

APPENDIX 1 Report on Working Group Activities 2012 – 2020 and Planning Process for 2021 Conservation Plan

The practice of conservation is a cyclical process of overlapping activities. The following sections summarize activities of the IBPCG from 2012-2020, relating to the Conservation Standards elements. The summary picks up at Implementation (following the release of the 2012 Conservation Plan).



IMPLEMENT

- Implemented several of the actions in the 2012 Conservation Action Plan (see Table A1-1 **Review of Actions from 2012 Conservation Action Plan for the Black-capped Petrel**), undertaking field investigations and conservation interventions each year.
- Developed workplans, timetables and budgets for research, monitoring and for conservation interventions 2012- present.
- Used internal funding from our organizations and obtained financial assistance from multiple supporters.
- *Coordinated fund-raising efforts in order to maximize synergies and minimize direct competition.*

ANALYZE AND ADAPT

- Members of the International Black-capped Petrel Conservation Group active in research, monitoring and conservation interventions in the field, have modified or expanded their activities based on findings each year.
- Thanks to the improved techniques for finding petrels in new places, seized opportunities to implement various forms of management, which were only hypothetical in 2012.
- To create a full revision of the international scale 2012 Conservation Plan, a subset committed to a course of weekly conferences from February to September 2020 to revisit and refine the plan.
- Realized that some of the desired conservation actions have pre-requisite activities that need to be explored well in advance of any implementation.

SHARE

- Published some field studies in peer-reviewed journals with open access
- Posted unpublished field reports in an archive online: (<https://www.birdscaribbean.org/our-work/working-groups/black-capped-petrel-wg/>)
- Shared annual or more frequent summaries of activities with the wider IBPCG and seabird conservation community via listservs
- Convened biannual meetings at BirdsCaribbean International Conferences
- The core planning team signed a Memorandum of Understanding in which they agreed to share data openly and freely to the benefit of greater understanding and priority conservation actions for the species.
- Created multiple information summaries and shared spaces (see appendices X, Y and Z)
- Incorporated results of petrel experts from other areas Réunion, Kauai, Cape Verde, Galapagos (acknowledgements)
- Shared results. The Miradi-related elements of this Plan are publicly available at www.miradishare.org

ASSESS

- Reaffirmed scope, vision and specified site-specific targets for petrel conservation
- Brought in new information on nesting habitat, habitat modelling and threats, and incorporated results from new seabird multi-population viability model.
- Undertook situational analyses for each site and populations of petrels at sea. Consulted active NGOs (Grupo Jaragua, EPIC), and biologists working with local communities in confirmed nesting areas (J. Goetz, A. Brown, E. Rupp) and at sea (Y. Stage, P. Jodice, G. Wallace).
- Drew on representatives at the IBPCG meeting held in 2019 to gather additional input into the situations across the species range, especially probable and suspected areas in the Lesser Antilles (Ref - Report of IBCPWG Meeting, July 2019).
- Consulted with external petrel experts we gained additional insights on various threats (for which few data were available) and to strategies as determined by other *Pterodroma* experts: Jérôme Dubos (Université de La Réunion), Martin Riethmuller (Société d'Études Ornithologiques de La Réunion), Teresa Militao (Universitat de Barcelona), Jacob Gonzalez-Solis (Universitat de Barcelona) and Herculano Dinis (Associação Projecto Vitó), Andre Raine (Kauai Endangered Seabird Recovery Program), Carolina Proaño (Galapagos Science Center), and Leo Zurita Arthos (Universidad San Francisco de Quito).
- Developed goals in the form of the status of Key Ecological Attributes (KEAs) relating to the petrel targets.

PLAN

- Developed strategies, documenting our assumptions about drivers of change, and drafting objectives, activities, and indicators.
- Rated Strategies, examined possible negative outcomes
- Compiled information needs (monitoring and research recommendations.)
- Brought in external resources, including new publications and guest lectures from *Pterodroma* petrel experts from other areas (Réunion, Kauai, Cape Verde, Galapagos) to create an atmosphere of learning and cross-collaboration.
- Looked for examples from beyond taxa-specific conservation plans to other plans where human communities are central themes (e.g., Masai Mara Conservation Action Plan).

Table A1-1: Review of Actions from 2012 Conservation Action Plan for the Black-capped Petrel

Table 2 from 2012 Conservation Action Plan is replicated below, annotated with notes on progress and current relevancy. Almost all actions are still relevant and carried forward into the 2021 Conservation Action Plan: these are marked “In 2021 Plan.”

Many actions are “ONGOING;” a few are essentially “COMPLETED;” only a few actions are noted as “DROPPED.” In 2012 we lacked information needed to assess nesting sites separately or to rate threats and strategies. With advances in knowledge, we are better able to characterize sites specifically, rate threats, and identify and describe top strategies at particular sites.

ACTIONS (from 2012 Conservation Action Plan, Table 2)	Progress Report
<p>OUTPUT 1.A. Reduce Existing Threats: Known threats of habitat loss, predation and tower kills quantified, prioritized and reduced</p> <p>1.A.i. Maintain existing forest cover at known sites; incorporate petrel conservation into existing reforestation projects In 2021 Plan, interventions commenced at one site in Haiti, Morne Vincent</p> <p>1.A.ii. Assess which towers pose mortality threat; prioritize actions in accordance with assessment; develop mitigation measures such as reduced lighting, re-locating, and co-locating on existing towers to reduce number of structures In 2021 Plan, some interventions commenced</p> <p>1.A.iii. Identify key predators and predation levels; prioritize sites and predators; reduce predator impact on BCPE with traps or other predator control methods In 2021 Plan, some interventions commenced</p> <p>1.A.iv. Increase fire-control measures, and increase vigilance and enforcement In 2021 Plan, priority particularly for La_Visite</p>	<p>As nest sites are discovered, threats are characterized by field observations and camera traps. Threats have been rated for each individual nesting site, although impacts of threats are not yet quantified. Determining impact of highest threats is a research priority.</p> <p>Some preliminary interventions have been made (modified lighting at one particularly dangerous tower, some pre-breeding predator trapping; some reforestation), but need to be expanded and effectiveness determined.</p> <p>(1.A.i.) Reforestation at forest buffer areas as well as farming practices that reduce needs to clear forest have offset the rate of deforestation in the border areas near Morne Vincent</p>
<p>OUTPUT 1.B. Community Involvement: Communities adjacent to the known breeding sites are integrated in a participatory conservation process</p> <p>1.B.i. Conduct social research to understand human dependency and impact on BCPE forest habitat as well as potential direct impacts on BCPE populations In 2021 Plan</p> <p>1. B.ii. Create participatory management plans for sites with human impacts</p>	<p>These actions are most relevant to the sites in Haiti, where communities are located within the Parks hosting petrels. At Morne Vincent, community engagement relating to sustainable agriculture and public education is ongoing. These and strategies of community development seek to provide citizens with concern for the petrel, and to provide them with skills and resources to improve environmental conditions in their fields and nearby forest.</p>

<p>In 2021 Plan</p> <p>1.B.iii. Work with communities to manage hunting pressures and/or predation Abandoned - Harvest by humans not considered an important threat, and community control of predators not discussed</p>	<p>Direct interventions at La_Visite ridge have not commenced, but Jim Goetz's Payment for Ecosystem Services Program near Seguin illustrates complexity of drivers of resource use. A socio-economic study specifically for the ridge area is recommended.</p>
<p>I.C. Breeding Distribution: Nesting sites are known, mapped and characterized across the breeding range</p> <p>1.C.i. Develop habitat model that accurately characterizes known nesting sites (e.g. with satellite images and spatially explicit modelling that accounts for slope and vegetation cover) Completed</p> <p>1.C.i. Identify potential nesting and restoration sites based on characterization (above) Completed</p> <p>1.C.ii. Compare historical and potential BCPE nesting sites on Cuba, Dominica, Guadeloupe, Hispaniola, Jamaica, Navassa, etc. to known BCPE nesting characteristics, and survey sites with most potential In 2021 Plan; surveys commenced on all except Navassa (ruled out).</p> <p>1.C.iii. Develop and refine search methodologies for individual nests and nesting sites, e.g. radar, search dogs, transmitters on birds caught at sea In 2021 Plan</p>	<p>Habitat model developed for Hispaniola and Caribbean, and shared with partners.</p> <p>100 nests now located in 5 sites on Hispaniola. Autonomous recording units and ground searches continue in promising areas.</p> <p>Radar surveys conducted for most promising areas of Hispaniola, Dominica, Guadeloupe, and Jamaica.</p> <p>ARUs deployed in Dominica and Guadeloupe. Some coastal surveys conducted in Cuba.</p> <p>Petrels captured at Loma del Toro nesting sites and at sea off Hatteras, NC, and tracked by satellite shed light on nesting grounds and foraging areas.</p>
<p>I.D. Knowledge: Additional factors that affect population size, structure and vulnerability are identified</p> <p>1.D.i. Understand limiting factors and mortality drivers: quantify population vital rates and create a demographic model, conduct Population Viability Analysis In 2021 Plan, ongoing</p> <p>1.D.ii. Determine whether BCPE is nest-site limited through investigation of intra-specific and inter-specific competition at nest sites Abandoned - Not a research priority</p> <p>1.D.iii. Investigate current and historical population structure using genetic studies, esp. to determine unique populations In 2021 Plan</p>	<p>Seabird mPVA indicates negative trajectory; determining key species-specific vital rates is a key priority.</p> <p>Genetic work on specimens captured in the 1980s indicates genetic distinction between dark, and light and intermediate morphs.</p>

<p>1.D.iv. Assess prevalence and impact of parasites and/or disease Abandoned – Not a research priority</p>	
<p>I.E. Management and Policy: Appropriate legal and policy protection</p> <p>1.E.i. Protected area boundaries defined legally and marked on the ground Not pursued in 2021 Plan</p> <p>1.E.ii. Where they do not exist, develop and circulate area management plans in appropriate languages Not pursued in 2021 Plan</p> <p>1.E.iii. Implement long-term protection measures for expanded breeding areas by elevating protected status or securing conservation concessions To date, no nests outside parks</p> <p>1.E.iv. Explore national legal protections for the species, e.g. address the possibility of U.S. Endangered Species Act listing; provide international technical support for the process Advised on the US ESA listing</p> <p>1.E.v. Explore international legal protections for the species, e.g. inclusion in CMS (see Appendix A of Plan) In 2021 Plan</p>	<p>KBAs in Haiti were redefined/refined with the process inextricably linked to the development of the National System of Protected Areas. Specifically, Massif de la Selle formally proposed as a Biosphere Reserve.</p> <p>The USFWS has undertaken a formal Status Assessment and released a Proposed Rule for the listing of the species as Threatened.</p> <p>Species added to Annex 2 of the SPAW Protocol (2014)</p>
<p>2.A.At-Sea Surveys and Seasonal Movements: Seasonal movements and at- sea range of BCPE understood</p> <p>2.A.i. Place transmitters on birds at nesting sites to understand at-sea movements; investigate differences in at-sea range in the breeding and non-breeding season In 2021 Plan, ongoing</p> <p>2.A.ii. Continue compilation of at-sea sightings by U.S. Geological Survey and update other databases such as eBird; identify data gaps, e.g. winter surveys off Cape Hatteras In 2021 Plan</p> <p>2.A.iii. Collect information on at-sea sightings between Cuba and Jamaica In 2021 Plan</p> <p>2.A.iv. Recruit fishermen, sailors, etc. to report sightings Not pursued</p>	<p>Tracking studies conducted on birds caught at nesting sites and at sea.</p>
<p>2.B.At-Sea threats: At-sea threats and factors that affect population size identified and reduced</p> <p>2.B.i. Identify prey and dynamics of prey base In 2021 Plan, ongoing</p>	

<p>2.B.ii. Investigate and if warranted, reduce fishery impacts on mortality In 2021 Plan, ongoing</p> <p>2.B.iii. Investigate marine lighting as a source of mortality, e.g. map locations of relevant platforms; develop mitigation for identified threats In 2021 Plan, ongoing</p> <p>2.B.iv. Assess risk posed by wind development in Caribbean areas In 2021 Plan</p>	<p>Spatial overlap developed using tracking data, and shared with partners.</p>
<p>3.A. Expanded Breeding Locations: Available nesting habitat at known sites increased by doubling the area of suitable threat-free habitat and/or increasing density using artificial nests or other measures. Suitable threat-free habitat at the existing three sites doubled in area</p> <p>3.A.i. Assess potential for habitat restoration to expand suitable habitat at Macaya, La Visite, and Loma del Toro In Haiti: Restoration preceded by development of tree crop buffers is envisioned as a long-term outcome for Morne Vincent. In DR, restoration at Loma del Toro not currently a priority; Valle Nuevo restoration discussed in 2021 Plan.</p> <p>3.A.iii. Monitor the regeneration and restoration of forest areas In 2021 Plan</p> <p>3.A.iv. Use artificial nest burrows, playback attraction and/or translocation to expand current BCPE breeding sites In 2021 Plan</p>	<p>Field projects conducted by partners in Massif de la Hotte were planning steps for habitat protection/restoration, but restoration not actually underway.</p> <p>Yet to be in a position to form a strategic approach to forest protection in and around the La Visite nesting colony.</p>
<p>3.B. New Locations: New breeding locations established in a minimum of three new areas through translocation, artificial nests, attraction</p> <p>3.B.i. Identify new locations suitable for BCPE breeding (near existing breeding sites, or in completely new areas) based on habitat model from item 1.C.i.</p> <p>3.B.ii. Assess the feasibility of securing suitable habitat and establishing breeding sites in new locations</p> <p>3.B.iii. Secure suitable habitat (managing and mitigating for threats) and implement long-term protection measures</p> <p>3.B.iv. Install artificial nest burrows in the new areas and attract birds to nest (through spotlight attraction of adults and introduction to artificial nests, and also through translocation of pre-fledging young)</p> <p>3.B.v. Carry out late-provisioning studies at known nests to acquire data necessary for translocation applications All in 2021 Plan</p>	<p>These steps in the creation of new breeding locations form a top strategy in the 2021 Plan.</p>

3C. Management of New Locations: Newly discovered or created sites protected and expanded

3.C.i. Set in place long-term protection measures for the newly discovered populations; develop area management plans if needed

3.C.ii. Manage land cover appropriately at each new colony, e.g. assess feasibility of tree planting or restoration to consolidate and expand habitat

3.C.iii. Manage for habitat and invasive predator threats at new and expanded breeding locations

[All of above in 2021 Plan](#)

[Site-specific strategies must be developed for any newly discovered or created sites](#)