

CEPF Final Completion and Impact Report

Organization's Legal Name:	New Guinea Binatang Research Center
Project Title:	Capacity Building for Rangers and Conservationists in PNG
Grant Number:	CEPF-110299
Hotspot:	East Melanesian Islands
Strategic Direction:	4 Increase local, national and regional capacity to conserve biodiversity through catalyzing civil society partnerships
Grant Amount:	\$138,919.58
Project Dates:	June 01, 2020 - December 31, 2021
Date of Report:	January 31, 2022

IMPLEMENTATION PARTNERS

Wanang Conservation Area (WCA)

BRC worked in close collaboration with WCA and the people of Wanang Village to host the Inaugural Conservation Ranger Training Course in January 2021.

When the field course was implemented WCA and the people of Wanang acted with extreme professionalism and are to be commended for their efforts.

The Wanang Community provided logistical support throughout the project. Later during the field course WCA staff and community members had productive and enlightened conversations with course participants where parties exchanged conservation experiences.

Wildlife Conservation Society (WCS)

WCS staff worked closely with the BRC team to organise and communicate with the communities from Manus and Mussau Island.

For the Field Training Course, BRC worked through WCS to find candidates for the program. WCS staff were most helpful. We had some late dropouts from the course so BRC worked with WCS to find replacements and brought on board two WCS community engagement workers Misu Nick and K-Lux Luluaki. This brought an excellent dynamic to the group.

During production of the guidebook, WCS again were of great assistance. BRC staff joined WCS on community visits in Manus Island. This allowed for both BRC and WCS to achieve their community objectives in unison. WCS also assisted BRC with logistics for a visit to Mussau island, however this was cancelled due to extreme weather conditions making the sea crossing too hazardous.

Conservation and Environment Protection Authority (CEPA)

We were most pleased to receive the backing and support of CEPA for the work on our Guidebook 'PNG Community Conservation'. BRC are most grateful for the kind and encouraging words provided by Ms Kay Kalim (Director -Sustainable Environment Programs) in the foreword on the guidebook. BRC and CEPA will retain open communications for upcoming conservation activities and BRC will host updates on CEPA activities on our project webpage.

CONSERVATION IMPACTS

Planned Long-Term Impacts: 3+ years (as stated in the approved proposal)

Impact Description	Impact Summary
<p>Over the careers of course attendees, and in the course of at least one year of follow-up distance mentoring by BRC, continued implementation of effective biodiversity surveys will grow the local and therefore also national species inventories. This will in turn aid biologists and conservationists when devising future research and conservation activities, granting greater efficiency and operational effectiveness from 2021 onwards. This growing knowledge based will be viewed by external researchers as attractive, bringing yet more expertise and developments from 2021 onwards.</p>	<p>BRC are optimistic that local conservation efforts can build species inventories nationally. However we acknowledge that this effort is still in it's infancy. Our Field Course provided a solid foundation for this work and our Guidebook will be able to build upon this foundation. However it is evident that more training and effort will be needed here as many participants had limited experience performing species surveys independently. Nevertheless the great enthusiasm shown by participants is a testament to their potential and with continued efforts, both from supporting NGOs and the communities themselves, we believe indigenous led species surveys can be a viable option in the medium to long term. Furthermore participants were most keen on a research based conservation model, so we also anticipate communities will make an extra effort to develop in this direction and attempt to attract researchers.</p>
<p>Long term management of conservation areas will see gains in efficiency facilitated by a greater understanding of forest ecology. Successional dynamics will be accounted for in forest regeneration projects and logging concessions, ensuring the maintenance of essential regenerative capacity of native forests. These measures can remove decades from forest development trajectories, where we see degraded forests returning to highly functional states in 2030s, 2040s and 2050s.</p>	<p>BRC attempted to structure science and ecology centric lessons to cater for the diverse range of experience of course participants. For example we removed planned elements pertaining to some more 'advanced' successional principles and instead focussed more on the basic understanding of biodiversity and the threats it faces. We believe that this was largely successful but acknowledge that some participants struggled with scientific components. Overall these lessons were received well, and subsequent discussions revealed that course participants were already factoring the scientific components into how they viewed their forests/seas. The implementation of these principles on a community project level will require continued assistance in the short to medium term. However longer term, and together with a growing scientific literacy in PNG, BRC remain optimistic that community conservation projects will be increasingly guided by scientific understanding</p>

Impact Description	Impact Summary
<p>Community involvement in conservation can be improved nationwide, using the Wanang Conservation Area, which received the UNDP Equator Prize for innovative conservation, as a model. The training of attendees during their time in WCA will highlight the importance of community involvement and enthusiasm when attempting to achieve sustainable, long term conservation initiatives. Continued community involvement will provide grassroots support for conservation, which may well spread among other villages who learn of the viability of development through conservation. This may bring financial stability for communities, and greater protection for their forests throughout 2020s and beyond</p>	<p>WCA staff and locals were invaluable in our program. Discussion between WCA and course participants were plentiful and fruitful. One of the main concerns raised by participants was the financial difficulties of supporting their projects, and with this the local political disputes that can arise due to lack of immediate and obvious development and progress. The WCA model was extremely popular among course participants and they were very much motivated upon seeing what is possible. For instance the Wanang Conservation School and research facilities were praised by course participants.</p> <p>Using WCA as a model was a clear success. However with this came two minor issues. The first was demands for BRC to replicate this back in their home projects. BRC explicitly stated that the relationship between BRC and WCA is one which took decades to build, and is not something that BRC can replicate overnight. Secondly, the logistical issues of BRC carrying out research and establishing research based conservation in EMI are simply too large at present. We instead encourage participants to take the lessons learned from their experience at WCA and use them as inspiration to establish their own sustainable initiatives. BRC offered to advise participants but could not promise anything more intensive</p>
<p>The successful delivery of this inaugural course can herald the beginning of biannual training course. In 2022 and beyond, refinements can be made to this course to more closely tailor it to the needs and demands of a constantly evolving conservation environment. With each iteration, the benefits would continually increase. The course could actively drive equality of opportunity in conservation in PNG. This would be done by actively enrolling female rangers and conservation officers to the course as 50% of all participants, promoting their key roles in conservation and offsetting imbalances of opportunity arising from social and economic barriers.</p>	<p>This impact was achieved, and the success of the course has prompted BRC to make it a longstanding training program, carried out annually if funding permits.</p> <p>We have already discussed new directions for the course and potential sources of funding. We are hosting a student course for female biologists in 2022, which while separate from the conservation course, is also being guided by BRCs gender and social inclusion principles directly flowing from this current project. BRC have a pending funding application for a 5 year training program focussing on conservation and communities involved in logging (as part of a larger local and international partnership, funders USAID).</p>
<p>5. Widespread distribution of the manual to conservation communities will improve indigenous understanding of conservation best practices, biological monitoring techniques, conservation boundary mapping, community engagement, sustainable management. This will help to create the solid foundations upon which sustainable conservation must be built.</p>	<p>The Guidebook will be distributed in January 2022. We believe that this impact will indeed be realised once distribution is complete as early reviews of the Guidebook have been positive. Reviewers include independent BRC staff, international academic collaborators and WCA staff and community members. Our participating communities are keen to</p>

Impact Description	Impact Summary
	receive their copies and BRC is working to make this happen as soon as possible.
<p>6. Construction of a dedicated webpage for hosting these conservation resources will allow us to engage with the public on a long-term basis and promote later iterations of the ranger course- Ultimately increasing the capacity of conservationists in PNG to govern their lands autonomously.</p>	<p>BRC have built the webpage PNGconservation.org but are still in the process of adding materials, which has seen delays due to a larger than expected volume of data and labour intense video processing. Once finalised the webpage will act as a learning and networking platform for conservation workers in PNG by hosting the freely downloadable guidebook, learning resources from the field course, information on future training opportunities, activity reports from community conservation projects around PNG, interviews and public opinions on conservation, contact details of partners and networking opportunities.</p>
<p>7. The gathering of photography, testimonials, questionnaires and activity reports from a variety of conservation projects will allow BRC, CEPF and stakeholders to further improve the course curriculum and related conservation activities to ensure they address the most pressing concerns these communities have- Improving conservation efforts nationally.</p>	<p>BRC has amassed a large selection photography, video interviews, testimonials, questionnaires and activity reports from conservation communities across EMI and mainland PNG. Photography was heavily utilised in the creation of the guidebook, whereas the remaining material will be hosted on the BRC webpage. Due to the volume of data collected, BRC are experiencing longer than anticipated delays on processing. Once all data is processed it will be shared with all project partners and freely available to visitors of our webpage.</p>
<p>8. Strengthening collaboration of BRC with governmental (CEPA) and non-governmental organisations (various), increasing the efficiency and effectiveness of conservation nationally.</p>	<p>BRC is most pleased to report that the field course and guidebook led directly to the strengthening of BRCs relationship with Wildlife Conservation Society, CEPA and participating conservation communities. Likewise WCA saw an expansion of its conservation network through interactions with participating EMI conservation communities.</p> <p>BRC and WCS worked together to identify community members (from Mussau and Central Manus) to attend the course. Following this, the partnership worked together to organise BRC field visits to these communities where we held multiple online meetings to discuss an opportunistic training program which occurred in tandem with gathering materials for the Guidebook and Webpage. Since then BRC and WCS have entered into a partnership on an upcoming funding opportunity that would see 5 years of investment in community land rights, conservation, forestry training and sustainable natural resource management.</p> <p>CEPA were pleased to support BRCs efforts in this program and provided an excellent foreword for our Guidebook. We will share copies of the guidebook with CEPA in addition to all of the conservation data (questionnaires, interviews and activity reports).</p>

Impact Description	Impact Summary
	This will serve national conservation efforts by facilitating evidence-based actions

Planned Short-Term Impacts: 1 to 3 years (as stated in the approved proposal)

Impact Description	Impact Summary
<p>By December 2021, twenty rangers and conservation professionals from Papua New Guinea will have received three weeks of training in tropical ecology and conservation at New Guinea Binatang Research Centre and Wanang Conservation Area. The gender-balanced (50-50) group of participants nominated the six participating communities will be able to demonstrate an improved knowledge of forest ecology (25% improvement), insect, bird, amphibian, plant and vertebrate sampling and identification (50%), conservation strategies, best practices of community involvement and environmental education (25%). Attendees will be surveyed both before and after the project to quantify this improvement.</p>	<p>We used a quantitative survey consisting of 13 questions, with a mix of self-assessment, multiple choice and open answer elements to assess progress in 6 key areas. Below we summarise the results as % improvement (i.e. % score from the post course survey minus % score on the pre-course survey)</p> <ol style="list-style-type: none"> 1- Biodiversity sampling (38%) 2- Taxonomy (32%) 3- Conservation practices (28%) 4- Ecology (34.5%) 5- Fundraising (27.6%) 6- Environmental Education Ability (self-assessed ability to teach others) (1.4%) <p>Note- not all participants returned their post course survey (17/20 completed, 3 missing), while others were incomplete. We used averages for final comparisons and thus our findings are fairly robust to incomplete questionnaires. Questionnaires were anonymous.</p>
<p>By December 2021 and beyond, attendees will bring the skills they have acquired back to their places of work allowing them to implement improvements there. Course graduates will seed their experiences and new insight within the daily operations of their respective conservation areas, allowing the teachings of the course to be propagated across a wider spectrum of conservation workers.</p>	<p>The majority of course participants expressed a great interest in returning to their communities and sharing the lessons they learned during the course. We were particularly pleased about this outcome. We followed up on this during visits to some of the communities and found that informal talks and reports had been given about the course on their return. We are optimistic about the positive impact this sharing of knowledge and experience will have had on the other community members.</p>
<p>By December 2021, course attendees will have enhanced identification skills for insect, bird, amphibian, and plant taxa, and will allow the presence of threatened and endangered species and their population trends to be recognized more expediently. This will streamline conservation processes and allow valuable time to be saved, with this effect boosting nationwide identification of priority conservation targets.</p>	<p>Course participants certainly improved their identification skills and we are confident they can grow their local species lists over time. However the baseline knowledge of most participants was too low to say with certainty that their knowledge can translate into national level identification of priority conservation areas. Three course participants proved to be particularly adept at species identification.</p>
<p>By December 2021, the capacity of PNG to carry out biodiversity surveys will be notably improved. 20 rangers and conservation officers will have formal training in designing and executing surveys for insects, birds,</p>	<p>We were particularly pleased with the positive reception of our biodiversity monitoring lessons. We believe these lessons have provided an excellent foundation for our participants to build their monitoring skills and apply them within their own</p>

Impact Description	Impact Summary
<p>amphibians, plants and vertebrates. This will bear additions to local species inventories within each specific conservation area, combining to significantly contribute to PNGs national species inventory. Further, it will enhance the local capacity of the conservation communities to host and support research, contributing thus to their conservation-derived income.</p>	<p>projects. Again, we feel that we should temper our expectations of the national improvements that will arise from this at present. However taking a longer-term view, we believe participants have shown a lot of promise and will continue to improve skills going forward.</p>
<p>5. By December 2021, existing community conservation projects (minimum 15) will have received hard copies of the conservation manual and leaflet. Thus min. of 15 conservation communities will be more informed on conservation best practices and lessons learned from elsewhere, streamlining and optimizing conservation in PNG in the short term.</p>	<p>The guidebook was printed from an Australian based printing company in December and thus could not be distributed during the official project period. BRC will distribute the guidebook widely to the conservation communities in January. Plans to create a leaflet were revisited and this was abandoned as it was considered a redundant activity given all the information was compiled in the guidebook.</p>
<p>6. By December 2021, a wider audience (including both communities interested in conservation and the general public) will have access to the conservation manual plus other resources via a dedicated webpage, increasing awareness and generating support for conservation in PNG. Estimated reach based on Facebook and BRC webpage analytics suggests engagement and downloads from up to 250 people is achievable in Q4 2021.</p>	<p>This impact has not yet been fully achieved. BRC created the webpage and the book is currently being hosted there. However BRC are still in the process of compiling and processing the large amount of data and interviews which will form the other components of the webpage. As such we are awaiting completion of the webpage before we promote the guidebook download. The webpage is PNGconservation.org and is intermittently accessible as the team works to complete it.</p>
<p>7. Manual, leaflet and webpage will generate further interest in the ranger training course offered by BRC (estimated reach of 1000 based on Facebook analytics), with future iterations of the course seeking to replicate and improve on earlier versions, ultimately increasing the capacity for PNG to self-govern their natural resources.</p>	<p>Interest in future courses has been seen through the creation of the 'BRC Conservation Course' Facebook page, that of the time of writing has 656 followers. However again this impact is pending the official launch of the webpage and distribution of the Guidebook which is due to occur in January 2022.</p> <p>Facebook page can be found here https://www.facebook.com/BRC-Conservation-Course-101527765282850</p>
<p>8. By December 2021 the national conservation network will be strengthened through increased awareness of the conservation case studies used in the manual, and collaborative efforts of communities and organisations (BRC, CEPF, Wildlife Conservation Society (WCS), Tree Kangaroo Conservation Program (TKCP), PNG Conservation and Environment Protection Authority (CEPA), community groups and others)</p>	<p>The decision was made to move the majority of the activity data to the webpage rather than having it as a core component of the guidebook. This rationale here was twofold. First, we felt that the guidebook should remain focussed around the learning components of the Field Course. Secondly, the webpage will be easy to update and modify, and should in fact have a larger audience than the readership of the guidebook alone. We believe that this impact will be amplified through this amended plan.</p>

Unexpected impacts (positive or negative)?

1- Demand for further assistance and in particular establishing a research driven model of conservation.

Our partnership with WCA during this project was fruitful. WCA staff and community members offered unique insights from their conservation experience. While BRC planned to show the viability of sustainable development through conservation, we underestimated the enthusiasm that our EMI communities would have for the WCA model. We received multiple requests from participating communities for BRC to help establish this research driven conservation model across EMI. Unfortunately BRC are not in a position to do so given the logistical and financial restraints on such an effort. While overall we view this unexpected impact as a positive influence which should encourage EMI communities to pursue their conservation goals, a minor negative element should be acknowledged arising from our inability to deliver further action to support the goals of our training partners. We have explained to the EMI communities, in clear terms, why we cannot deliver the successes of WCA to the EMI communities directly and easily. We believe the communities are understanding and appreciative of our honesty on this matter.

2- Additional training.

As described in the 'summary of overall results' section, BRC managed to deliver a substantial in-community training program that was developed organically throughout the planning stages of guidebook production. This was not one of the original goals of the project.

Communities received this training well and were very pleased that BRC made the extra effort here. As such we unexpectedly increased conservation and environmental understanding throughout the EMI hotspot by delivering training to a large number of community members.

PROJECT RESULTS/DELIVERABLES

Overall results of the project:

BRC are pleased to report the achievement of positive results in several key areas.

Training

Our training in January 2021 saw 20 participants complete our Conservation Field Course. Participants included 5 female and 15 male participants. These participants came from conservation communities from across EMI: Lolieng Sustainable Program (Mussau), the communities of Mt Balbi Key Biodiversity area inclusive of Rau and Tera LLG and the Kunua Plains (Central Bougainville), communities of Whiteman Range Conservation Project and the South Coast Mangrove Project (West New Britain), the North and South Coast Manus communities co-owning the Central Manus Forest Conservation (Manus). The number of participants from each region were: Mt Balbi (3), Kunua (2), Mussau (3), Whiteman Range (5), and Central Manus (5), plus two community reps working with WCS. See attached table entitled Annex 1: List of Conservation Course participants, for breakdown of names and locations.

Trainers on the program included staff from BRC and invited speakers. Topics of training and learning covered a diversity of topics ranging from basic conservation principles, to ecological processes, to community engagement and practical conservation implementation. For a full breakdown of the course program together with the instructors, please see attached document: Annex 2- Conservation Course Report.

In addition to the field training course, and in fact stemming from it, BRC later engaged with communities in order to gather materials for the guidebook and website. We saw an opportunity for added value here and decided to host training sessions when possible. This was also in direct response to requests from course participants for follow up activities and additional assistance. This equated to four days training on Manus Island (two days on South coast at Pelipowhai village, and two days on the North Coast at Lahapua), 3 days on West New Britain at Whiteman Range, and 4 days at Bougainville (two days at Aita and Rokotas respectively). Planned training at Mussau Island had to be postponed due to dangerous travel conditions, while training within Kunua Community unfortunately failed to materialise due to organisational difficulties arising from a Covid related absence of community reps. It is the hope of BRC that we will be able to return to these communities in 2022. Planning of the Mussau trip is in late stages of organisation and will be funded by BRC.

This training effort was led by Redley Oposa and Ruma Umari. These two trainers delivered talks on conservation and monitoring leveraging their extensive personal experience (Ruma Umari is a member of Wanang Community and thus offers unique insight in community conservation). The team delivered a program involving talks and practical activities around record keeping for conservation and monitoring programs, use of GPS devices, and entomological sampling and monitoring techniques. The data gathered from the monitoring activities was used as sample data for the record keeping exercise. The team also engaged in extensive conservation discussion on an ad hoc basis. See attached document- Annex 3 Training Activities for EMI Community Visits for more details and small selection of photography. Additional photography can be found on PNGconservation.org.

Production of Learning Resources

Our activities throughout the project duration led to the creation of two major learning resources: a guidebook and a website.

The book is titled 'PNG Community Conservation: A Guidebook to Conservation and Biological Monitoring'. BRC produced this guidebook with the aim of compiling the lessons from the Field Course in addition to expanding into a diversity of biological monitoring techniques that could be used as a point of reference for monitoring programs. Based on our experiences of the course we understand that it is best to keep a foundational approach to community teaching so that the spectrum of education backgrounds we meet within communities is catered for.

The book can be broadly divided into two parts. The first five chapters deal with fundamental concepts underpinning biodiversity and conservation, and how the reader and their communities might get involved in community conservation work. The latter half of the book is focussed on biological monitoring techniques, presenting some of the most commonly used and/or accessible methods. These methods encompass the monitoring of insects, mammals, plants, frogs, reptiles, birds and bats. BRC invited a number of PNG experts to assist with their speciality taxa, we thank these co-authors for their generous contributions. We also thank the local artists for helping us to bring the book to life with engaging and authentic PNG artworks. Special thanks also go to the Cultural Sanctuaries Foundation and renowned photographer Chris Rainier for donating fantastic photography. See attached document Annex 4 PNG Community Conservation- A Guidebook for Conservation and Biodiversity Monitoring.

The book is freely downloadable at our second major learning resource PNGconservation.org. As the project developed, we saw that we were gathering a large amount of data that was difficult to synthesise and place into the guidebook in such a way

as to remain relevant and up to date. As such BRC decided to shift much of the data and info gathered on our community visits to the website, which originally was planned to simply be a place to host the downloadable book and course info. More info on this effort follows.

Gathering of conservation perspectives, data, promotional material, and activity reports

In addition to the aforementioned communities where training was carried out (East Melanesian Island communities), BRC also engaged a number of other community conservation efforts around Madang and Simbu. This includes the Wanang Conservation Area, the wider Mt Wilhelm Conservation Area, and communities of Baitabag, Ohu and Baitata. Throughout these visits BRC gathered 1) video interviews with key community members documenting their opinions on key environmental and social issues, 2) questionnaires from the wider community pertaining to conservation perspectives and priorities, 3) Photographs for promotional and educational purposes, and 4) activity updates where appropriate/desired. BRC have yet to publish all of this data on the website due to the unexpected large volume and data processing requirements. Redley Opasa will continue to work on this moving forward funded by BRC.

See attached documents Annex 5- Interview for Rangers & Questionnaire sheet_ English Version for the interview script and questionnaires used through the data gathering process. The questionnaire will be hosted on the website for continued data gathering from the general public. All data will be freely shared with CEPF, CEPA, WCS and any other interested parties when processing is finalised.

Results for each deliverable:

Component		Deliverable		
#	Description	#	Description	Results for Deliverable
1.0	Secure project endorsement from WCA and conservation institutions	1.1	Minutes and summaries of meetings with the Wanang community and their leaders, for future use by local stakeholders, CEPF and BRC.	In the interest of Covid safety, we did not have these meetings but rather communicated via radio and through intermediates (Wanang personnel visiting/working at BRC)
1.0	Secure project endorsement from WCA and conservation institutions	1.2	Minutes and summaries of meetings held within BRC, among BRC management.	BRC held a series of meetings between project staff and team leaders in PNG. Additionally there was significant email correspondence in preparation for the program and throughout it's delivery.
1.0	Secure project endorsement from WCA and conservation institutions	1.3	Letters of consent and endorsement from the Wanang community stating that they are in favour of the proposed project, are in agreement with the complaint system, and that their needs and requests have been duly fulfilled.	Letters attained and archived.
1.0	Secure project endorsement from WCA and conservation institutions	1.4	Letters of interest and participation from conservation institutions	Emails of interest attained rather than official letters
1.0	Secure project endorsement from WCA and conservation institutions	1.5	Summary of stakeholder communications, PDF and powerpoint.	Emails archived

Component		Deliverable		
#	Description	#	Description	Results for Deliverable
1.0	Secure project endorsement from WCA and conservation institutions	1.6	Endorsement of project and complaints system through written letters from landowners and community leaders whose land project activities will take place on	Completed and archived
2.0	Ranger and Conservation officer field course implementation	2.2	All 20 participants arrive at BRC evidenced with group picture. (July 2020)	Arrival at BRC was staggered, so group photo was taken at WCA. Photography archived
2.0	Ranger and Conservation officer field course implementation	2.1	Documents showing the successful completion of travel arrangements for course participants. PDFs of airfare receipts. (July 2020)	Completed and archived.
2.0	Ranger and Conservation officer field course implementation	2.3	Completed baseline surveys of participants knowledge of forest ecology and conservation practices (August 2020)	Completed and archived
2.0	Ranger and Conservation officer field course implementation	2.4	Wanang component completed, evidenced with photography	Completed and archived
2.0	Ranger and Conservation officer field course implementation	2.5	BRC component completed, evidenced with photography and presented certificates of course completion.	Completed and archived
3.0	National improvement of conservation practices and	3.1	DELETED WITH AMENDMENT OF JULY 2021	

Component		Deliverable		
#	Description	#	Description	Results for Deliverable
	stimulation of inter-institutional communication and collaboration			
3.0	National improvement of conservation practices and stimulation of inter-institutional communication and collaboration	3.2	Correspondence (emails letters) and meetings demonstrating improved connectivity between conservation institutions, government agencies (CEPA) and BRC.	Completed and archived
3.0	National improvement of conservation practices and stimulation of inter-institutional communication and collaboration	3.3	DELETED WITH AMENDMENT OF JULY 2021	
3.0	National improvement of conservation practices and stimulation of inter-institutional communication and collaboration	3.4	DELETED WITH AMENDMENT OF JULY 2021	
4.0	Continued expansion and development of project interest and legacy for the project	4.1	Online promotions of the course aimed at broadening and diversifying attendance of future courses, executed using BRC webpages and social media	Several Facebook posts have thus far accumulated 656 followers of our course Facebook page and growing. Updates on future courses will be posted when appropriate i.e. when funding is secured.
4.0	Continued expansion and development of project	4.2	Promotions in conventional media.	Not completed.

Component		Deliverable		
#	Description	#	Description	Results for Deliverable
	interest and legacy for the project			We were invited speakers at an online streaming event by Global Biofest https://www.globalbiofest.com/ on Indigenous Conservation efforts. We had planned to carry out some promotion at that event. Unfortunately it was cancelled a week before it was due to go live.
4.0	Continued expansion and development of project interest and legacy for the project	4.3	Data and resource repository created for course participants, their institutions and interested parties.	Partially completed. Our webpage serves as the resource repository. However at present we are compiling all learning resources, questionnaires, interviews. Thus the repository may still be considered as under construction.
4.0	Continued expansion and development of project interest and legacy for the project	4.4	DELETED WITH AMENDMENT OF JULY 2021	
4.0	Continued expansion and development of project interest and legacy for the project	4.5	DELETED WITH AMENDMENT OF JULY 2021	
4.0	Continued expansion and development of project interest and legacy for the project	4.6	Produce a written plan or roadmap for future courses and ways to improve them (July 2020)	No formal plan has been drafted. However discussions are already under way with funding partners on ways to implement and refine the course (Cardno, WCS, USAID and others)
5.0	Fundraising for future courses	5.1	Strategy developed to seek funds for future courses (July 2020)	Multiple funding applications have been made including USAID (three applications), and The Incentive Fund (Australia).

Component		Deliverable		
#	Description	#	Description	Results for Deliverable
				Most promising as of now is our late stage application for 'Sustainable Landscapes', a USAID program in PNG. We are project partners in this large program and will run conservation training courses should we be successful (up to 5 years of training programs).
5.0	Fundraising for future courses	5.2	Correspondence (emails and letters) from potential funders (July 2020)	Completed and archived
5.0	Fundraising for future courses	5.3	Submitted grant and funding applications to viable sources, 4 applications and more as needed.	Completed and archived
6.0	CEPF project management and monitoring	6.1	Safeguard policies for Indigenous Peoples implemented, monitored, and reported every six months to CEPF to ensure full compliance.	Completed
6.0	CEPF project management and monitoring	6.6	Have a project audit conducted to review all expenditures from 1 July 2020 – 31 May 2021	Completed and submitted
6.0	CEPF project management and monitoring	6.2	Institutional Capacity of New Guinea Binatang Research Centre evaluated through the CSTT and the Gender Tracking Tool	Completed and submitted

Component		Deliverable		
#	Description	#	Description	Results for Deliverable
6.0	CEPF project management and monitoring	6.3	Submission of an article and photograph demonstrating project benefits to course participants.	Completed and submitted
6.0	CEPF project management and monitoring	6.4	Submitted final impact monitoring report upon completion of the project	Completed and submitted
6.0	CEPF project management and monitoring	6.5	All necessary CEPF financial and programmatic reports completed correctly and submitted	Ongoing
7.0	Risk assessment and contingency plans	7.1	COVID 19 contingency plan (July 2020)	Completed
3.0	National improvement of conservation practices and stimulation of inter-institutional communication and collaboration	3.5	Community conservation manual (English & Tok Pison), leaflet (English & Tok Pison) and webpage	Partially completed. Conservation Guidebook was completed but not translated to Tok Pison, this was deemed not possible by native tok pison speakers as the guidebook contained technical details that had no tok pison equivalent. Leaflet was abandoned in favour of added focus on the Guidebook. Webpage built and material is being added sequentially.
3.0	National improvement of conservation practices and stimulation of inter-institutional communication and collaboration	3.6	Database of questionnaires, interviews, activities and photography for use by all stakeholders	Partially completed. Due to a very high volume of data and information, processing and compilation is still ongoing.

Tools, products or methodologies that resulted from the project or contributed to the results:

Products

BRC produced two products during the project, namely a guidebook and a webpage. The former has been submitted to CEPF with this report and the webpage can be found at PNGconservation.org, however note that construction is ongoing, and the page is only intermittently live at present (has yet to be officially launched). As such, if CEPF would like to promote our widely, we would first request patience while we complete the webpage and launch it officially on our own accord.

These items are described above; however we will summarise again here:

The book is titled 'PNG Community Conservation: A Guidebook to Conservation and Biological Monitoring'. BRC produced this guidebook with the aim of compiling the lessons from the Field Course in addition to expanding into a diversity of biological monitoring techniques that could be used as a point of reference for monitoring programs. Based on our experiences of the course we understand that it is best to keep a foundational approach to community teaching so that the diversity of education backgrounds we meet within communities is catered for.

The book can be broadly divided into two parts. The first five chapters deal with fundamental concepts underpinning biodiversity and conservation, and how the reader and their communities might get involved in community conservation work. The latter half of the book is focussed on biological monitoring techniques, presenting some of the most commonly used and/or accessible methods. These methods encompass the monitoring of insects, mammals, plants, frogs, reptiles, birds and bats. BRC invited a number of PNG experts to assist with their speciality taxa, we thank these co-authors for their generous contributions. We also thank the local artists for helping us to bring the book to life with engaging and authentic PNG artworks. The book is freely downloadable at our second major learning resource PNGconservation.org.

As the project developed, we saw that we were gathering a large amount of data that was difficult to synthesise and place into the guidebook in such a way as to remain relevant and up to date. As such BRC decided to shift much of the data and info gathered on our community visits to the website, which originally was planned to simply be a place to host the downloadable book and course info.

PNGconservation.org is a webpage which will act as a learning and networking platform for conservation workers in PNG. It hosts learning resources from the field course, information on future training opportunities, activity reports from community conservation projects around PNG, interviews, and public opinions on conservation, contact details of partners and networking opportunities.

Methodologies

BRC also produced two methodologies for attaining perceptions on local communities towards conservation and environmental issues, namely: A quantitative questionnaire and qualitative interview script. The quantitative questionnaire was designed in simple terms to increase accessibility and understanding by a broad audience, while the interview script delves more deeply into key issues.

Both documents are attached in Annex 5- Interview for Rangers and Questionnaire sheet_ English Version

PORTFOLIO INDICATORS

Portfolio Indicator Number	Portfolio Indicator Description	Expected Numerical Contribution	Expected Contribution Description	Actual Numerical Contribution	Actual Contribution Description
4.4	Number of conservationists that demonstrate strengthened capacity in conservation management, science and leadership.			26	We have used the figure of 26 here, but we feel this is conservative. This figure comprises 20 course participants and 6 of the BRC instructors which attended most lessons. However, there were also an additional 187 persons (approx) that received minor training during community visits to EMI. This is detailed later in the report. If minor training should be included then the total figure is 213.

GLOBAL INDICATORS

Protected Areas

Protected areas that have been created and/or expanded as a result of the project. Protected areas may include private or community reserves, municipal or provincial parks, or other designations where biodiversity conservation is an official management goal.

Name of Protected Area	WDPA ID*	Latitude	Longitude	Country	Original Total Size (Hectares) **	New Protected Hectares ***	Year of Legal Declaration or Expansion
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*World Database of Protected Areas

**If this is a new protected area, 0 should appear in this column

*** This column excludes the original total size of the protected area.

Key Biodiversity Area Management

Key Biodiversity Areas (KBAs) under improved management—where tangible results have been achieved to support conservation—as a result of the project.

KBA Name	KBA Code	Size of KBA	Number of Hectares with Improved Management
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Production Landscapes

Production landscapes with strengthened management of biodiversity as a result of the project.

A production landscape is defined as a site outside a protected area where commercial agriculture, forestry or natural product exploitation occurs.

Name of Production Landscape	Latitude	Longitude	Hectares Strengthened	Intervention
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Benefits to Individuals

- **Structured Training:**

Number of Men Trained	Number of Women Trained	Topics of Training
135	52	<ul style="list-style-type: none"> -Roles of forest rangers -Biodiversity concepts and function -Ornithology -Mammalogy -Entomology -Botany -Herpetology -Mangrove Ecology -Biodiversity Monitoring -Boundary Mapping on Conservation Area and GPS use -Creating local community conservation projects -Fundraising -Forest restoration -Sustainable alternative incomes -Conservation principles and discussions -Taxonomy -Ecology -Record Keeping -Presentation Skills

- **Cash Benefits:**

Number of Men – Cash Benefits	Number of Women – Cash Benefits	Description of Benefits

Benefits to Communities

View the characteristics column below with the following corresponding codes:	View the benefits column below with the following corresponding codes:
1- Small Landowners	a. Increased Access to Clean Water
2- Subsistence Economy	b. Increased Food Security
3- Indigenous/ Ethnic Peoples	c. Increased Access to Energy
4- Pastoralists / Nomadic Peoples	d. Increased Access to Public Services
5- Recent Migrants	e. Increased Resilience to Climate Change
6- Urban Communities	f. Improved Land Tenure
7- Other	g. Improved Use of Traditional Knowledge
	h. Improved Decision-Making
	i. Improved Access to Ecosystem Services

Community Name	Community Characteristics							Type of Benefit									Country	Number of Males Benefitting	Number of Females Benefitting
	1	2	3	4	5	6	7	a	b	c	d	e	f	g	h	i			

Characteristics of "Other" Communities:

Policies, Laws and Regulations

View the topics column below with the following corresponding codes:			
A- Agriculture	E- Energy	I- Planning/Zoning	M- Tourism
B- Climate	F- Fisheries	J- Pollution	N- Transportation
C- Ecosystem Management	G- Forestry	K- Protected Areas	O- Wildlife Trade
D- Education	H- Mining and Quarrying	L- Species Protection	P- Other

No.	Name of Law	Scope	Topics															
			A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P

“Other” Topics Addressed by the Policy, Law or Regulation:

No.	Country/ Countries	Date Enacted/ Amended	Expected impact	Action Performed to Achieve the Enactment/ Amendment
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Companies Adopting Biodiversity-friendly Practices

A company is defined as a for-profit business entity. A biodiversity-friendly practice is one that conserves or uses natural resources in a sustainable manner.

Name of Company	Description of Biodiversity-Friendly Practice	Country/Countries where Practice was Adopted
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Networks and Partnerships

Networks/partnerships should have some lasting benefit beyond immediate project implementation. Informal networks/partnerships are acceptable.

Name of Network/Partnership	Year Established	Country/ Countries	Established by Project?	Purpose
BRC and WCS informal partnership	2021	Papua New Guinea	Yes	BRC and WCS have established common ground and intersections in our areas of focus. In particular, we will support each others training programs where appropriate.

Name of Network/Partnership	Year Established	Country/Countries	Established by Project?	Purpose
				Additionally, we are two of four in-country partners for a large project aiming to improve sustainability in resource use in PNG. We plan to mutually support each others efforts in that program.

Sustainable Financing

Sustainable financing mechanisms generate funding for the long-term (generally five or more years). These include, but are not limited to, conservation trust funds, debt-for-nature swaps, payment for ecosystem services (PES) schemes, and other revenue, fee or tax schemes that generate long-term funding for conservation.

Name of Mechanism	Purpose	Date Established	Description	Country/Countries	Project Intervention	Delivery of Funds?

Globally Threatened Species

Globally threatened species (CR, EN, VU) on the IUCN Red List of Threatened Species, benefitting from the project.

Genus	Species	Common Name (English)	Status	Intervention	Population Trend at Site

LESSONS LEARNED

Lesson learnt 1- Be careful with assumptions, even if you think it's a certainty.

Event- Unexpected rejection of our offer of free training

Recommendation- When planning your project, do not make any assumptions but rather confirm every detail.

Lesson learnt 2- Don't trust the weather

Event- Cancelled training program due to lengthy storm

Recommendation- Always give proper consideration to the seasonal weather and factor that in to planning and logistics. Assume there will be bad weather and devise a back up plan, even when the forecast says it will be sunny.

Lesson learnt 3- Prepare for cancellations, and then prepare for more cancellations

Event- Repeated withdrawals by accepted participants from the program, some last minute.

Recommendation- If you are performing a project that requires the attendance of individuals that you have not met, then you should leave plenty of wiggle room for unexpected outcomes. Have a back up list of replacements, and then a back up list for your back up list.

Lesson learnt 4- Pandemics are unpredictable, unsurprisingly.

Event- Spiking cases of Covid suddenly from a seemingly calm situation

Recommendation- Again it is always best to plan for the worst-case scenario.

Lesson learnt 5- Communication is key, particularly when it is difficult

Event- Lines of communication broke down, particularly with some of the more remote communities.

Recommendation- Ensure that your lines of communication are as robust as possible. This means not only have a primary means of communication, but multiple backups in case your primary means goes down. Remember that when working with rural communities, their mobile signal may be weak, intermittent or non-existent. Thus you must deadlines well in advance and clearly, so that if comms go down then all parties understand what needs to be done. Additionally it is a good idea to set up a rendezvous time/place that can be used as an emergency means of establishing contact.

Lesson learnt 6- Speak directly to as many trainees as possible before training

Event- A variable skill level among trainees

Recommendation- Try to not rely too much on community reps if possible. Although of course they do a great job as intermediaries, sometimes there is information that is lost. For example, some of your participants may struggle with certain topics and others may excel, and it is often unreasonable for the rep to be aware of all these nuances. Thus, if possible, speak to your trainees beforehand and carry out a very quick analysis of their abilities so lessons can be tailored appropriately.

Lesson learnt 7- Let your junior staff take charge sometimes

Event- Covid prevented some senior instructors from attending the course in person

Recommendation- Sometimes it is beneficial to all parties to allow senior and more established staff to step back and allow up and coming staff to prove their skills. Always take note of the talent in your organisation and be ready to let it shine.

SUSTAINABILITY/REPLICATION

Replicability

The model that BRC uses for our Field Courses unfortunately relies on having a well suited and equipped field location- Wanang Conservation Area (WCA) in our case. If other organisations seek to replicate the exact format of BRC training programs then they will need access to a similar location, which can be quite difficult to come by. The key word here is similar. That is to say that although WCA is an ideal location with massive investments in research and training facilities, strictly speaking an adequately established field location with accommodation facilities would suffice in a pinch, even if it lacked any existing training infrastructure. The crucial aspect in this case is to come very well prepared and be ready to carry a lot of equipment into the field.

Sustainability

BRC are confident that we can make this conservation training model work long term, as we take direct experience from our similar student field course which has been running bi-annually for 14 years. Although PNG is an expensive place to carry out any significant project, we have set up our training model in a relatively efficient manner which has proven appealing for funders.

ENVIRONMENTAL AND SOCIAL SAFEGUARDS/STANDARDS

See Annex 6- WCA Social Safeguards Report CEPF, for more details.

ADDITIONAL COMMENTS/RECOMMENDATIONS

CEPF have made many meaningful contributions to the development of PNG and the sustainability of its biodiversity conservation efforts. BRC commends the efforts of CEPF. Of course CEPF can not support these efforts indefinitely, and thus the following comment is just purely for information purposes and is certainly not a critique.

In the experience of BRC, we know that when funding and support stops after project completion, that sustainability of outcomes can be a serious issue. There must always be a careful balance between bringing conservation communities towards their goals, while creating realistic expectations. Of course this is true of conservation work across the globe, but we feel it is particularly pertinent in PNG. This is because PNG communities tend to favour building close relationships with development organisations. We are invited into their 'Papa Graun' and this hospitality comes with an implicit expectation of long term relationship building. Unrealistic expectations are too often an issue in PNG, and can be detrimental.

Therefore we would advise CEPF to ensure recipients of grants and their local partners understand that they must move forward independently and further to temper and reduce any expectations which they may have. If explained well, it can strengthen CEPF- recipient-community relationships. If communities allow their expectations to grow too much, then this can lead to deleterious consequences for conservation efforts and the undoing of significant progress.

ADDITIONAL FUNDING

Total Amount of Additional Funding Actually Secured (USD)	
Breakdown of Additional Funding	

INFORMATION SHARING AND CEPF POLICY

CEPF is committed to transparent operations and to helping civil society groups share experiences, lessons learned and results. For more information about this project, you may contact the organization and/or individual listed below.

Name- New Guinea Binatang Research Centre Email- info.ngbinatang@gmail.com