable conditions in the latter half of the year allowed for successful planting, and Plant With Purpose planted **3,000** seedlings, tripling the original goal. These trees are now anchoring soil, filtering water and contributing to the reforestation of the area.

ACTIVITY: TRAIN FARMERS IN SOIL CONSERVATION MEASURES TO IMPROVE WATER RETENTION AND STABILIZATION OF SOIL

TARGET OUTCOME: Maintain Plant With Purpose staff presence and activities

RESULT: Plant With Purpose provided training in soil conservation measures for a combined attendance of **450**. Soil conservation training led to increased use of soil conservation techniques. These techniques lead to improved topsoil, less erosion, and improved habitat. Examples of training techniques include anti-erosion barriers and gully control as detailed below.

TARGET OUTCOME: Incorporate anti-erosion barriers and gully control at similar levels as in previous years (2017 = 6,750 linear meters of anti-erosive barriers and 1,200 linear meters of gullies controlled)

RESULT: Partnering farmers established **10,570** linear meters of anti-erosive barriers, exceeding 2017 results by 57 percent. In addition, farmers controlled **1,400** meters of gullies thus far, exceeding 2017 results by 17 percent.

ACTIVITY: TRAIN FARMERS IN HOW TO BUILD AND MAINTAIN NURSERIES

TARGET OUTCOME: Maintain Plant With Purpose staff presence and activities

RESULT: Plant With Purpose staff trained farmers to build and maintain nurseries with a combined attendance of **380**. Seedlings are being cultivated and, based on the season and rainfall, planted at the optimal time to ensure a high survival rate.

ACTIVITY: DEVELOP ALTERNATIVES TO CHEMICAL/SYNTHETIC HERBICIDES AND FERTILIZERS

TARGET OUTCOME: Maintain Plant With Purpose staff presence and activities

RESULT: Plant With Purpose staff members trained farmers about the benefits of and techniques for building compost piles. This year training reached a cumulative attendance of **380**.

TARGET OUTCOME: Create 500 new compost piles (2017 = 520 created)

RESULT: Once the harvest came through this year, partnering farmers created **580** compost piles, exceeding the target by 16%.

STRATEGY: YOUTH EDUCATION PROGRAM

ACTIVITY: ENVIRONMENTAL CURRICULUM IN LOCAL PRIMARY AND SECONDARY SCHOOLS (AGES 5 TO 15).

TARGET OUTCOME: Educate primary school aged children in the border region of Haiti and the Dominican Republic, on the importance of water, soil, plants, and wildlife. Classroom visits should occur at similar rates to previous years (two educators to visit 6 or more schools monthly in the Haiti/Dominican Republic border region, focusing on Boukan Chat, between February and July).

RESULT: Five educators were employed to run Black-capped Petrel Conservation-based youth teaching curriculum activities in Boukan Chat and adjacent villages. A total of five schools have been enrolled in the program.

Sessions have been held for a total of 218 students, 119 of which were male (54.6%) and 99 females (45.4%). Education activities were carried out for a group of students selected by teachers (from 10 to 17 years of age), ranging from 25 to 50 students per session (an average of 42 students per session, depending on attendance rates). Between 2 to 4 teachers were present during sessions.

The teaching agenda included activities regarding Black-capped Petrel conservation (week of March 25th – 29th), soil conservation (week of April 1st – 5th), tree biology and conservation (week of April 22nd- 26th), the water cycle (week of May 13th -- 17th), waste and waste disposal I (week of May 27th -- 31st), waste and waste disposal II (plastics) (week of June 10th --14th), and finally closure, revision and handover of diplomas (week of June 24th -- 28th). Overall, all school groups showed progress and high acceptability towards curriculum.

TARGET OUTCOME: Petrel Activity Books distributed.

RESULTS: The youth-oriented activity book that focuses on petrel natural history and habitat, was distributed to schools throughout Boukan Chat, as part of the youth education program. This activity book was especially helpful as an activity for younger students, as it doesn't require any reading and the bold and beautiful images enable the students to make clear connections between forest habitat and healthy petrels. This activity book will remain a staple of our youth education program moving forward.

ACTIVITY: MAINTAIN YOUTH-MANAGED NURSERY

TARGET OUTCOME: Continue consultations.

RESULTS: The plant nursery that was created by a local school in Boukan Chat in 2017, in partnership with Grupo Jaragua, continued to be integrated into our youth education program. Our educators, along with the teachers of the primary schools, worked together with students to identify which plants were needed by their families in the village. These plants included vegetables, avocado, and native trees. The students, alongside the adults, planted the seedlings, watered them and fertilized them as needed, using environmentally friendly practices, similar to those we are integrating into our adult farming programs. The seedlings were then distributed to families and farmers and in some cases, sold to farmers, as a means to provide a small income for the school. We will continue this program in 2020 and beyond, as a staple of connecting sustainable land use practices with healthy petrel populations.

STRATEGY: BLACK-CAPPED PETREL COMMUNITY OUTREACH EVENTS

ACTIVITY: ANNUAL FESTIVAL

TARGET OUTCOMES: Run an annual festival to create awareness for the conservation of the Black-Capped Petrel throughout the communities living along their flyway and nesting colony areas (Forêt des Pins/Boukan Chat). Specifically, produce a new mural; organize a parade with school pupils, farmers, and park guards; organize and oversee a soccer match with two team from Boukan Chat and neighboring community; show the latest film about the Black-capped Petrel program in the village of Boukan Chat; and provide soccer uniforms to two women's teams.

RESULTS: To plan the festival we visited the community prior to the event in Boukan Chat in order to meet all the target community groups that would be involved in the conservation of the petrel and to invite them to participate and help us better plan the event as well.

The community groups we met with included: (1) The 20 team leaders of the Village Savings and Loans groups along with the political representatives of CASEC (Mayor) of Boukan Chat. (2) Second, we met the Director of the National Park Forêt des Pins and his staff. (3) Third, we met with the Directors of the three main community schools and (4) Fourth, we met with the soccer league director. With all groups, we planned the community workshop, the school environment education, the parade and the soccer match.

The Black-capped Petrel Festival in 2019 was celebrated over two days, the 11th and 12th of April. This event was held despite widespread political turmoil throughout Haiti. The teams on the ground, led by Anderson Jean, were able to host the event despite political unrest that led to uncertain travel (including low fuel reserves country-wide and road closures), questionable food availability, difficult communication between partners, and complicated procedures to safely withdraw money from banks.

On the first day, we hosted a two-hour class at the *Coeurs Unis School*, with activities that focused on Black-capped Petrel breeding biology and the petrel's conservation needs. We worked with the 27 pupils from the school and incorporated lessons, games, coloring and watching the new Black-capped Petrel film.

The second day, we had a workshop, with 31 community members, including members of the Village Saving Groups, CASEC, park guards and farmers from several additional localities (Boukan Chat, Gros Cheval, Savane Zombie and Forêt des Pins). During this meeting we had a PowerPoint presentation that focused on the Black-capped Petrel conservation team's work as well as the threats to the petrel and its habitat. Following the presentation, we have a group discussion on how the participants might contribute to the conservation of the petrel and support the team's work in the Boukan Chat.

In the afternoon of the second day, we hosted a parade with pupils, farmers, and the soccer team, starting from the village center of Boukan Chat and ending at the soccer pitch. The parade was led by the Black-capped Petrel mascot, a fixture in the village for the last three years. After the parade we hosted a soccer match between the Boukan Chat team and the soccer team from Savane Zombie. The Boukan Chat team, played valiantly, but sadly, lost the game 5-4.

We produced soccer uniforms for two women's teams as well as for a second men's soccer team for the village of Boukan Chat. These uniforms were created by the same uniform designer as those produced in the past and are emblazoned with the teams *Diablotin's Football Club* logo on the front as well as the village name, Boukan Chat, on

the back. Due to the unstable political situation in Haiti, we were unable to transfer the uniforms down to Haiti but will transfer this equipment during 2020.

During the second night of the Festival, we hosted the official premier of the latest Black-capped Petrel conservation film, entitled, *The Diablotin Festival*. We projected the movie three times in the village center of Boukan Chat, as many people were watching the movie with attention and passion.

Overall, with the Pride campaign, we engaged close to 1,000 residents of Boukan Chat during the school visit, the workshop, the parade and the soccer match.

The Black-capped Petrel mural, the next in a series of petrel-themed murals in Boukan Chat, was not painted in 2019. Due to political unrest in Haiti, we were unable to get the paint and other materials needed to the mural artist. We have included this activity as a priority for 2020, as part of the larger conservation strategy.

STRATEGY: MEASURE OVERALL THREAT ABATEMENT

ACTIVITY: BLACK-CAPPED PETREL NEST MONITORING

TARGET OUTCOMES: This activity involves monthly monitoring of the petrel colony near Boukan Chat and development of map of known petrel nesting habitat adjacent to Boukan Chat using drones and ground-truthing.

RESULTS: Nest monitoring was carried out by the Dominican-Haitian team at nest sites that are adjacent to agriculture areas associated with Boukan Chat and surrounding villages. The team was composed of the following members: Ernst Rupp (Coordinator), four Dominican field and research assistants (Jairo Isaa Arache Matos, Gerson Feliz Feliz, José Luis Castillo, Ivan Ernesto Terrero) and five Haitian field and research assistants (René Jeune, Tinio Louis, Samuel Nossirel, Pierre Sanón and Victor Renozier).

Field trips executed to the Black-capped Petrel nest colony at Morne Vincent, immediately adjacent to Boukan Chat, were carried out as follow:

- February 15–20, 2019: Trip conducted for checking of nests at Morne Vincent.
- April 9–14, 2019: Trip conducted for checking of nests at Morne Vincent.
- May 22-27, 2019: Trip conducted for checking of nests at Morne Vincent.
- July 27-31, 2019: Final trip conducted for checking of nests at Morne Vincent.

Specific details on Black-capped Petrel nest success and habitat use are summarized as follow:

- A total of 17 nests were monitored at Morne Vincent (14 had brooding adults and three were observed to be inactive at the start of monitoring).

- During the monitoring in April at Morne Vincent, 13 nests had chicks, one nest had a broken egg.
- The final monitoring in July showed 13 nests at Morne Vincent where chicks had successfully fledged. Within this study, we define successful fledging as observing within and around the nests, the presence of down feathers shed during the practicing of wings prior to final departure to the sea.
- Taking as a basis for calculations of nesting success the active nests with brooding adults at the start of the season in February and the nests that showed successful fledging at the end of July, we documented a fledging success percentage of 92.9% for Morne Vincent.

TARGET OUTCOME: Habitat mapping to define boundaries of local Black-capped Petrel habitat adjacent to Boukan Chat. This will allow for future monitoring of habitat growth, decline, or stability and allow us to link petrel breeding success and human land use to petrel habitat.

RESULTS: Our mapping exercise for 2019 was curtailed as we made the decision to not have members of the conservation team from abroad travel to Haiti due to the political unrest in the country. This remains a priority for the conservation effort, we will integrate this activity into our plans for 2020. Team members from Plant with Purpose will be taking on this critical data collection.

FINANCIAL REPORT

PROPOSED AND ACTUAL BUDGET FOR PROGRAM

The total actual expenditures and match were just as proposed, as follows:

Overall Budget for Year 1: \$148,873 USD

Funding Provided by Betty Petersen Fund for Conservation for Year 1: 65,000 USD

Matching Funding Provided to Program: \$83,873 USD

LINE ITEM ALTERATIONS

International staff did not travel to Haiti due to political instability there, so funds to support the Program Manager's travel costs to and in Haiti were re-allocated. Specifically, \$2,400 (~3% of total grant funding) were re-allocated to travel, housing, and per diem for additional domestic staff as well as space rental and food for the workshop completed on the second day of the festival.

DISCUSSION

This past year was full of successes and challenges for the Black-capped Petrel conservation program. The country of Haiti was working through major political unrest. This unrest was associated with violence through much of the country, economic instability, gas and food shortages, and travel restrictions for many. This instability limited travel to Haiti for many of the

foreign members of the conservation team. These travel restrictions limited the import of conservation equipment for the team as well as limited some aspects of the conservation activity that was to be undertaken by foreign members.

With these aforementioned challenges, additional expectations and tasks were placed on our domestic staff and partners. These staff members and partners, despite the wide-ranging challenges, were able to take on the added responsibilities and successfully carry out almost all aspects of the conservation effort. Anderson Jean, the Haiti Project Manager, Grupo Jaragua, and Plant with Purpose, were all able to lead efforts in youth education, sustainable farming, petrel research, and the pride campaign. Overall, our program grew in many aspects through 2019, and all this despite the challenges associated with the unrest throughout Haiti.

The Black-capped Petrel conservation program has become a fixture in Boukan Chat, Haiti. With aspects of the conservation program integrated into the education system, the main economy, the recreation, and the entertainment, the petrel conservation has touched most members of the community in one way or another

The high breeding success rate (92.9%) of the Black-capped Petrel nest colony immediately adjacent to the farms where we implement our sustainable agriculture program, speaks of the positive impact that the programs are having on the petrels as well as their forest habitat. As a comparison of petrel breeding success, the petrel colony that is monitored in La Visite National Park, 56km to the west in Haiti, had a breeding success during the same year (2019) of approximately 45%. This is half the success than was observed in Boukan Chat. The agricultural practices in La Visite National Park are not managed for sustainability nor is there a youth education or pride campaign, as there is in Boukan Chat.

*Request for **YEAR TWO** funding for the Black-capped Petrel conservation program*

For a successful petrel conservation campaign in 2020, we request a second year of funding from the Betty Petersen Fund for Conservation at the same level as Year 1 (\$65,000). We will continue to address the issue of sustainable human land use and stewardship in a critical nesting area for Black-capped Petrels. Our strategies will remain consistent from 2019, and we will work towards the same or very-similar outcomes.

Within our youth environmental education programs, we are witnessing high levels of recall of the lessons we are teaching on water, soil, plants, and recycling. Thus, in the upcoming year, we will work with our sustainable agriculture partners to craft lesson plans for the youth that evolve with local agricultural practices and draw clear comparisons between the classroom, the field, and the food that is served at home. In our interactions with VSLAs, we will continue to connect the importance of human interaction with the land and the stability of local Black-capped Petrel populations. We are already seeing the Black-capped Petrel being embraced by children as a symbol of the local environment and will continue to foster this stewardship of the petrel.

Long-term funding for the conservation of the endangered Black-capped Petrel and its imperiled habitat is crucial. With the estimated primary forest cover of Haiti down to less than 3% of historic levels, and the country in a state of socio-economic crisis, an infusion of external funding for humanitarian and biological conservation is necessary for many years to come. Therefore, during the two years of this grant, we are continuing to look for additional funding opportunities for our work. Since much of our work – agricultural improvement, youth education, economic empowerment – is in the realm of human sustainable development, we are cooperating with our partners to tap additional funders focused on that topic. Continued biological field work to assess the status of the petrel and the success of the community interventions will depend on funders focused on biodiversity conservation.

Ultimately, probably a decade from now, we envision a system that is self-perpetuating and self-funded. This all hinges squarely on the long-term sustainable land use by local communities. Each aspect of our program looks to long-term change: from encouraging alternative livelihoods through Village Savings and Loans, to promoting sustainable agriculture practices that value water and soil stability in turn leading to higher plant yields, to providing young members of the community with basic environmental science information.

We recognized we will need to evolve our programs in a manner consistent with the growth of sustainable land practices in those human communities and adjust to address any new land use developments in the communities. Throughout, we will promote consistent messaging about the value of forest conservation in terms of benefits to villagers' livelihoods and sense of pride. We believe that the buy-in of the local community to these messages is the answer to the protection of forest and the population stability of nearby Black-capped Petrel colonies.

IMAGES

~SUSTAINABLE AGRICULTURE~ (all photos credit Plant with Purpose)**Anti-erosion barriers in Boukan Chat****Agro-forestry practices at farm plot in Boukan Chat****Village Savings Group working together on compost pile in Boukan Chat**

~YOUTH EDUCATION~ (all photos credit Anderson Jean)



Hands-on water cycle and erosion lab with students in Boukan Chat



Classroom lesson on petrel conservation in Boukan Chat



Students receiving their certificates following completion of environmental education course

~BLACK-CAPPED PETREL PRIDE CAMPAIGN~ (All photos credit Anderson Jean)



Diablotin Festival parade in Boukan Chat



Boukan Chat soccer team, *The Diablotins*, just before their Festival day match



Diablotin Festival participants from the Diablotin conservation workshop

~BLACK-CAPPED PETREL NEST MONITORING~ (All photos credit Grupo Jaragua)



Team member pointing out a petrel nest cavity near Boukan Chat



Team member looking at petrel nest contents near Boukan Chat



Adult petrel approaching a nest cavity near Boukan Chat