



In-Situ Conservation Project

Technical Progress Report

January - August 2013



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 Puerto Princesa City, Palawan, Philippines
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TECHNICAL PROGRESS REPORT

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PROJECT TITLE: PHILIPPINE COCKATOO CONSERVATION PROGRAMME

In-situ Conservation Project

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PROJECT COOPERATORS:

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Municipal Government of Dumarán, Palawan, Philippines
Municipal Government of Rizal, Palawan, Philippines
Municipal Government of Balabac, Philippines
Municipal Government of Patnanungan, Quezon, Philippines
Municipal Government of Polillo, Quezon, Philippines
Bgy. Culasian Government, Rizal, Palawan, Philippines
Bgy. Burdeos Government, Polillo, Quezon, Philippines
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Palawan Council for Sustainable Development Staff (PCSDS)
Jewelmer Corporation Inc.
Polillo Islands Biodiversity Conservation Foundation, Inc.
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Contents

EXECUTIVE SUMMARY	5
ACKNOWLEDGMENTS	13
ACRONYMS	15
LIST OF FIGURES	16
INTRODUCTION	18
THE PHILIPPINE COCKATOO CACATUA HAEMATUROPYGIA.....	18
OBJECTIVE OF THE PHILIPPINE COCKATOO CONSERVATION PROGRAM	19
PROGRAM STRATEGY	19
DELIVERABLES.....	19
DESCRIPTION OF PROJECT SITES	21
RASA ISLAND, NARRA, PALAWAN.....	21
SULU SEA COASTAL PLAIN	22
DUMARAN ISLAND, DUMARAN, PALAWAN	23
CULASIAN MANAGED RESOURCE PROTECTED AREA (CMRPA), RIZAL, PALAWAN.....	24
PANDANAN ISLAND, BALABAC	25
PATNANUNGAN, POLILLO GROUP OF ISLANDS, QUEZON	26
METHODS	26
RESULTS AND PROGRESS	29
OUTPUT 1: CONSERVATION OF COCKATOO POPULATION ON PANDANAN AND BUGSUK ISLANDS, BALABAC	29
<i>Warden scheme</i>	29
<i>Cockatoo population and nest monitoring</i>	30
<i>Conservation education</i>	33
<i>Constraints and measures taken</i>	34
OUTPUT 2: REINTRODUCTION OF PHILIPPINE COCKATOOS INTO PARTS OF THE HISTORICAL RANGE.....	34
<i>Assessments of potential reintroduction sites</i>	34
<i>Constraints and measures taken</i>	36
OUTPUT 3: CONSERVATION OF COCKATOO POPULATION ON RASA ISLAND WILDLIFE SANCTUARY (RIWS), NARRA CONTINUED	37
<i>Wardening scheme</i>	37
<i>RTD Bambalan’s visit to Rasa Island</i>	38
<i>Capacity building of the Protected Area Management Board (PAMB) of the Rasa Island Wildlife Sanctuary (RIWS)</i>	38
<i>Conservation education and eco-tourism</i>	39
<i>Systematic collection of data on breeding and feeding biology and population dynamics of Philippine Cockatoo continued</i>	41
<i>Constraints and measures taken</i>	43
OUTPUT 4. CONSERVATION OF COCKATOO POPULATION IN THE SULU SEA COASTAL PLAIN OF PALAWAN	44
<i>Monitoring in mainland Narra</i>	44
<i>Iwahig monitoring</i>	44
<i>Apis Forest Restoration</i>	44
<i>Constraints and measures taken</i>	44
OUTPUT 5. CONSERVATION OF COCKATOO POPULATION ON DUMARAN ISLAND, DUMARAN CONTINUED	45
<i>Warden scheme</i>	45
<i>Members of Local Protected Areas Management Committee assisted and capacitated</i>	45
<i>Buffer zone restoration and establishment and management of critical habitat</i>	45
<i>Conservation education</i>	48

<i>Systematic collection of data on breeding and feeding biology and population dynamics of Philippine Cockatoo continued</i>	48
<i>Breeding</i>	49
<i>Constraints and measures taken</i>	49
OUTPUT 6. SUPPORT FOR POLILLO ISLANDS PARROT PROJECT.....	49
OUTPUT 7. CONSERVATION OF COCKATOO POPULATION IN CULASIAN MANAGED RESOURCE PROTECTED AREA (CMRPA), RIZAL CONTINUED	50
<i>Warden scheme</i>	50
<i>Potential for cockatoo supplementation explored</i>	51
<i>Constraints and measures taken</i>	51
OUTPUT 8. KATALA INSTITUTE FOR ECOLOGY AND BIODIVERSITY CONSERVATION	51
<i>Captive management of Philippine cockatoo and other threatened target species</i>	51
<i>Landscaping with native species propagated in the Katala nursery continued</i>	52
<i>Educational trail, enclosures and visitors facilities upgraded</i>	53
<i>Constraints and measures taken</i>	54
OUTPUT 9. COCKATOO ADVOCACY	54
<i>IEC in Narra and Puerto Princesa City</i>	55
<i>Earth Day celebration</i>	57
<i>Press conference</i>	58
<i>PCSD engagements</i>	59
<i>Online petitions, signature campaigns and media and information material productions</i>	59
<i>Networking activities and other engagements</i>	60
<i>Constraints and measures taken</i>	63
OTHER HIGHLIGHTS	63
OTHER REPORTED WILDLIFE WITHIN THE REPORTING PERIOD:	63
COOPERATIONS	64
SUMMARY OF RELEVANT SEMINARS, EXPEDITIONS AND WORKSHOPS ORGANIZED AND ATTENDED	65
PAPERS PUBLISHED, SUBMITTED FOR PUBLICATION TO RELEVANT JOURNALS, RELEVANT REPORTS AND MEDIA	66
MILEAGE	66
EQUIPMENT, PERSONNEL AND FACILITY STATUS	67
IMPLICATIONS FOR FURTHER WORK.....	67
PLANNED TARGETS AND ACTIVITIES FOR THE NEXT REPORTING PERIOD	67
LITERATURE.....	69

EXECUTIVE SUMMARY

Output 1: Conservation of cockatoo population on Pandanan and Bugsuk Islands, Balabac

1. Two nests were already occupied in January, one of which already had three hatchlings by the third week of the month. In February six nest trees were occupied and eight hatchlings present. Signs of impending occupation (cut twigs, fresh faeces) were observed around other nests during these months.
2. Eleven cockatoo nest trees were confirmed occupied. A total of 22 fledglings were successfully monitored and 20 of which were banded. Two fledged earlier without leg bands.
3. Two newly discovered nest trees yielded two hatchlings in one nest and one hatchling in the other.
4. In May and June respectively, in addition to the up to 91 and 102 birds roosting in Malinsuno, another temporary roost was occupied on Pandanan with 18 and 33 cockatoos. A simultaneous roost count yielded 159 individuals in all with 68 in Dalahican and 91 in Malinsuno roost site the highest for Pandanan since start of the project.
5. On August 1 in the Malinsuno roost site 131 cockatoos were counted likewise the highest count for a single roost site in this project site.
6. Begging immature birds were recorded on the roost site by April and increased in number in the onward weeks.
7. Possibly due to stepped-up patrolling, including during night-time, no poaching incidence was observed during this breeding season.
8. At least 19 food-providing plants for cockatoos were identified from Pandanan, but most are known only from by their local names so far.
9. There had been confirmed sightings of cockatoos in June and onwards in mainland Bataraza (Puring and Buliluyan) where our volunteer monitors. Cockatoos were observed feeding on Malunggay as well.
10. As of June, four and eighty-one Palawan Hornbill and Blue-naped Parrot successful fledglings respectively were monitored by wardens.
11. New squatters were reported from Pandanan. This was reported to barangay authorities and Jewelmer Corporation.
12. Community monitoring and enforcement visibility also confiscated illegally collected shells *Hippopus hippopus* and after barangay investigation were released in controlled area.
13. PCCP conducted a Katala Fun Day in January in celebration of the annual fiesta of Bgy. Pandanan. Lectures and fun games and activities were actively participated by both elementary and high school students in the area.
14. In June we resumed our school visits as school commenced. We conducted an average of two school visits from June to August and were able to reach 180 pupils from grades 3 to 6 of Pandanan and Malinsuno.
15. Our community visits reached ca 200 parents mostly women who were recipients of 4Ps, a national program against poverty.
16. An information campaign was done in Buliluyan area where we reached about 50 households to discuss about the presence of the cockatoos in the area. The campaign was to encourage people to participate in monitoring and not to harm the cockatoos visiting their areas.

17. The Barangay Council of Pandanan has approved in March 2013 the Resolution No. 1-13 declaring the protection of the Philippine cockatoo roosting site and surrounding vegetation in Malinsuno Island, Bgy. Pandanan.

Output 2: Re-introduction of Philippine cockatoos into parts of the historical range

18. One location, Marinduque Island, with two sites has been assessed for suitability for cockatoo reintroduction within the reporting period.
19. The central portion of the island is protected through the Marinduque Wildlife Sanctuary. Although forest is only found in higher altitudes, the absence of orographic rain due to the overall low elevation of the island potentially make these forests suitable for cockatoos.
20. Among the potential cockatoo food plants were *Pterocymbium tinctorium*, *Garuga floribunda* and *Ficus* sp. in moderate numbers. Another potential food plant, *Erythrina* cf. *subumbrans*, was flowering during the time of our visit, providing an abundant, but highly seasonal food source for cockatoos.
21. Potential nest trees were scarce and included *Shorea*, *Dipterocarpus*, *Pterocymbium tinctorium* and *Koordersiodendrom pinnatum*.
22. Extensive stands of mangrove persist along the northern and north-eastern coast of Marinduque within the municipalities of Torrijos and Sta. Cruz.
23. Large stands of *Avicennia* sp. and *Nypa fruticans* could be found on the landward sites and particularly along rivers, whereas *Rhizophora* and *Sonneratia* were dominant seawards. The latter, as only taxon of importance as nest and food-providing for cockatoos in this ecosystem, was represented in few individuals and in small diameter classes.
24. The landward coastal vegetation contained some additional food-providing plants (*Albizzia*, *Pithecellobium*), but overall potential food supply was poor, and potential nest trees were virtually absent.
25. In coordination with IUCN-SOS, site assessments and preparations have been suspended following the assessment in Marinduque, until the immediate threat posed by the proposed 15MW coal-fired power plant to the cockatoo source area on Rasa Island could be resolved.

Output 3: Conservation of cockatoo population on Rasa Island Wildlife Sanctuary (RIWS), Narra continued

26. Although 35 cockatoo pairs attempted breeding in 2013, overall productivity was low. We recorded 72 eggs; the average clutch size is now 2.06, possibly as a response to the high cockatoo density on Rasa. Only four clutches contained three eggs, two nests contained only one egg, the remaining pairs had two eggs.
27. Eight eggs were removed by the team because they were cracked or rotten. Others which were beyond hatching age, disappeared and probably were removed by the adult birds. Egg predation occurred in at least two instances.
28. A total of 42 cockatoos hatched. Losses during this stage occurred due to mites and predation (monitor lizard suspected in one incidence, bird of prey, possibly goshawk in a second one). Three hatchlings died shortly after hatching for unknown reasons. One hatchling got injured by a rattan used for taking out birds for monitoring and banding.
29. Twenty-three cockatoos fledged successfully.
30. Treatment of cockatoo hatchlings infested with mites was major activity of wardens.

31. The trend continued within the reporting period that numbers of cockatoos utilizing the traditional roost sites oscillated tremendously. However, from May onwards, numbers of roosting cockatoos increased again rapidly and reached 227 individuals in August.
32. Wardens were more vigilant in monitoring visitors and motor boats around Rasa within the period because of the proposed coal plant. The proponent and its allies had attempts to visit without proper coordination either from the PAMB or the municipality.
33. The wardens were able to raise similar issues against coal plant during a meeting organized by the National Commission on Indigenous Peoples (NCIP) Regional Office in May in Narra where support was also manifested. The Tagbanua community for which most of our wildlife wardens belong also passed a resolution opposing said coal plant.
34. In February, DENR 4B Regional Technical Director G. Bambalan in her first visit to Rasa was greeted with excitement. RTD Bambalan chatted with wardens, visited a nest tree and most importantly had seen a cockatoo in the wild for the first time. It was opportune time for PCCP as well to elaborate its position against the proposed coal plant.
35. The regular PAMB meeting was presided none other than the Mayor himself on 15th March 2013. The highlight was the approval of the PAMB Resolution 2013-001 opposing the construction and operation of the DMCI coal power plant at the Trident area, Panacan, Narra, Palawan.
36. In July, the PAMB was assessed by a team pursuant to the Protected Area Management Enhancement (PAME) Program of the DENR. Rasa Island Wildlife Sanctuary was chosen as one of the priority sites all over the Philippines to participate in this program.
37. A two-man team from the National Mapping Resources Institute (NAMRIA) visited Rasa to validate the boundaries of the protected area. The team was assisted by the wardens.
38. Local government of Narra approved the continued financial assistance for Rasa Island in particular for the warden scheme for 2013.
39. The revised Comprehensive Land and Water Use Plan (CLWUP) of Narra integrates the management zonation of Rasa as proposed.
40. The 7th Katala Festival was a huge success. Pupils and students of elementary and high schools were engaged in different fun and learning activities with this year's theme "Cockatoos instead of coal".
41. Our CE activities this period were all directed to schools and communities that will be affected by the proposed coal plant. This includes focus group discussions, house to house visits and attending to barangay regular sessions in particular covering three immediate coastal barangays fronting Rasa Island.
42. In June, fisherfolks went to hear the DMCI-initiated public forum in Panacan 2 and the proponent was received with a loud NO TO COAL by residents. Their messages were hand printed in big tarpaulin they normally use for fishing.
43. PCCP team also presented during barangay sessions of Panacan 2, Poblacion and Antipuluan to provide them information about impacts of the proposed coal plant in Panacan. This resulted to approval of resolutions opposing the said proposal.
44. A group of media from Manila visited Narra and met with key stakeholders to talk about the proposed coal plant. Organized by change.org, this opens opportunity for our cause to get a nationwide media mileage.

45. During the Philippines Independence Day celebration in June, PCCP and KFI participated in the event through the parade and took the opportunity to again promote coal-free Narra. The Mayor-elect Lucena Demaala was vocal to acknowledge the efforts of the PCCP/KFI. This was the first occasion we heard the Mayor-elect Lucena Demaala officially announcing in loud speakers to the general public her strong stand against the coal plant in Narra.

Output 4: Conservation of cockatoo population in the Sulu-Sea coastal plain of Palawan

46. Numbers of cockatoos foraging on the mainland increased rapidly since its population recovered. These are the months were cockatoo nestlings are present on Rasa, and very likely feeding parents add to the numbers of birds foraging on the mainland. This indicates how important the flight path is for maintenance of reproductive viability of Philippine Cockatoos on Rasa Island!
47. In 2013, exclusively the mainland sector *closest* to Rasa was utilized as flight path by foraging cockatoos. Number of birds varied considerably from day to day, possibly as function of weather conditions and food supply on Rasa.
48. Cockatoo observations from Iwahig will be regularly monitored starting September 2013 through our contact volunteer working inside the Penal Colony.
49. The remoteness of the area and the costs involved in deploying wardens remains a challenge in the Apis Forest area. We continue to monitor illegal cutting of trees.

Output 5: Conservation of cockatoo population on Dumaran Island, Dumaran continued

50. Numbers of cockatoos on the roost remain stable over the longer term, with highest counts of 24 individuals in July and fluctuate seasonally. Begging calls of birds in July indicate that cockatoo numbers were augmented by this year's fledglings and their parents.
51. By end of March six pairs showed indication of breeding activity but only three nests contained eggs, whereas the other three nests were still being cleaned. Nest chambers were treated with anti-mite powder as early as January since there were indications of mite infestation.
52. In five nests only the breeding pairs seem to be present, in one nest three cockatoos were around during controls. Supplement feeding of two nestlings was undertaken in May and early June. Seven hatchlings fledged successfully.
53. Highlight of the LPAMC meeting was the approval of Res. No. 2013-01 endorsing the establishment of the Dumaran Island Critical Habitat. This project aims to connect two cockatoo reserves through a corridor and protect and restore the buffer zone of this locally declared protected area.
54. In August, Municipal Resolution passed Res. No. 049 series of 2013 which declared an area in Bgys. Poblacion, Sto. Tomas, Bohol and San Juan in the Municipality of Dumaran as "Dumaran Island Critical Habitat".
55. Some 1,508ha of remaining forest and adjacent areas, including existing protected areas, buffer zones and connecting corridor were delineated and mapped in preparation of declaring the area as Dumaran Island Critical Habitat.
56. In March, we organized the Rainforestation Farming through the help of experts from Leyte, Dr. Marlito Bande and A. Carino and R. Vendiolo from Negros which was attended by 33 farmer stakeholders.
57. Wardens helped identify and validate farmer co-operators for the "Critical Habitat Project". They were also busy in the early parts of the year on stocking up the nursery with enough seedlings and wildlings in preparation for the planting season.

58. As of June, our nursery holds 28,254 seedlings of assorted native species. 908 seedlings were planted in June in the buffer zone as the rainy season started.
59. Kaingin (slash-and-burn) activities in Bulalakaw and Camaya areas and one Bgy. Bohol were monitored within the period and were reported during the LPAMC meeting. Chainsaw operation was observed in February. Most kaingin is outside the protected area but many in high elevations were observed.
60. The 10th celebration of the Kalabukay Festival in June had the theme “Forests - nature at your service”. About 200 native tree seedlings were planted by farmer co-operators after the Alay Lakad Tanim (Walk for a cause).
61. Lectures and/or FGD have been conducted with elementary and high school students, 4P¹ and KALAH-CIDSS members, LGUs and community members during fiestas and foundation days from November 2012 to November 2013. A total of 128 or an average of 10.7 IEC per month reaching 6,176 people was conducted.
62. The local government of Dumarang continued its financial assistance for the warden scheme of the PCCP this year in the total amount of 160,000 pesos.

Output 6: Support for Polillo Islands Parrot Project

63. No field work conducted within the period.

Output 7: Conservation of cockatoo population in Culasian Managed Resource Protected Area (CMRPA), Rizal continued

64. Wardens surveyed the only cockatoo nest tree in Bgy. Ransang and observed that said tree had finally fallen. The other cavity beside was occupied by Blue-naped Parrot.
65. Wardens surveyed areas in higher elevation to check on cockatoo nest trees but were only surprised to see vast areas opened for kaingin (slash-and-burn).
66. In total ca. 5,000 seedlings were planted by wardens within the PA as part of the National Greening Program of the DENR. Most planted Ipil trees withered under the strong heat in March.
67. Cutting of mangroves for charcoal production was rampant within the period. Some trees were in close proximity to known nesting trees. There were cases of illegal fishpond establishment also reported.
68. In June, actual illegal chainsaw operation was witnessed by wardens that resulted to the confiscation of said chainsaw.
69. Assessment for supplementation/reintroduction of Philippine Cockatoos into the area is unfavorable. CMRPA does not any more support a viable cockatoo population. In the past year, no cockatoo has been recorded any more from within the protected area. We assume that the few remaining birds either died or moved somewhere else.
70. Despite intensive patrolling and reporting of violations to the concerned law-enforcing bodies, persecution of illegal resource users was with very few exceptions non-existent or inefficient. Reasons for this are lack of resources among law-enforcers and political will among law-makers. It appears that illegal activities in the area are on the increase, presumably because perpetrators are aware that chances of being caught are slim, or they even enjoy protection from influential parties.

¹ 4Ps is a government program run by the Dept. of Social Welfare and Development which targets rural poor families.

71. Despite the area being declared as protected landscape on national, and managed resource protected area on local level, it will be lost within the next decade, if rule of law will not apply for poachers and land grabbers.

Output 8: Education and research at the Katala Institute for Ecology and Biodiversity Conservation

72. Three birds are kept in the large aviary in the public area, whereas Silver remains isolated in an outdoor aviary in the quarantine area due to continued aggression.
73. In addition to the basic food, birds regularly receive wild fruits still attached to branches and foliage. Driftwood and cuttlefish 'bones' are regularly exchanged. A sprinkler system has been installed to give the birds opportunity to take a bath during longer dry spells. Despite these efforts, behavioral problems persist, particularly with Blue, one of the original batch which was recaptured during the translocation experiment in 2005.
74. Turtles were inventoried on a monthly basis and growth was monitored in February and May 2013.
75. One Palawan Pangolin was turned over to KIEBC and released after stabilization was released by Mr. Alfaro of CENRO-Narra.
76. As of August, 1,200 tree seedlings in 32 species have been planted within the reporting period; a total of 2,956 seedlings of 36 plant species was present in the nursery.
77. Wild cockatoos are seasonally foraging on fruiting trees and are also interacting with the birds in the aviary.
78. The aviary underwent repairs and improvement. The smaller aviary that is used to isolate aggressive cockatoos was also repainted and installed. A digital weather station was also installed.
79. Fencing continued to secure the perimeters of KIEBC. The loop trail is now improved and boulders were laid out.
80. A loop trail for visitors was laid out within the public area. This partially involved the creation of dykes in the more swampy portions of KIEBC. Culverts were produced on site to bridge canals. Ditches were excavated for better drainage.
81. A weather station was established within the quarantine area, including sensors for temperature and humidity inside the bird clinic.
82. A display pond for *S. leytensis* was constructed in June.

Output 9: Cockatoo advocacy

83. Apart from the RIWS-PAMB approved Resolution 2013-001 which opposed the proposed DMCI coal-fired power plant, two municipal resolutions were also approved. Municipal Resolution SB Resolution 2013-1935 opposing and denying the endorsement of said coal plant was passed by the outgoing officials. In June after the midterm elections, the new set of officials approved SB Resolution 2013-1969 still in opposition to the construction and operation of coal-fired power plant in Barangay Panacan, Narra, Palawan.
84. We got support also from three impact barangays that opposed the coal project and approved their respective barangay resolutions: Bgy. Panacan 2: Resolution 2013-10, Bgy. Antipuluan: Resolution 06-2013, Bgy. Poblacion: Resolution 2013-13.
85. Other resolutions of support were gathered from the Wildlife Conservation Society of the Philippines and the Wild Bird Club of the Philippines.

86. LPF and all partner donors wrote to national and local officials to appeal for the rejection of the coal plant in its proposed site.
87. Three online petitions were launched which garnered nearly 82,000 signatures in total.
88. The signature campaign gained significant local support that played part in the consideration of municipal and barangay officials' rejection of the project.
89. We submitted our position paper and assessment to the Initial Environmental Examination Report to DENR, DOE, PCSDS and other concerned authorities.
90. Our IEC campaigns covered the impact areas of the proposed project. We have done FGD, house to house visits, school and community visits and fora.
91. The elected Mayor Lucena Demaala attended most of our information campaigns and was very vocal to announce to everyone her strong stand against the coal power plant.
92. There were two PCSD meetings where residents from Narra in particular from Panacan witnessed the decisions of the council on the coal project. Hundreds of people came to vent their concerns on health and livelihood in particular. In these two big protests, the local government of Narra had extended their support through provision of transportation.
93. The Katala Festival in June had its theme "Cockatoos instead of coal" and interactive lectures were well received by ca. 300 elementary and high school students in Narra.
94. We also celebrated the Earth Day in April with the theme "The Face of Climate Change". In May, we organized a press conference in Puerto Princesa. This was well attended by local media and helped spread out the cause we are fighting.
95. We became part of the Palawan Alliance for Clean Energy that promotes renewable energy (RE) for Palawan. Through this loose network, we are able to campaign all throughout Palawan regarding RE.
96. We wrote to PCSDS regarding the illegal trapping of wildlife within the proposed coal power plant site in Panacan. This was apprehended by Narra Police through the efforts of the good Mayor Demaala.
97. We produced information materials that were used for the intensive campaign against coal plant e.g. stickers, pamphlets, tarpaulins, flyers, etc. This has reached to all target communities.
98. We also have formed alliances with other organizations like WWF, Greenpeace, and Philippine Movement for Climate Justice and 350.org.

Other highlights

- Hawksbill Turtle *Eretmochelys imbricata* (IUCN: critically endangered). One hatchling was found by a gleaner on Malinsuno (adjacent Pandanan) on March 31, indicating that the species is nesting in the vicinity. It was released back into the sea.
- Philippine Collared-dove *Streptopelia dusumieri* (IUCN: least concern). Six individuals of this species which was recently split from Island Collared-dove *S. bitorquata* were recorded feeding on the edge of a slash-and-burn field. The species is becoming rare in Palawan.
- Palawan Hornbill *Anthracoceros marchei* (IUCN: vulnerable). Up to 45 individuals have been encountered during patrols on Pandanan in April.
- We are participating in a study on parrot hemoparasites initiated by Dr Juan Masello of Giessen University, Germany. Three parrot species were sampled in Rasa, Pandanan and Dumarán.

- As follow-up on Peter's trip to Burung Indonesia's (BI) parrot conservation project in Halmahera last year a BI delegation visited three different KFI project sites in Palawan from 30 May to 06 June 2013. Three representatives from the Halmahera and Sumba projects were accompanied by BI Director Dr Agus Utomo.

Annex 1 Foraging and flight path of the Philippine cockatoo in Rasa Island Wildlife Sanctuary and adjacent mainland

Annex 2 Resolutions opposing the construction and operation of the DMCI coal-power plant in Panacan, Narra, Palawan: PAMB, Municipal Resolutions, Barangay Resolutions, WCSP Resolution and WBCP Resolution

Annex 3 Compilation of selected news articles regarding our fight against the coal plant in Narra

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ACRONYMS

CE	Conservation Education
CENRO	Community Environment and Natural Resources Office(r)
CEPA	Conservation des Espèces et Des Populations Animales
CMRPA	Culasian Managed Resource Protected Area
DENR	Department of Environment and Natural Resources
ELAC	Environmental Legal Assistance Council
FGD	Focus group discussion
IUCN	International Union for the Conservation of Nature and Natural Resources
KEEC	Katala Environmental Education Center
KFI	Katala Foundation, Inc.
KIEBC	Katala Institute for Ecology and Biodiversity Conservation
LGU	Local Government Unit
LPAMC	Local Protected Area and Management Committee
LPF	Loro Parque Fundación
MENRO	Municipal Environment and Natural Resources Officer/Office
MMPL	Mt. Mantalingahan Protected Landscape
MOA	Memorandum of Agreement
NCIP	National Commission on Indigenous Peoples
PA	Protected Area
PAMB	Protected Area Management Board
PAWB	Protected Areas and Wildlife Bureau
PASu	Protected Area Superintendent
PCCP	Philippine Cockatoo Conservation Program
PCSD(S)	Palawan Council for Sustainable Development (Staff)
PENRO	Provincial Environment and Natural Resources Office
PFTCP	Philippine Freshwater Turtle Conservation Program
PNP	Philippine National Police
PTFCF	Philippine Tropical Forest Conservation Foundation
PWRCC	Palawan Wildlife Rescue and Conservation Center
RA 9147	Republic Act 9147 otherwise known as the Wildlife Protection Act
RIWS	Rasa Island Wildlife Sanctuary
SDENRO	Special Deputy Environment and Natural Resources Officer
WPU	Western Philippines University
ZGAP	Zoologische Gesellschaft für Arten- und Populationsschutz

LIST OF FIGURES

- Figure 1.** Map of the Philippines indicating sites of the Philippine Cockatoo Conservation Program: 1. Culasian Managed Resource Protected Area, Rizal; 2. Pandanan, Balabac; 3. Rasa Island, Narra; 4. Sulu Sea coastal plain; 5. Omoi and Manambaling Cockatoo Reserves, Dumaran; 6. Patnanungan Island, Polillo group of Islands, Quezon.
- Figure 2.** Vegetation and land-use of Rasa Island, Palawan, Philippines.
- Figure 3.** Sites covering Sulu Sea coastal plains in Palawan, Philippines.
- Figure 4.** Omoi Cockatoo Reserve (left) and Manambaling Cockatoo Reserve (right) cover the last forest patches on Dumaran Island.
- Figure 5.** Vegetation, land use and boundaries of Culasian Managed Resource Protected Area, Rizal, Palawan
- Figure 6.** Location map of Pandanan Island indicated in red arrow
- Figure 7.** Map of the Polillo Islands, Philippines indicating the major islands and settlements, a global priority site for biodiversity conservation (adopted from Hampson *et al.*, 2003).
- Figure 8.** Pandanan barangay police confiscated and released illegally collected *Hippopus hippopus*
- Figure 9.** Begging immature cockatoos near the field house in Malinsuno; another bird, presumably one of the parents, is hidden behind the palm frond in the centre
- Figure 10.** Maximum and minimum monthly counts of cockatoos roosting on Malinsuno, Balabac
- Figure 11.** Rene doing biometrics for this year's cockatoo hatchlings from Pandanan
- Figure 12.** Philippine Cockatoos feeding on Kapok red flowers and nectar
- Figure 13.** Forest patch in Marinduque Wildlife Sanctuary circa 200 m above sea level (left); mass flowering of *Erythrina cf. subumbrans* a potential cockatoo food plant (right)
- Figure 14.** Mangrove near Sta. Cruz with scattered *Sonneratia* in the foreground and dense *Rhizophora* in the back (left); vegetated limestone outcrop (right)
- Figure 15.** Peter with Siegfred doing the banding of cockatoo hatchlings from Rasa Island (left). In the same occasion, Chris Shepherd from TRAFFIC SEA visited Rasa Island in his visit to Palawan (right)
- Figure 16.** Wildlife warden Agui interacts with RTD Bambalan during visit to Rasa in February (left). RTD Bambalan was joined by L. Dimapilis (Region 4B), CENRO Cojamco and R. Ubani (PENRO)
- Figure 17.** Some of the NO TO COAL signages posted out in private houses in Panacan to express their support to the cause and the fight
- Figure 18.** PCCP wardens and staff joined the Independence Day Parade in Narra in June with messages against coal and headdresses of a Philippine Cockatoo
- Figure 19.** Total number of breeding pairs, eggs, hatchlings and fledglings per breeding season
- Figure 20.** Average number of eggs, hatchlings and fledglings per breeding pair per breeding season
- Figure 21.** Minimum number of Philippine Cockatoos on traditional roost site on Rasa
- Figure 22.** Map of Dumaran Island indicating the proposed critical habitat

- Figure 23.** Participants of the Rainforestation Training was taught how to make growth chambers from local materials available (left) while Dr. Bande shows the proper seed bed construction and maintenance (right)
- Figure 24.** The impressive nursery at our buffer area
- Figure 25.** Dr. Schoppe welcomed farmer cooperators and students who participated in the walk for a cause in celebration of the 10th Kalabukay Festival (left). Municipal officials took part in the tree planting which followed after the alay lakad
- Figure 26.** Maximum and minimum monthly counts of cockatoos roosting in Lagan, Dumaran
- Figure 27.** A Palawan Pangolin was turned over to KIEBC
- Figure 28.** Highest simultaneous numbers of wild cockatoos by month foraging in KIEBC, Narra
- Figure 29.** The smaller aviary is prepared for the rescue or emergency needed at KIEBC facility
- Figure 30.** Temporary trails in grass-and wetland portion of KIEBC
- Figure 31.** The high number of attendees from different sectors of Panacan during the IEC conducted was very encouraging. In the two-day IEC in June, we were honored by the participation of the Mayor-elect of Narra Lucena Demaala who expressed its official stand against the coal plant
- Figure 32.** Anti-coal supporters from Narra display their placards during the short program after the Alay Lakad. Students from Narra with their sign against the coal plant
- Figure 33.** “The Face of Climate Change” was the theme during the Earth Day activities
- Figure 34.** We announced during the press conference the mounting opposition against the coal power plant as manifested by more than 80,000 signatures collectively gathered through www.change.org and www.regenwald.org. Katala mascot also was there to express its serious concern over the issue. Local TV, radio and print media were able to highlight the issues
- Figure 35.** Painting in canvass depicting the plight of the birds on Rasa Island Wildlife Sanctuary in the eyes of the local artist, Jonathan Benitez. Said painting was donated to KFI for educational purposes
- Figure 36.** Snapshots taken during the peaceful rally of anti-coal supporters from Panacan, Narra before the PCSD Meeting in June. Protestors brought their own baon (provisions) while transport expenses were supported by PACE members, LGU Narra and individual donors
- Figure 37.** No to coal stickers were distributed all over target communities during the conduct of information campaigns and similar events. Tarpaulins were effective prompts to saturate the community with the conservation message
- Figure 38.** Malayan Night-heron rescued from a snare on Pandanan Island
- Figure 39.** Male and female Palawan Blue-Flycatcher on nest
- Figure 40.** Banding of cockatoos on Rasa with visitors from Burung Indonesia (left); Dr Agus Utomo, Director of Burung Indonesia, discussing with Agui, first-generation wildlife warden of PCCP

INTRODUCTION

*The Philippine Cockatoo *Cacatua haematuropygia**

The Philippine Cockatoo or Red-vented cockatoo *Cacatua haematuropygia* is restricted to lowland forest areas and mangroves in the Philippines. Formerly, it could be found all over the archipelago (Dickinson *et al.* 1991). Only in the last decades a rapid decline set in, which brought the species to the brink of extinction (e.g. Boussekey 2000a; Lambert 1994). The reasons for the decline of the populations are (e.g.; Collar *et al.* 1999; Lambert 1994; Widmann *et al.* 2001):

- Habitat destruction, particularly in respect of nesting and food providing trees.
- Persecution as crop pest.
- Poaching for pet trade.
- Potential diseases caused by the introduction of captive birds in the range of wild populations.
- Tropical storms and typhoons

Habitat destruction and poaching are the most important factors threatening the Philippine cockatoo.

Since almost fifteen years Katala Foundation Inc. (KFI) implements the PCCP in the Philippines. Comprehensive conservation projects are currently undertaken in five sites in Palawan (Fig. 1): Rasa Island (Narra), Dumaran Island (Dumaran), Culasian (Rizal), Pandanan and Bugsuk Islands (Balabac) and the most recently the Sulu Sea plain of Narra, Aborlan and Puerto Princesa. The three former sites contain by now protected areas declared on municipal levels, specifically demarcated to include the remnant cockatoo populations. The Pandanan site is predominantly owned by Jewelmer Corporation, with which KFI has a Memorandum of Agreement for the conservation of the species. The Sulu Sea plain has various ownerships, but the most important site is the Iwahig Penal Farm.

We estimate that between 600–1000 Philippine cockatoos exist in the wild (assuming few populations have been overlooked in recent surveys of historical locations, and 100-150 individuals survive in the Sulus, for which only incomplete information is available).

The single-most important Philippine cockatoo population on Rasa is secured under presidential proclamation as “Rasa Island Wildlife Sanctuary” since February 2006, in addition to local legislations. Pandanan, holds possibly the second-most important population with at least 140 (up from 80) individuals.

One additional site is in the Polillo group of islands in the Luzon Faunal Region, the only known location in the Luzon Faunal Region.

With the five project sites in Palawan and one in Luzon, it is estimated that between one- to two-third of the remaining wild population is currently covered in PCCP projects. Cockatoo populations are stable or increasing in all sites, except in Rizal, and improved legal conservation could be achieved (e.g. through creation of cockatoo reserves). However, law enforcement by state agencies remains weak and pressure on these areas is rather increasing (migrant influx to Palawan, mining, planned large-scale establishment of bio-fuel plantations). Warden schemes remain the single-most important tool to assure the short-term survival and recovery of the species, whereas lobbying, conservation education, habitat restoration and reintroduction, as well as provision of alternative livelihood options are

important for the long-term improvement of the frame conditions for cockatoo conservation in the Philippines.

Objective of the Philippine Cockatoo Conservation Program

Conservation and restoration of the most viable subpopulations of the Philippine Cockatoo and their habitats, including associated flora and fauna under involvement of all key stakeholders, resulting in a down-listing of the species from ‘Critical’ to ‘Endangered’ through reversing its population decline and under consideration of the precautionary principle.

Program Strategy

The main strategy of the programme is to conserve *in-situ* the most important subpopulations of the Philippine cockatoo through adopting participative methods.

The general program strategies are:

- Management of local resources in the framework of Philippine law;
- Capacity-building for local decision-makers and key stakeholders to ensure sustainability of the conservation efforts; and,
- Ecosystemic conservation approach with the Philippine cockatoo as flagship species.



Figure 1. Map of the Philippines indicating sites of the Philippine Cockatoo Conservation Program: 1. Culasian Managed Resource Protected Area, Rizal; 2. Pandanan, Balabac; 3. Rasa Island, Narra; 4. Sulu Sea coastal plain; 5. Omoi and Manambaling Cockatoo Reserves, Dumaran; 6. Patnanungan Island, Polillo group of Islands, Quezon.

Deliverables

Objective 1: Conservation of cockatoo population on Pandanan and Bugsuk Islands, Balabac

- Warden scheme on Pandanan and Bugsuk Island continued and extended to adjacent mainland.
- Monitoring of cockatoo population and habitat on Pandanan and Bugsuk Island continued.
- Networking with local stakeholders, particularly Jewelmer Corporation, the largest private landowner, continued.
- Conservation education in Pandanan Island and adjacent mainland continued.
- Research on conservation-related aspects of cockatoo biology on Rasa continued, with focus on factors influencing breeding success and foraging ecology.
- Small livelihood projects for key-stakeholders continued.

Objective 2: Re-introduction of Philippine Cockatoo

- 2nd Workshop for re-introduction of the Philippine Cockatoo with national and local stakeholders from two selected re-introduction sites conducted.
- Philippine Cockatoo Action Plan published.
- One priority site prepared (habitat rehabilitation, community awareness and acceptance).
- Actual re-introduction initiated.

Objective 3: Conservation of cockatoo population on Rasa Island, Narra

- Warden scheme continued.
- Members of Protected Areas Management Board in the management of the Philippine Cockatoo and Rasa Island Wildlife Sanctuary capacitated and meetings facilitated.
- Conservation education for stakeholders continued.
- Research on conservation-related aspects of cockatoo biology on Rasa continued, with focus on factors influencing breeding success and foraging ecology.

Objective 4: Conservation of cockatoo population in the Sulu-Sea coastal plain of Palawan

- Monitoring of new mainland flocks initiated (municipalities of Narra, Aborlan), and of existing one (Iwahig Penal Colony) continued.
- Intensive conservation education initiated for communities visited by foraging flocks.
- Potential crop damages assessed and compensation mechanisms developed.
- Networking with Department of Justice, WESCOM and other land owners continued or initiated.
- Habitat restoration and management in Apis, Aborlan continued.

Objective 5: Conservation of cockatoo population on Dumarán Island, Dumarán

- Warden scheme continued.
- Members of Local Protected Areas Management Committee in the management of the Philippine cockatoo, as well as Omoi and Manambaling Cockatoo Reserve assisted and capacitated.
- Research on conservation-related aspects of cockatoo biology on Rasa continued, with focus on factors influencing breeding success and foraging ecology.
- Buffer zone restoration around existing cockatoo reserves continued.
- Creation of forest corridor connecting the two existing cockatoo reserves initiated.

Objective 6: Support for Polillo Islands Parrot Project

- Warden scheme for Philippine cockatoo and other parrot species continued.
- Conservation education for threatened parrot species within the archipelago continued.
- Handing over of project to Polillo Island Biodiversity Conservation Foundation initiated.

Objective 7: Conservation of Culasian Managed Resource Protected Area

- Warden scheme for cavity-breeding birds continued.

- Members of Local Protected Areas Management Committee in the management of the Philippine cockatoo, as well as Culasian Managed Resource Protected Area assisted and capacitated.
- Potential for cockatoo supplementation explored.
- Handing over to the Protected Area Management Board of the Mt. Mantalingahan Protected Landscape initiated.

Objective 8: Education and research at the Katala Institute for Ecology and Biodiversity Conservation

- Captive management of Philippine Cockatoo and other highly threatened species continued through employment and training of zookeepers and volunteers.
- Landscaping with native species propagated in the Katala nursery continued.
- Educational trail, enclosures and visitors facilities upgraded.
- Modules for guided tours for general public and schools, as well as short courses in conservation awareness prepared and field-tested.
- Proposal submission to other potential donors continued.

Objective 9: Cockatoo Advocacy

- Engagement with the Palawan Council for Sustainable Development and other law-enforcing bodies in formulation and implementation in the fields of wildlife trade, illegal logging, establishment of large-scale agricultural projects, particularly plantations.
- Participating in environmental impact assessment of planned coal plant opposite Rasa Island initiated.
- Advocacy in respect to impacts and perpetrations in cockatoo habitats continued.

Description of Project Sites

Rasa Island, Narra, Palawan

Rasa is a small coral island of 8.34 km² land area situated in the Sulu Sea, just offshore of the Municipality of Narra, Palawan, Philippines (Fig. 2). About 1.75 km² are covered with coastal forest, mangrove (5.60 km²), cultivated areas (predominantly coconut; 0.39 km²), 0.60 km² are barren or sparsely vegetated sand and coral outcrops. In February 2006, the island became a Wildlife Sanctuary through Presidential Proclamation 1000 and since a Protected Area Management Board is functioning as management body for Rasa Island Wildlife Sanctuary (RIWS). In 2008, RIWS was chosen as Top 13 Bird Watching Sites in the Philippines by the Department of Tourism.

The island is the pilot site of the program since 1998. Key component of this project site is the warden scheme which involves patrolling and protection of the birds during and outside the breeding season.

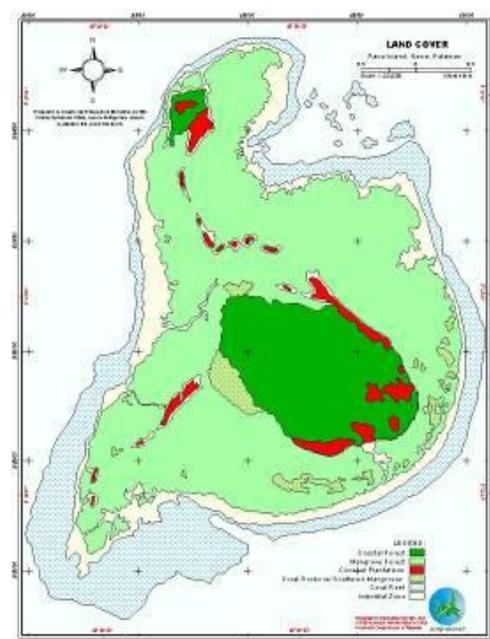


Figure 2. Vegetation and land-use of Rasa Island, Palawan, Philippines.

This scheme has proven to be efficient. It has more than doubled the population of cockatoos on the island over ten years.

Rasa Island probably holds the highest population density of Philippine Cockatoo that remains in the wild. The world population of Philippine cockatoo was estimated to range between 1,000 to 4,000 individuals (Lambert 1994). More recent estimates put the number of cockatoos remaining in the wild between 600 and 1,000. About 70 to 75% of this population is probably found in Palawan (Boussekey 2000b). This makes Rasa a high priority area for the protection of this species.

Not only Philippine Cockatoos live on the island, but a variety of other species, with an unusual high percentage of globally threatened and near-threatened taxa (IUCN 2013), considering the small size of Rasa. Noteworthy among the 109 recorded bird species are Grey Imperial-pigeon *Ducula pickeringii* and Mantanani Scops-owl *Otus mantananensis*.

Sulu Sea Coastal Plain



This project sites comprises the lowlands of central Palawan facing the Sulu Sea and including areas of Puerto Princesa City, and the municipalities of Narra and Aborlan. The area is bordered by the Victoria-Anepahan Range to the west and the Sulu Sea to east; the northern edge runs roughly along 9° 47' N, the southern along 9° 9'N.

Figure 3. Sites covering Sulu Sea coastal plains in Palawan, Philippines.

Philippine Cockatoos have long been known to persist in the Iwahig Penal Colony south of Puerto Princesa City. More recent are flocks of cockatoos from Rasa feeding on the mainland of Narra and from Iwahig Penal Colony feeding in coastal areas of Puerto Princesa City, particularly in the compound of the Western Command (WESCOM).

Large parts of the coastal plains are cultivated, mainly with coconuts and rice paddies, particularly in Narra and Iwahig, where irrigation is available. Extensive areas of disturbed grassland-forest mosaics persist, which are habitats for a surprisingly high number of Palawan endemics. One explanation for this phenomenon could be that the present vegetation resembles that of some periods in the Pleistocene. These areas are used as pastures, but also for the collection of a wide variety of forest products. Grass fires are a regular occurrence and partly the vegetation is adapted to these occurrences (*Antidesma* fire savanna). Extensive evergreen and semi-evergreen lowland forests exist at the foot of the Victoria Anepahan Range, on fossil limestone reefs in Narra and Aborlan, south of the Bay of Puerto and in the Iwahig Penal Colony. Particularly the latter area is of outstanding conservation importance. All endemic lowland bird species are recorded from the area. Globally threatened species, aside from the cockatoo, include Palawan Peacock-pheasant

Polyplectron napoleonis, Blue-headed Racquet-tail *Prioniturus platenae*, Palawan Hornbill *Anthracoceros marchei*, Great Slaty Woodpecker *Mulleripicus pulverulentus*, Falcated Wren-babbler *Ptilocichla falcata*, and Palawan Flycatcher *Ficedula platenae*. Because of the abundance of brackish and freshwater wetlands Iwahig Penal Colony is an important wintering ground for waterbirds, including the endangered Black-faced Spoonbill *Platalea minor*.

Dumaran Island, Dumarán, Palawan

Dumaran is situated in north-eastern Palawan between 10°22' and 10°41'N and 119°28' and 119°55'E. Nine Barangays are situated on Palawan mainland, seven on western Dumaran Island. The island is situated in the Sulu Sea and separated by a ca. seven km wide channel from the mainland.

PCCP currently manages three areas on the island: Omoi and Manambaling Cockatoo Reserves (Fig. 4) and the traditional roosting site in Lagan. A Local Protected Area Management Committee (LPAMC) functions as its management body.

All natural terrestrial ecosystems in Dumaran are tree-dominated. On Dumaran Island only few small and isolated forest patches remain, none of them larger than 103 ha. The most abundant formation is evergreen and semi-evergreen lowland forest with Ipil *Intsia bijuga*, Amugis *Koordersiodendron pinnatum* being emergent tree species of commercial value.

Ornithological surveys conducted by Katala Foundation so far yielded 136 species from the island. A prominent species of conservation concern is the Philippine cockatoo, which can be found with viable population in the mangroves and forest remnants of Dumaran Island, but apparently not anymore on the mainland. The last remaining forest patches are therefore of global conservation concern. This notion is supported by the recent records of other globally threatened species, particularly the Palawan Forest Turtle *Siebenrockiella leytensis*.

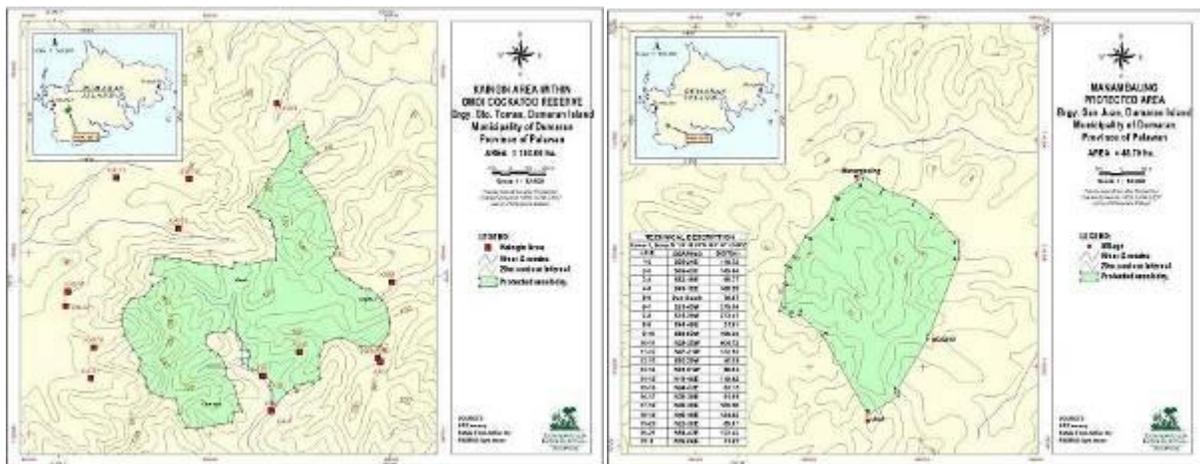


Figure 4. Omoi Cockatoo Reserve (left) and Manambaling Cockatoo Reserve (right) cover the last forest patches on Dumaran Island.

Other species of conservation concern are Palawan Hornbill, Blue-headed Racquet-tail and Palawan Pencil-tailed Tree-mouse *Chiropodomys calamianensis*.

Habitat degradation and destruction, rather than poaching, remain the biggest challenges for cockatoo conservation in Dumaran. In the current phase ca. five hectares of secondary forest and grassland were purchased with support of the Stadtholding Landau in the course of a

carbon-mitigation project. These areas have been rehabilitated and integrated in the buffer zone of the Omoi Cockatoo Reserve.

Culasian Managed Resource Protected Area (CMRPA), Rizal, Palawan

The Protected Area (PA) is located in the southern portion of Palawan Island in the municipality of Rizal. It is situated in the coastal plain facing the South China Sea, between the coordinates 8°52' to 8°47'N and 117°27' to 117°31'E. The PA comprises 1,954 hectares.

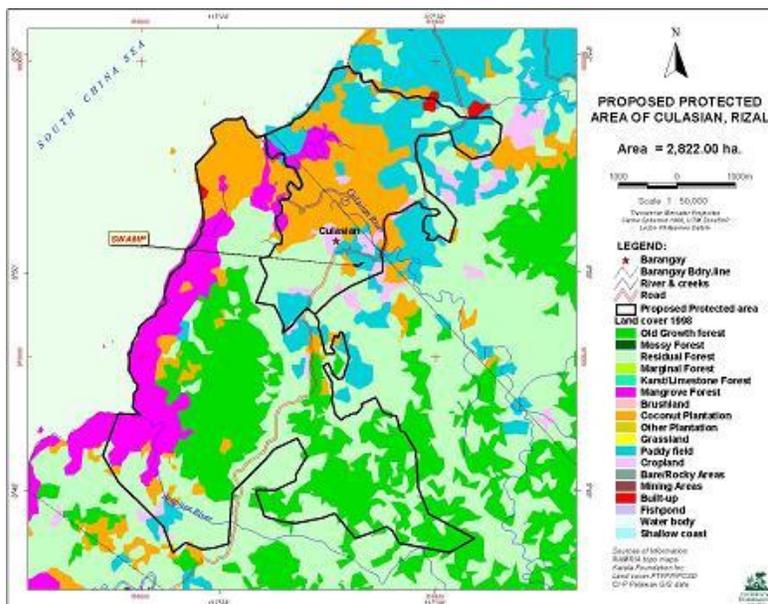


Figure 5. Vegetation, land use and boundaries of Culasian Managed Resource Protected Area, Rizal, Palawan.

CMRPA ranges from sea level to about 140ma.s.l. south of Culasian proper. The terrain is flat in the narrow coastal area, and rolling to moderately steep in the remaining portions. The two largest forest areas persist north of the highway near Tagbalugo on an isolated moderately steep hill reaching 120ma.s.l. and a highly fragmented rolling forest area south of the highway from ca. 20 to 140ma.s.l. near Darapiton, Malutoc, Balingasag and Tuburon. Two permanent rivers mark the periphery of CMRPA: Culasian River in the north and Arapitan River in the south. Smaller ephemeral creeks and stagnant water bodies can be found inside the area.

The major terrestrial ecosystem in the PA is lowland dipterocarp forest. Unlike most forests in Palawan, canopy heights are very high, often thirty to forty meters, with “Apitong” *Dipterocarpus grandiflorus*, “Manggis” *Koompassia excelsa* being the most conspicuous emergent tree species. Particularly in Rizal is the only location in the Philippines where *Koompassia excelsa*, the tallest tree species in Asia, can be found. Other emergent trees are for example *Dipterocarpus gracilis*, *Dipterocarpus hasselti*, *Intsia bijuga* and *Koordersiodendron pinnatum*.

Level areas are dominated by permanent cultivation. Shifting cultivation is also most common along the roads, but can frequently be found isolated in forested areas, often on steep slopes. Emergent “Manggis” and “Apitong”, isolated in cultivated areas, indicate nest sites of parrots or hill mynas which are ‘owned’ by a poacher, and therefore were not cut during the area was cultivated. The PA holds the highest known density of the near-threatened Blue-naped parrot in the country, and is likely of global importance for this

species. Since habitat is very suitable and poaching is reduced significantly, reasons for the stagnant population could be over-aged breeding pairs or competition with other tree-cavity breeders (particularly Blue-naped Parrots).

To date, 133 bird species are recorded within the CMRPA. Of outstanding conservation concern (IUCN 2013) are particularly the larger tree cavity nesters, like Palawan Hornbill, all three parrot species of Palawan, Philippine Cockatoo, Blue-naped Parrot *Tanygnathus lucionensis* and Blue-headed Racquet-tail *Prioniturus platenae*.

Pandanán Island, Balabac

Pandanán Island in Bgy. Pandanan belongs to the north easternmost municipality of Balabac in Palawan (Fig. 6). Coastal forests are dense and stock on flat limestone originating from elevated coral reefs. Large trees in the coastal forest are mostly deciduous and widely spaced due to water stress during the dry season. The understory is very dense with abundant vines. Emergent trees comprise the genera *Dipterocarpus*, and *Ficus*. A narrow rim of beach forest with *Erythrina*, *Calophyllum* and *Barringtonia* is present. The dense coastal forest cover is as well protected because the large portion of the island is privately-owned and entries are monitored by private guards. Coconuts are the major crop grown in the coastal areas and shifting cultivation including lowland rice, corn, and root crops inside forested areas are common land use forms. Extensive mangroves are thriving.

So far, 74 bird species have been recorded in Pandanan and adjacent Malinsuno, but inventories are still ongoing. Among these are six globally threatened and six near-threatened species (IUCN 2013). Of outstanding conservation concern are particularly the larger tree cavity nesters, like Palawan Hornbill, all three parrot species of Palawan, Philippine Cockatoo, Blue-naped Parrot and Blue-headed Racquet-tail, and other conservation relevant species like Grey Imperial-pigeons and Mantanani Scops-owl (Widmann *et al.* 2008). The first and only record for the Philippines of a Fairy Pitta *Pitta nympha* comes from Malinsuno as a result of the conservation project.

The implementation of the warden scheme recruiting cockatoo poachers resulted in significant increases of the cockatoo population in the first two years of project implementation, comparable to those of the early stages on Rasa Island. In recent surveys, roosting site is at a coconut plantation in Malinsuno Island just across Pandanan Island. Highest number of cockatoo observed was 159 in 2013.

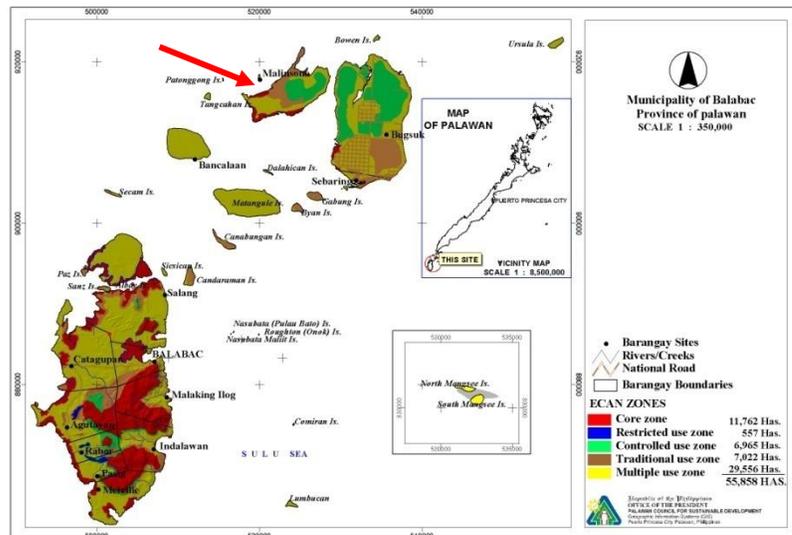


Figure 6. Location map of Pandanan Island indicated by red arrow (Map Source: PCSDS).

Patnanungan, Polillo group of islands, Quezon

The Polillo group of islands in Quezon is possibly the last area containing a population of the critically endangered Philippine Cockatoo, or 'Kalangay' as known locally, in the Luzon faunal region (Gonzalez 1997, Collar *et al.* 1999, Widmann 2001).

Patnanungan Island (Fig. 7) is mostly covered by scattered fragments of logged primary lowland evergreen forest and patches of secondary growth forest. About 95 species of birds were recorded from Patnanungan Island, of which 18 species are endemic to the Philippines and three are restricted to Greater Luzon. (Gonzales, 2007).

Forests, particularly in the northern and central portion of the island, are frequently transformed into slash-and-burn fields. The small diameter classes of cut trees indicate that rotational periods might be shorter than fifteen years. Principal crops planted are corn, cassava, banana and papaya.

Cockatoos persist in very low numbers. Habitat is seriously degraded and lack of nest trees might be a limiting factor. Due to the relative proximity to Manila as potential market, illegal logging and wildlife trade remain rampant in the area. Poaching for the pet trade is still ongoing, due to insufficient law enforcement, particularly in remote areas.

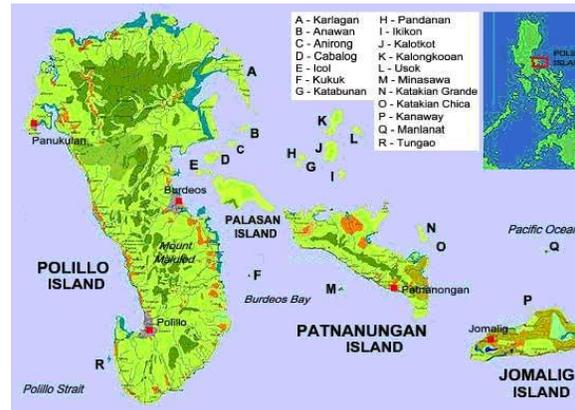


Figure 7. Map of the Polillo Islands, Philippines indicating the major islands and settlements, a global priority site for biodiversity conservation (adopted from Hampson *et al.*, 2003).

Methods

The Philippine Cockatoo Conservation Programme (PCCP) employs an ecosystemic and community-based approach to biodiversity conservation using the Philippine cockatoo as its flagship species. The main components of the program are nest protection or warden schemes; scientific researches on feeding, biology and ecology of the Philippine cockatoo and other threatened species; identification, protection and management of key conservation sites; conservation education; habitat restoration; and capacity building. Researches on the Philippine cockatoo include distributional surveys, rescue of individual birds, translocation assessments, and conservation breeding for later re-introduction.

Information on the biology and ecology of the cockatoo is gathered through direct observation. On Rasa, movements of the cockatoos can be best observed from a boat, from beaches or coral outcrops. Very dense vegetation on the island considerably hampers visibility on transect walks or point counts. On Dumaran, Rizal, Pandanan and Polillo, movements are observed through wardens monitoring and patrols at protected areas and roost sites.

Monitoring of the population trend on Rasa, Dumaran and Pandanan in Balabac is done through counting individuals at a traditional roost site. A traditional roost site is situated in a mangrove area on Rasa and can be observed from a boat while in Dumaran a privately-

owned coconut plantation serves as the roost site bordering close to a mangrove area. On Balabac, at least two roosting sites are presently monitored; one in Malinsuno Island and the other on Pandanan Island. Counts are conducted monthly either before sunset on Rasa and Balabac islands and daily on Dumarán. Counts are also conducted during dawn before birds leave the roost site. Whenever possible, counts on Rasa are conducted under similar weather and light conditions. No roosting sites are known from Culasian and Patnanungan.

The core component in all project sites is the wardening scheme, employing former poachers as wildlife wardens. Wardens inspect and verify existing and potential nest trees starting end of September. During the breeding season, the nest trees are under permanent surveillance. Trees are climbed and nest holes controlled every ten days during that time. For safety reasons, dead or damaged trees are not climbed. Nest trees are characterized through species identification, tree height, diameter at breast height (DBH), height of nest hole, exposition of nest hole, diameter of hole, and diameter at base and depth of cavity. The geographic location of each nest tree is taken with the help of a GPS and marked in a map.

Presence or absence and condition of adult birds, eggs, nestlings or nest predators are noted. Nestlings are weighed with Pesola spring balances/and or electronic balance and banded with aluminum rings bearing the inscription of the Department of Environment and Natural Resources (DENR), the number and year (e.g. DENR 13-0001).

Volunteers are detailed in monitoring stations at the mainland coasts of Narra within and outside the breeding season. These volunteers record all sightings of cockatoos and other significant wildlife in the area of assignment.

Surveys to find remnant cockatoo populations are based on historical sources or recent information. To initially narrow down the searches, non-formal interviews with key informants (poachers, other forest users, barangay officials, school teachers) are conducted. Surveys aim to identify remnant cockatoo populations or areas which are suitable for translocation.

Herbarium collections are made of key plants in cockatoo habitats, particularly food-providing plants, and nest and roost trees. The physical structures of cockatoo breeding habitats are characterized through forest profiles. Phenological information on fruiting and flowering of food-providing trees are systematically collected on Rasa and Dumarán.

Restoration of mangrove is conducted on Rasa through transplanting of nursery-grown trees. Experimental restoration of lowland forest habitat is done in Dumarán. Particularly nest- and food-providing plants for cockatoos are systematically tested for their suitability for reforestation. MS Access and excel programs are used for analysis.

Composition of remaining bird communities in project and survey sites is assessed using MacKinnon-Lists and, occasionally, mist-netting. Composition of mammal, reptile and amphibian communities in project sites is assessed through direct observations, mist- and harp-netting, live-trapping (Sherman type and locally-made cage type) and pitfall trapping.

To identify potential cooperators for the projects, livelihood needs, and capacities, stakeholder and SWOT analyses are employed. Participatory planning is done through goal-oriented project planning methodology. Alternative livelihood is provided for key-stakeholders of the cockatoo and the PAs, based on the needs assessments.

Conservation education activities employ the PRIDE approach which uses marketing methodologies to galvanize community support for conservation. The approach conducts pre and post project surveys to assess changes in levels of knowledge, awareness and behavior among target audience by using control groups. Survey Pro is used for analysis on changes

over time. Proven marketing vehicles like billboards, posters, fact sheets, puppet shows, school and community visits, festivals and media participation are used to deliver relevant and compelling conservation messages.

Relevant trainings and seminars are conducted to help capacitate local partners in conservation. Cross visits to Rasa and other project sites are encouraged to facilitate exchange of experiences, lessons learned and good practices to boost morale of local partners and reinforce knowledge.

Please refer to each output for particular methodologies used in achieving results.

RESULTS AND PROGRESS

Output 1: Conservation of cockatoo population on Pandanan and Bugsuk Islands, Balabac

Warden scheme

Monitoring conducted by wardens yielded many observations and records of new transients in the area and were all reported to the barangay for proper coordination. In January, wardens monitored coconut clearing inside the Jewelmer area by locals from Buliluyan. The area cleared was planted with root crops. There were also reported collectors of rattan in Gabong area who had apparently established trail. This was coordinated immediately with the Jewelmer security team and the barangay police.

Community monitoring and enforcement visibility also confiscated illegally collected shells *Hippopus hippopus* and after barangay investigation were released in controlled area. Night patrols were also conducted by the composite team to ensure protection from poaching activity. We monitored clearing of old coconut plantation inside Jewelmer's property. Old growth trees are also cut down (with DBH of 30cm). Some kaingin areas in Kambangtuli and Tagbinwan were noted with rice ready for harvest. Wardens chatted with the locals and were told that lots of cockatoo pass by their area during morning and afternoon however they didn't observe cockatoos raiding rice fields or kaingin area. In August, twelve bundles of round timber (DHB 3-4cm, locally called Putian tree) were found near the Magsakayan trail. Wardens suspect timbers will be used for the planting of Agar agar or seaweeds. On average 21 local households were reached and information materials like posters were distributed.

We observed dynamite fishing activities almost daily near the Malinsuno Island and inside the fishing ground of Pandanan Island. These fishers are allegedly from Bancalaan Island and Buliluyan with local associates from Malinsuno Island. Caught fishes were sold to known buyers in Malinsuno Island where it will be dried and later transported to PPC market. Some local officials are reportedly involved in this activity. Apart from dynamite fishing, there is also compressor fishing going on probably using sodium cyanide and they were sighted in the evening.

Wardens also monitored nest trees of target species like Palawan Hornbill, Blue-naped Parrot and Hill Myna.

In April, we noticed one hornbill hatchling on the ground below its nest tree. After ensuring there was no injury, we placed the bird on a perch near its nest tree where the adults could see. The day after we checked, the bird was already on a higher perch along with two hornbills. We suspect the hatchling accidentally fell during feeding by parents. On the ground where it was found, it appeared that food was continuously provided as indicated by the litter around the bird. In May, nestlings of Blue-naped Parrot were monitored to be in good condition and blood samples were taken for inspection of blood parasites. Two Palawan Hornbill nests were occupied while forty two nest trees of Blue-naped Parrot were monitored by wardens.

As of June, four and eighty-one Palawan Hornbill and Blue-naped Parrot successful fledglings respectively were monitored by wardens. Wardens also monitored one dead Dollarbird hatchling inside its nest hole devoured by maggots already.

The Breeding Season Assessment meeting was conducted in July. Highlighted was the good working relation among wardens and stakeholders. It is highly recommended to maintain night patrolling during breeding season and strict locals/settlers checking and monitoring. Further, the recruitment of additional wardens with climbing skills was seen as an important

issue to be addressed. This was graced by one barangay official who reported to wardens and PCCP staff that recognition is now gaining on ground as people from Balabac and other parts of Palawan appreciates the cooperation done by KFI and LGU and locals.



Figure 8. Pandanan barangay police confiscated and released illegally collected *Hippopus hippopus* (Photo: R. Antonio)

One highlight activity within the period was the visit of partners from BirdLife Indonesia who are also planning to implement warden schemes. An exchange of views and sharing of experiences was beneficial to both sides and in some sort boosted the morale of our wardens in the area.

Wardens also collected seeds which were found below nest trees of hornbill nests for propagation in the nursery. In August, the nursery was rebuilt and new seedlings of Ipil, Amugis, Balindadagat and Malunggay were nurtured.

Cockatoo population and nest monitoring

Roost counts



Figure 9. Begging immature cockatoos near the field house in Malinsuno; another bird, presumably one of the parents, is hidden behind the palm frond in the centre (Photo: P. Widmann, KFI)

One cockatoo was found dead under the roost site on January 4; the reason is unknown, but during this time there were strong winds from NW affecting the site. On February 2, a White-bellied Sea-Eagle *Haliaeetus leucogaster* disturbed the roost site, but was unsuccessful in taking a cockatoo. On three occasions in July and August, a Crested Goshawk *Accipiter trivirgatus* was observed attacking the roosting cockatoos, which however was unsuccessful in all instances. It took the birds between five to ten minutes to settle down after the attacks.

Begging immature birds were recorded on the roost site by April and increased in number in the onward weeks.

In May and June respectively, in addition to the up to 91 and 109 birds roosting in Malinsuno, another temporary roost was occupied on Pandanan with 18 and 33 cockatoos. A simultaneous roost count yielded 159 individuals in all with 68 in Dalahican and 91 in Malinsuno roost site the highest for Pandanan since start of the project.

On August 1 in the Malinsuno roost site 131 cockatoos were counted (Fig. 10), likewise the highest count for a single roost site in this project site.

In February, two cockatoos were observed in Buliluyan area, mainland Palawan, fronting Pandanan island by Field Officer R. Antonio at 6:20am. This sighting was corroborated by the sightings of Bgy. Captain in Buliluyan that some 10 cockatoos were observed flying interior part of the barangay and then go back to Malinsuno for roosting. In June we confirmed sightings in Puring and Buliluyan, mainland Bataraza. In July, around 10-15 cockatoos were reported visiting the same area. Observations by locals usually occur between 8:00 to 9:00 in the morning. We visited the said area and noted few Malunggay trees. No report of cockatoo feeding in Malunggay during the visit. The area of Buliluyan is nearly converted to coconut plantation, few tree species is found along the way. In Dandolit coast, old Pagatpat trees were documented by wardens with maximum height of 10 meters. No fruit noted. Clearing of mangrove area was observed near the pier site of Buliluyan; clearing was done in order to establish private docking area (for live fish trader) and for the settlement. Along the way, there were newly constructed houses located less than 10meters away from the mangroves forest. Coconut and Banana are the main crops. We distributed 100pcs poster on “Sagipin ang Katala” to the locals.

In May, 18 birds were counted roosting in Dalahican area near Gabinete’s property very near the shore. Monitoring yielded regular though not daily observations of roosting cockatoos in the highest coconut perch from June until early August. Highest afternoon count in June and July was 68 and 70 respectively. We suspect the birds occupied this new roosting site because of the prevailing and ever changing strong southeast and southwest winds. In the area, Malunggay fruits were feasted by the birds. Some locals observed the birds on the ground as well enjoying the pods of Malunggay. They said cockatoos seem not to be wary of kids playing nearby. They are also not being harmed by any local in the area. We assessed the new roost site and four coconut trees were recorded being used by cockatoo for roosting. Site is close to shore (ca. 10m) and is also close to dense coastal forest. *Pandanus tectorius* and few shrub species thrive in the area. When the strong southwest monsoon winds shifted, the birds went back to Malinsuno roosting site.

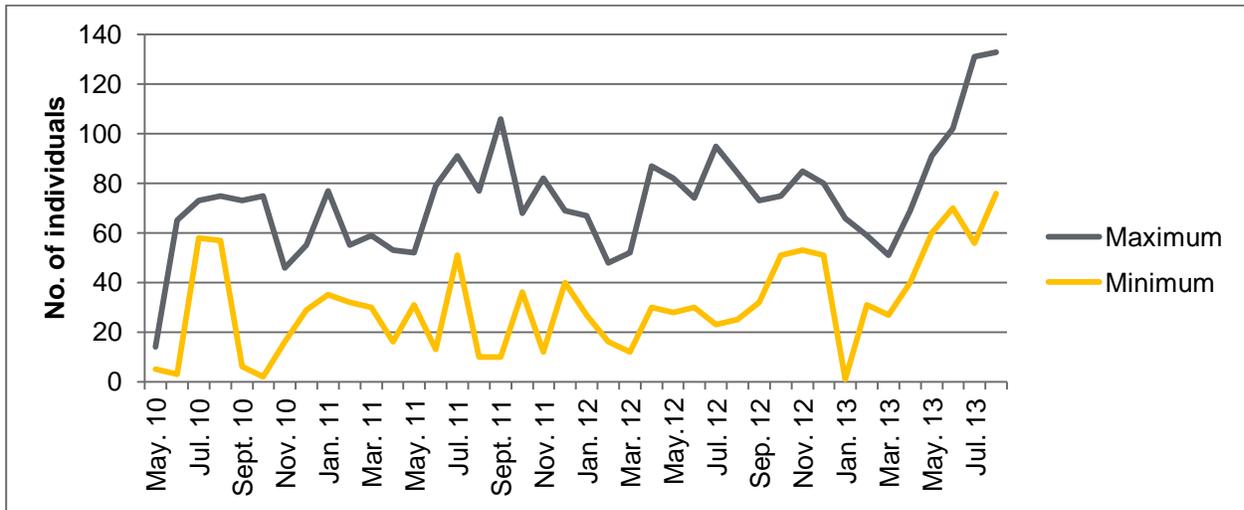


Figure 10. Maximum and minimum monthly counts of cockatoos roosting on Malinsuno, Balabac

Two nests were already occupied in January, one of which already had three hatchlings by the third week of the month. In February six nest trees were occupied and eight hatchlings present. Signs of impending occupation (cut twigs, fresh faeces) were observed around other nests during these months. One nest which showed such early signs of cockatoo occupation was eventually utilised by Hill Mynas *Gracula religiosa*.

A new nest tree was discovered in March containing two nestlings. Eleven nest trees were confirmed occupied. A total of 22 fledglings were successfully monitored and 20 of which were banded. Two fledged earlier without leg bands.

Twenty nestlings were banded in the second week of March and second/third week of April, two birds fledged without being banded. All birds were in good condition; they appeared well fed, and no ectoparasites were detected. Feather samples from three hatchlings from three different nest trees were collected as per GP 2013-001 for PBF test and DNA sexing. Despite stormy weather conditions towards the end of the breeding season, no damage of nests was recorded. Nest characterization of newly discovered nests of all target species and potential cockatoo nests was completed.



Already end of August there are indications of cockatoos inspecting nest holes for the next breeding season, particularly cut branches.

Possibly due to stepped-up patrolling, including during night-time, no poaching incidence was observed during this breeding season.

Figure 11. Rene doing biometrics for this year's cockatoo hatchlings from Pandanan (Photo: KFI)

Foraging Ecology

At least 19 food-providing plants for cockatoos were identified from Pandanan, but most are known only from by their local names so far. There is some overlap with species also found on Rasa, but some are only recorded from this site as food plants. A new feeding record is fruit consumption of *Koordersiodendron pinnatum*.

Noteworthy is the persistence of *Erythrina orientalis*. The populations of this tree species, which flowers are visited for nectar by cockatoos and many other bird species, virtually collapsed in the Philippines due to a viral epidemic. The stock in Pandanan was either spared or is resistant. Cuttings are meanwhile cultivated in our nurseries in Pandanan and Narra, and hopefully this important food plant can be re-established in other project sites.

There had been confirmed sightings of cockatoos in June and onwards in mainland Bataraza (Puring and Buliluyan) where our volunteer monitors. Cockatoos were observed feeding on Malunggay as well. In June, R. Antonio observed six cockatoos in the morning flying from Magsakayan area (Pandanan) straight to northeast of Buliluyan however after five minutes same birds flew back to Pandanan.

In March, cockatoos were observed feeding on Malunggay *Moringa oleifera* between 7:00-8:00 in the morning along coasts in Malinsuno and Pandanan islands as observed by locals in successive five days.

In April, two fledglings probably the ones which escaped banding were observed during afternoon roost count at the roost site being fed by adult birds. Before leaving the roost site the following morning, young Pagatpat *Sonneratia alba* fruits were enjoyed by the birds before returning to Pandanan island.



Figure 12. Philippine Cockatoos feeding on Kapok red flowers and nectar (Photo: R. Antonio)

Conservation education

PCCP conducted a Katala Fun Day in January in celebration of the annual fiesta of Bgy. Pandanan. Lectures and fun games and activities were actively participated by both elementary and high school students in the area.

In June we resumed our school visits in Dalahican Elementary School to discuss the concept of co-existence. This was a timely refresher especially that cockatoos had been observed in the area of Dalahican recently. Teachers welcomed the lectures as pupils enjoyed the interaction with wardens and Field Officer. Not only this topic was discussed but we also had the chance to talk about the threats of cockatoos in Narra where a coal plant was proposed

to be built and was successfully removed out of site. We did two visits in the same school within the month. In July, we did two school visits covering lectures on importance of forest to wildlife and human and water cycle. Posters, postcard and button pins were distributed. Aside from students, wardens also distributed 70 pcs posters to each household in Dalahican proper. In August, we covered topics on marine resources and their importance. In total from June to August we reached nearly 200 pupils from Malinsuno and Pandanan.

Lectures with 4P's² beneficiaries were also conducted within the period. Attended by 199 members most of them housewives, we were able to reach regarding importance of the environment and wildlife protection. Posters and button pins were distributed to the members from Matangule and Tangkahan Island. Community visits along with enforcement team members were done month-long and coupled with Malunggay planting in Dalahican area.

An information campaign was done in Buliluyan area where we reached about 50 households to discuss about the presence of the cockatoos in the area. The campaign was to encourage people to participate in monitoring and not to harm the cockatoos visiting their areas. We also distributed a total of 100 Sagipin ang Katala posters.

The Barangay Council of Pandanan has approved in March 2013 the Resolution No. 1-13 declaring the protection of the Philippine cockatoo roosting site and surrounding vegetation in Malinsuno Island, Bgy. Pandanan. This initiative of the barangay officials is commendable as it ensures the integrity of the new roosting site of the species. The said resolution also was confirmed by the owner/claimant of the lot through their representative Mr. Kahar Sali.

Constraints and measures taken

- Since there is only one climber in Pandanan, we imported two climber-wardens from Rizal to help in the early breeding activities in the area.
- Networking with the Jewelmer Corporation security team is essential in maintaining the monitoring efforts in the area. Equally important is also the cooperation and networking with the Bgy. Police or Tanods who immediately respond to our requests for assistance especially on new locals / transients sighted in the area. Enforcement visibility helps deter illegal activities as well.
- An amendment to the agreement was signed between KFI and owner of the lot where field house is situated to cover the taxes and other payments needed.
- The nursery has to be improved to accommodate more food- and nest-providing trees for propagation and planting.
- Herbarium specimens of fertile food-providing plants have to be collected. Permanent marking of a representative sample of flowering plants on Pandanan is desirable in order to collect quantitative phenological data, like on Rasa Island.

Output 2: Reintroduction of Philippine cockatoos into parts of the historical range

Assessments of potential reintroduction sites

Marinduque

The island of Marinduque retains little lowland forest cover, except extensive mangrove areas in the North. The central portion of the island is dissected by two low cordilleras which

² 4Ps is a government program run by the Dept. of Social Welfare and Development which targets rural poor families.

at their highest points reach slightly more than 800 m above sea level. An exception is Mt. Marlanga, a Pleistocene volcano at the southern tip of the island which is 1157 m high.

The central portion of the island is protected through the Marinduque Wildlife Sanctuary. Although forest is only found in higher altitudes, the absence of orographic rain due to the overall low elevation of the island potentially make these forests suitable for cockatoos. Lowland areas are cultivated, mostly with rice, corn and coconut. The latter can be found at least up to altitudes of 400 m above sea level.

The staff of DENR/PENRO showed genuine interest in our project and PENRO immediately agreed to provide personnel for the assessment. Local communities were less enthusiastic, mainly because they could not see how they could benefit from the project and potential damage to crops was a concern.

Marinduque Wildlife Sanctuary

The protected area covers about 8,000 ha in two blocks. Very small forest blocks (0.5 to 2 ha) could be found in 200 m above sea level. Starting at around 400 m the landscape was characterized by mosaics of larger old-growth forest blocks and *Imperata* grassland. Understorey of a forest sample plot was 80% covered by leaf litter. Few rock outcrops were present. Understorey vegetation consisted of tree saplings, ferns (most conspicuous *Angiopteris* *evecta*), *Curculigo*, *Selaginella* and *Musa*. Vines were represented by *Bambusaecae*, *Pandanaceae* and *Araceae*. Buttresses were moderately common, stilt roots were rare. Prominent tree taxa included *Alstonia macrophylla*, *A. scholaris*, *Shorea* spp., *Dipterocarpus* spp.. Among the potential cockatoo food plants were *Pterocymbium tinctorium*, *Garuga floribunda* and *Ficus* sp. in moderate numbers. Another potential food plant, *Erythrina* cf. *subumbrans*, was flowering during the time of our visit, providing an abundant, but highly seasonal food source for cockatoos. The species is known to feed on flowers of the closely related *Erythrina orientalis* in Palawan (Widmann *et al.*, 2001). Potential nest trees were scarce and included *Shorea*, *Dipterocarpus*, *Pterocymbium tinctorium* and *Koordersiodendrom pinnatum*. Cockatoo food plants in the cultivated areas were common, particularly *Pithecellobium dulce* and other Fabaceae, as well as Horseraddish Trees *Moringa oleifera*.

Marinduque Wildlife Sanctuary is partly covered by IBA PH036 (Mallari *et al.*, 2001). The globally threatened Green Racquet-tail *Prioniturus luconensis* is historically recorded from the area, but recent records are lacking. We did not come across the former species, and our companions from DENR were not familiar with it. Older farmers in the area remember this parrot, but claim that it disappeared at least fifteen to twenty years ago. It is potentially competing for nest holes with cockatoos, although this has been observed only on one occasion for the similar-sized Blue-headed Racquet-tail *Prioniturus platenae* and the cockatoo from Palawan. Other cavity nesters still present in the area according to our own observations include Luzon Hornbill *Penelopides manillae* and Colasisi Loriculus *philippensis*. The only larger woodpecker species recorded from Marinduque is the Sooty Woodpecker *Mulleripicus funebris* (Dickinson *et al.*, 1991), but it is not sure if it persists on the island. We observed White-bellied Sea-Eagles in the area, a potential aerial predator of cockatoos.



Figure 13. Forest patch in Marinduque Wildlife Sanctuary circa 200 m above sea level (left); mass flowering of *Erythrina cf. subumbrans* a potential cockatoo food plant (right; Photos: P. Widmann)

Northern mangroves from Ipil to Kalumpong

Extensive stands of mangrove persist along the northern and north-eastern coast of Marinduque within the municipalities of Torrijos and Sta. Cruz. We were not able to secure accurate information on extent, but were told by DENR personnel the mangroves certainly would cover “hundreds of hectares”. The forests stock mostly in protected coves and along the short rivers which drain into these bays. Narrow mangrove belts were also present in some of the outlying islands, which however all contained human populations. Particularly in the north-eastern portion fish ponds were present, but according to DENR information no more expansion took place and mangrove reforestation was undertaken.

Steep limestone promontories could be found in the vicinity, which were densely covered with stunted forest, with only bamboos reaching heights of about 8m. Mangroves showed clear zonation in some situations. Large stands of *Avicennia* sp. and *Nypa fruticans* could be found on the landward sites and particularly along rivers, whereas *Rhizophora* and *Sonneratia* were dominant seawards. The latter, as only taxon of importance as nest and food-providing for cockatoos in this ecosystem, was represented in few individuals and in small diameter classes. The landward coastal vegetation contained some additional food-providing plants (*Albizzia*, *Pithecellobium*), but overall potential food supply was poor, and potential nest trees were virtually absent.

Constraints and measures taken

- In coordination with IUCN-SOS, site assessments and preparations have been suspended following the assessment in Marinduque, until the immediate threat posed by the proposed 15MW coal-fired power plant to the cockatoo source area on Rasa Island could be resolved.



Figure 14. Mangrove near Sta. Cruz with scattered *Sonneratia* in the foreground and dense *Rhizophora* in the back (left); vegetated limestone outcrop (right; Photos: P. Widmann, KFI)

Output 3: Conservation of cockatoo population on Rasa Island Wildlife Sanctuary (RIWS), Narra continued

Wardening scheme

Wardens were more vigilant in monitoring visitors and motor boats around Rasa within the period because of the proposed coal plant. The proponent and its allies had attempts to visit without proper coordination either from the PAMB or the municipality.

Wardens facilitated and were able to express their opposition to the coal plant during validation visits conducted by technical staff of the Palawan Council for Sustainable Development. Visits were though too short to engage in more detailed discussions. PCSDS team of divers was also documented in June around Rasa Island reportedly to conduct coral assessment. The timing of the activity was suspected to be related to the coal plant proposal, though coordination with the municipality officials was done. Our wardens interacted with the team. As of this writing, there had been no reports on results of such assessment presented to the PAMB.

The wardens were able to raise similar issues against coal plant during a meeting organized by the National Commission on Indigenous Peoples (NCIP) Regional Office in May in Narra where support was also manifested. The Tagbanua community for which most of our wildlife wardens belong also passed a resolution opposing said coal plant.

During wardens' patrol, it was noticed that not only claimants were engaged in marine resource gathering/gleaning (sea cucumber collection, sea shells and sea urchins) but also residents from mainland Panacan.

Treatment of cockatoo hatchlings infested with mites was major activity of wardens.

In April, Chris Shepherd from TRAFFIC Southeast Asia visited Palawan and joined the PCCP team in Rasa Island for the first round of banding. While in May, a good interaction and exchange of experience between and among PCCP wardens and the BirdLife Indonesia visiting team was done during said visit on Rasa.



Figure 15. Peter with Siegfred doing the banding of cockatoo hatchlings from Rasa Island (left). In the same occasion, Chris Shepherd from TRAFFIC SEA visited Rasa Island in his visit to Palawan (right; Photo: KFI)

RTD Bambalan's visit to Rasa Island

In February, DENR 4B Regional Technical Director G. Bambalan in her first visit to Rasa was greeted with excitement. RTD Bambalan chatted with wardens, visited a nest tree and most importantly had seen a cockatoo in the wild for the first time. It was opportune time for PCCP as well to elaborate its position against the proposed coal plant. This opportunity indeed helped in our fight through the support from the regional office of DENR.



Figure 16. Wildlife warden Agui interacts with RTD Bambalan during visit to Rasa in February (left). RTD Bambalan was joined by L. Dimapilis (Region 4B), CENRO Cojamco and R. Ubani (PENRO; Photo: KFI)

Capacity building of the Protected Area Management Board (PAMB) of the Rasa Island Wildlife Sanctuary (RIWS)

The regular PAMB meeting was presided none other than the Mayor himself on 15th March 2013. The highlight was the approval of the PAMB Resolution 2013-001 opposing the construction and operation of the DMCI coal power plant at the Trident area, Panacan, Narra, Palawan. This was unanimously agreed by all 10 members present in the meeting. During the deliberations the good Mayor also highlighted the inconsistencies of the

proponent, DMCI, through the documents he presented before the board. He contends there is deception made by the proponent. Among other highlights of the meeting include the introduction of the new CENRO in Narra, CENRO Emelina Cojamco and the approval of the work and financial plan for 2013.

In July, team was in Narra to assess the Protected Area Management Board of Rasa Island pursuant to the Protected Area Management Enhancement (PAME) Program of the DENR. Some members of the PAMB were interviewed. The PAME is aimed to improve the protection and management of Key Biodiversity Areas in the Philippines. Its implementing partners are DENR-PAWB and Deutsche Gesellschaft for Internationale Zusammenarbeit (GIZ) on behalf of the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU). Rasa Island Wildlife Sanctuary is one of the priority sites/PAs in the Philippines.

A special PAMB meeting was called in July at the PENRO Office in Puerto Princesa by PASu Cojamco to discuss on the Management Plan and the coal plant issue to mention a few. This meeting resulted to KFI presenting on the progress of the management plan. Mayor-elect Lucy Demaala reiterated her position against the coal plant in Panacan and as well informed the body that she is personally negotiating the withdrawal of the resolution issued by Bgy. Panacan in favor of the coal plant. Barangay Captain Mahinay of Panacan who also attended said meeting acknowledged this initiative and reported to help realize such negotiation.

A two-man team from the National Mapping Resources Institute (NAMRIA) visited Rasa to validate the boundaries of the protected area. The team was assisted by the wardens.

The local government of Narra has continued to appropriate the amount of 200,000 pesos mainly for warden scheme and another 100,000 for development assistance in particular for KIEBC development.

The revised Comprehensive Land and Water Use Plan (CLWUP) of Narra integrates the management zonation of Rasa as proposed during the public hearing conducted in August. A proposal initiated by the KFI was submitted to the LGU to consider protecting the mainland areas fronting Rasa Island as critical habitats in particular because they are feeding areas and within the flight path of the Philippine cockatoo.

Conservation education and eco-tourism

Conservation education activities were intensified massively as we continue our strong opposition to the proposed coal plant. Several fora, focus group discussions, house to house and school visits were done to explain to people and communities the ill effects and false promises of clean coal technology as promoted by the supporters of the coal plant. Please refer to Objective 9 for more details.

Panacan residents particularly the fisherfolks were demonstrative of their opposition to the coal plant. Simple sign board and placards expressing this opposition were mounted on streets and outside of their houses. In May when a foreign team allegedly the DMCI-contracted party for the construction of the coal plant was intensely monitored by community members on site. Some even brought their placards "NO TO COAL" to the visiting team on site.



Figure 17. Some of the NO TO COAL signages posted out in private houses in Panacan to express their support to the cause and the fight (Photo: KFI)

In June, fisherfolks went to hear the DMCI-initiated public forum in Panacan 2 and the proponent was received with a loud NO TO COAL by residents. Their messages were hand printed in big tarpaulin they normally use for fishing.

In schools, we focused in Panacan to help explain to students the impacts of coal fired power plant. Sessions were held in different classes in the high school reaching about 400 students. The intensive interaction with school children prompted a more active involvement of NYOFEC members in the fight against the coal plant. Their first major event was their presentation for the March Forum on “Nature of coal power plants - its effects and implications” where they used guerilla marketing as a strategy. The students made their own headdresses and props for the presentation. Within the reporting period they were also busy posting placards and signages/messages in opposition to the proposed coal plant in private (with consent of owners) and public places. The said placards were deliberately removed by supporters of the coal plant; this however didn’t deter the students’ determination to saturate the community with NO TO COAL messages.

PCCP team also presented during barangay sessions of Panacan 2, Poblacion and Antipuluan to provide them information about impacts of the proposed coal plant in Panacan. This resulted to approval of resolutions opposing the said proposal.

A media tour was possible through the initiative of change.org. Local and national media (TV and print and online) were on Rasa and had met with stakeholders in May. Mr. Carlos Celdran, a tourist guide, graced the invitation along with PTV4, Yahoo news Philippines and local ABS-CBN TV Patrol Palawan. Media mileage was done instantly and online support was overwhelming.

During the Philippines Independence Day celebration in June, PCCP and KFI participated in the event through the parade and took the opportunity to again promote coal-free Narra. The Mayor-elect Lucena Demaala was vocal to acknowledge the efforts of the PCCP/KFI. This was the first occasion we heard the Mayor-elect Lucena Demaala officially announcing in loud speakers to the general public her strong stand against the coal plant in Narra.



Figure 18. PCCP wardens and staff joined the Independence Day Parade in Narra in June with messages against coal and headdresses of a Philippine Cockatoo (Photo KFI)

The Municipality of Narra had organized a production team that took footages of Narra's tourism destinations. In January, the production team visited Rasa and was able to document the cockatoos at the roosting site and those crossing from island to mainland. This initiative was facilitated by Narra for the Palawan tourism promotional feature.

Systematic collection of data on breeding and feeding biology and population dynamics of Philippine Cockatoo continued

Breeding season

Although 35 cockatoo pairs attempted breeding in 2013, overall productivity was low (Figs. 19 and 20). We recorded 72 eggs; the average clutch size is now 2.06, possibly as a response to the high cockatoo density on Rasa. Only four clutches contained three eggs, two nests contained only one egg, the remaining pairs had two eggs.

Eight eggs were removed by the team because they were cracked or rotten. Others which were beyond hatching age disappeared and probably were removed by the adult birds. Egg predation occurred in at least two instances, with rats and Red-headed Flameback as main suspects.

A total of 42 cockatoos hatched. Losses during this stage occurred due to mites and predation (monitor lizard suspected in one incidence, bird of prey, possibly goshawk in a

second one). Three hatchlings died shortly after hatching for unknown reasons. One hatchling got injured by a rattan used for taking out birds for monitoring and banding. The abdominal cavity was exposed and intestines were ruptured. The bird was brought to KIEBC, where the wound was disinfected and stitched, but it succumbed on the following day. There was no food shortage during the 2013 breeding season. Twenty-three cockatoos fledged successfully.

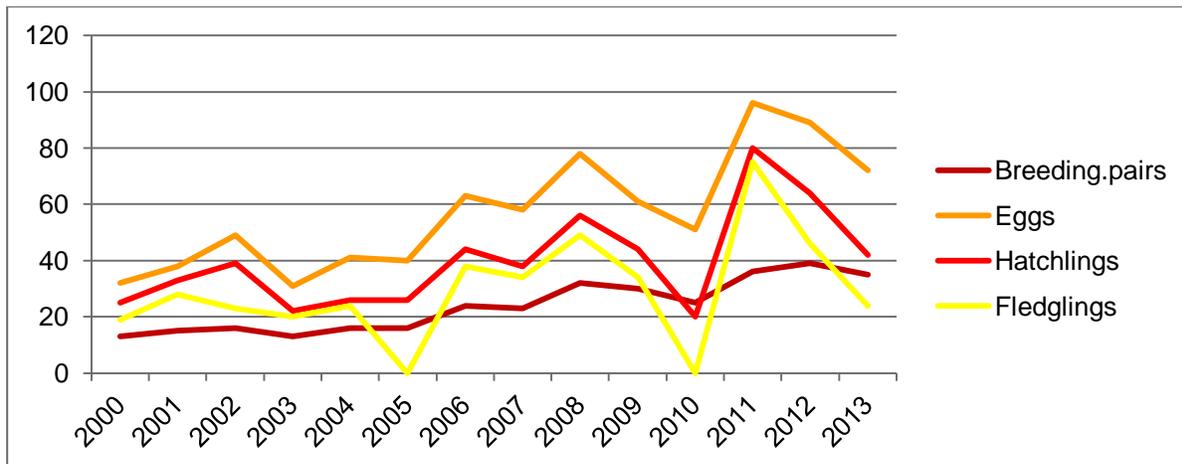


Figure 19. Total number of breeding pairs, eggs, hatchlings and fledglings per breeding season

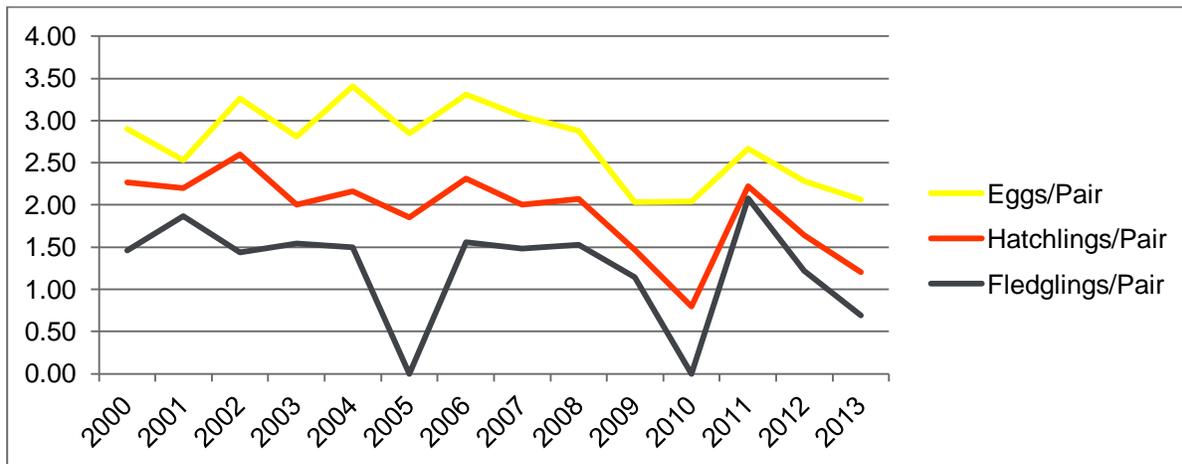


Figure 20. Average number of eggs, hatchlings and fledglings per breeding pair per breeding season

Nest No. 28 was created by a Red-headed Flameback *Chrysocolaptes erythrocephalus* and before occupied by Blue-headed Racquet-tails. It was taken over by cockatoos after enlarging the entrance and the cavity. This is the first indication of nest competition between Philippine Cockatoo and a *Prioniturus* species and has significance for cockatoo reintroduction attempts into locations with globally threatened racquet-tail species, e.g. Subic Forest Reserve (Green Racquet-tail) and Siburan Forest (Mindoro Racquet-tail).

Roosting

The trend continued within the reporting period that numbers of cockatoos utilizing the traditional roost sites oscillated tremendously. However, from May onwards, numbers of roosting cockatoos increased again rapidly and reached 227 individuals in August.

Never within the almost fifteen years of monitoring cockatoo numbers fluctuated so dramatically. Possible reasons for this development are:

- Two more known roost sites are utilized, however irregularly. One is situated on the mainland and was first occupied in 2012, another one was discovered on Rasa. On March 29 we counted 102 cockatoos roosting in the mangrove in SE of Rasa. Both sites are not yet permanently used. This new roost area is characterized by four huge Pagatpat trees with diameters of 55, 95, 101 and 113 cm and height ranging from 14-18 m. It cannot be ruled that other roost site exist in the inaccessible mangrove interior of Rasa.
- Increasingly birds stay and sleep in the vicinity of their nest sites, even outside of the breeding season. Often more than two birds can be recorded staying on the sites.
- The traditional roost site appeared to be crowded; if more than ca. 180 birds were present. Occasionally it took longer for the birds to settle down. Counts are also hampered because some birds stay within the canopy in supposedly less desirable spots with reduced view.

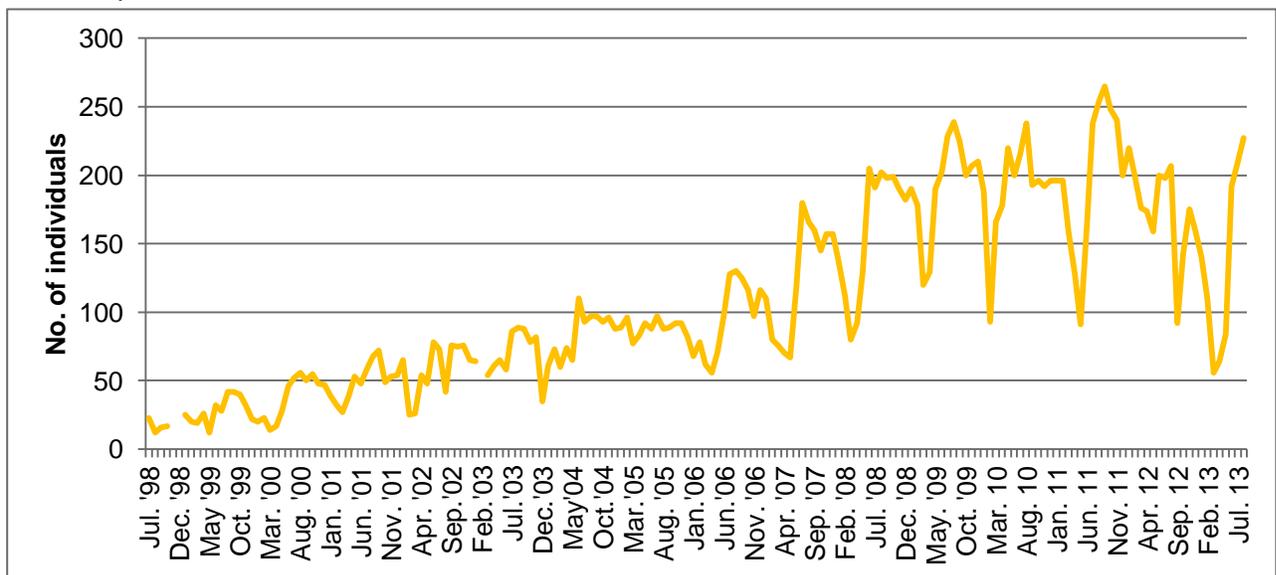


Figure 21. Minimum number of Philippine Cockatoos (simultaneous count) on traditional roost site on Rasa Island

Constraints and measures taken

- Despite treatment of nest substrate (or replacement where feasible) before onset of the breeding season, and treatment of hatchlings throughout, mite infestations remain a concern. It seems that pyrethrum-based products do not have a long-lasting effect. Systemic preparations, like “Frontline” were recommended for mite treatment in New Zealand and Mauritius (Jones and Merton, 2012). We currently explore sources.
- The loss of a hatchling through the rattan is the first of its kind since project start. Only one other injury ever occurred in a hatchling, which however could be treated successfully. Other tools, like blunt steel hooks, to remove birds from the nest cavities have been tried, but took much longer, causing considerable stress to hatchlings and parents, or sometime did not work at all. We currently do not see any alternative to the traditional poacher’s method of getting hatchlings out of the nest hole.

- Increasingly unpredictable roost counts need to be complemented by distance sampling of the Rasa population.
- Visits conducted by the staff of the PCSD to Rasa Island and vicinities would have been more productive if done more intensively to allow more interaction and better assessment of the issue along with diverse stakeholders.
- The start of the cockatoo breeding season falls also at the height of the marine resources collection e.g. sea cucumbers. Hence, intensive monitoring is needed.

Output 4. Conservation of cockatoo population in the Sulu sea coastal plain of Palawan

Monitoring in mainland Narra

After recovery of the cockatoo population on Rasa set in as effect of intensive conservation measures, we recorded birds for the first time on the mainland in the first half of 2001 on three different occasions, with three, three and four birds respectively (Lacerna *et al.*, 2001). Numbers of birds foraging on the mainland increased rapidly with the largest number of 42 recorded in October of the same year (Widmann *et al.*, 2001). Numbers of cockatoos foraging on the mainland increased very slightly from 2006 onwards, but numbers varied considerably from month to month. This is likely a result of weather conditions, food supply on Rasa and nutritional demands of birds inside and outside of the breeding season. There is a significant peak of birds foraging on the mainland from April to July of most years. These are the months were cockatoo nestlings are present on Rasa, and very likely feeding parents add to the numbers of birds foraging on the mainland. This indicates how important the flight path is for maintenance of reproductive viability of Philippine Cockatoos on Rasa Island. A marked exception is the year 2010, which was extremely dry. Food for cockatoos got scarce on Rasa already very early into the dry season, which may explain that cockatoo numbers peaked on the mainland much earlier than in “normal” years. In 2013, exclusively the mainland sector *closest* to Rasa was utilized as flight path by foraging cockatoos. Number of birds varied considerably from day to day, possibly as function of weather conditions and food supply on Rasa.

Please refer to Annex 1 for the complete report on this study.

Iwahig monitoring

Cockatoo observations from Iwahig will be regularly monitored starting September 2013 through our contact volunteer working inside the Penal Colony.

Apis Forest Restoration

We monitored few tree cutting in the Apis forest in Aborlan. During our patrols, chainsaw operations were heard from a near distance.

Constraints and measures taken

- The remoteness of the area and the costs involved in deploying wardens remains a challenge in the Apis Forest area. We explore the possibility of working with the Western Philippines University in Aborlan who does outreach in the area.

Output 5. Conservation of cockatoo population on Dumaran Island, Dumaran continued

Warden scheme

Kaingin (slash-and-burn) activities in Bulalakaw and Camaya areas and one Bgy. Bohol were monitored within the period and were reported during the LPAMC meeting. Chainsaw operation was observed in February. Most kaingin is outside the protected area but many in high elevations were observed.

Wardens helped identify and validate farmer co-operators for the “Critical Habitat Project”. They were also busy in the early parts of the year on stocking up the nursery with enough seedlings and wildlings in preparation for the planting season.

Breeding season assessment meeting was completed in July. Significant issues like religiously complying with monitoring schedules, nests that need flashing were resolved.

Members of Local Protected Areas Management Committee assisted and capacitated

The Local Protected Areas Management Committee meeting for this reporting period was conducted on 22nd January 2013. Highlight of the meeting was the approval of the LPAMC Res. No. 2013-01 endorsing the establishment of the Dumaran Island Critical Habitat. This will be subjected for adoption by the SB. On Aug. 7, 2013 – delayed by the municipal election - SB Dumaran had issued Res # 49-2013 adopting the LPAMC Resolution hence declaring an area in Bgys. Poblacion, Sto. Tomas, Bohol and San Juan in the Municipality of Dumaran as “Dumaran Island Critical Habitat”. Subsequently, LGU and KFI submitted a joint application for the establishment of the Dumaran Island Critical Habitat to PCSD on 14 August 2013.

KFI through our Field Officer M. Plazos actively participates in planning sessions and Bottoms Up Budget (BUB) meetings conducted by the Municipal Development Council of which KFI is the only NGO-member representative. The municipality acknowledges the contribution of KFI in the area such that it becomes member to recently organised committees signed through Executive Orders 006, 009, 011 and 014 series of 2013 signed in July 2013: Project Monitoring and Evaluation Committee, Municipal Development Council, Municipal Disaster Risk Reduction and Management Council and Municipal Solid Waste Management Board respectively.

The LGU of Dumaran through the leadership of Mayor Medwin Pablico continued its active support and financial assistance of 160,000 pesos to the PCCP in particular for the warden scheme.

Buffer zone restoration and establishment and management of critical habitat

The planning workshop under “Critical Habitat Establishment and Management Project” was successfully conducted in January. Stakeholder identified the following three objectives during the workshop: 1) To sustainably manage the remaining forest through establishment of Critical Habitat; 2) To capacitate farmers to practice sustainable farming; and 3) To increase knowledge about farming technologies, environmental laws and importance of forests.

Some 1,508ha of remaining forest and adjacent areas, including existing protected areas, buffer zones and connecting corridor were delineated and mapped in preparation of

declaring the area as Dumaran Island Critical Habitat. The said project is mainly funded by the Philippine Tropical Forest Conservation Foundation Inc. and Stadtholding Landau in der Pfalz, Germany, together with Freundeskreis and Zoo Landau.

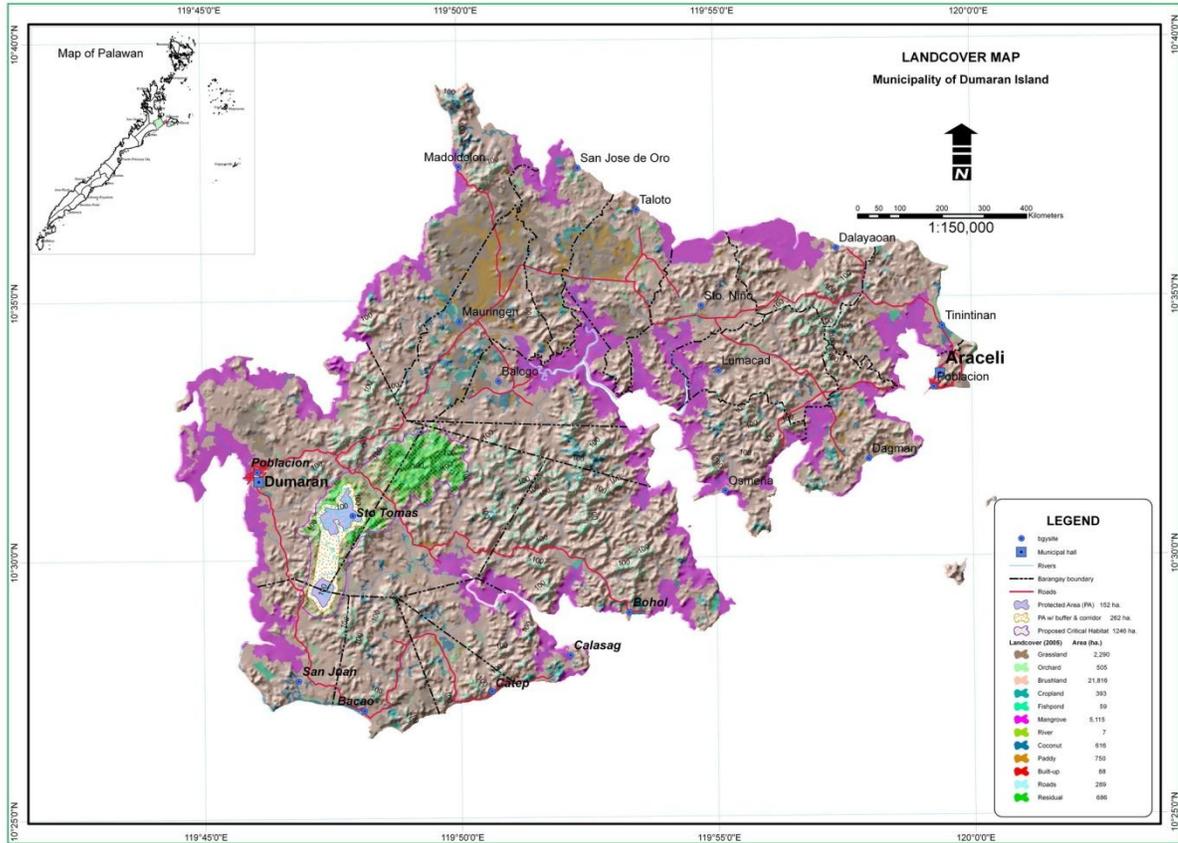


Figure 22. Map of Dumaran Island indicating the proposed critical habitat

In March, we organized the Rainforestation Farming through the help of experts from Leyte, Dr. Marlito Bande and A. Carino and R. Vendiolo from Negros which was attended by 33 eager farmer stakeholders. The training has given and widened knowledge of farmers on vermin-composting, proper soil preparation, proper bagging of soil and seedlings, proper seedlings and wildlings collection, pruning, and establishment of growth chamber. Actual farm preparations were done with the resource speakers and farmer participants were as well asked to draw their farm plans which shall form part of their conservation agreements signed with KFI. Eventually all wardens are farmer co-operators in the said project.

Perimeter fencing was completed. Different stations in the nursery e.g. seeding, vermi-bed, hardening were all completed.

The establishment of the Biodiversity Monitoring Stations as per DENR guideline was also completed in July. GPS readings were taken.



Figure 23. Participants of the Rainforestation Training was taught how to make growth chambers from local materials available (left) while Dr. Bande shows the proper seed bed construction and maintenance (right; Photo: A Carino)



Figure 24. The impressive nursery at our buffer area (Photo: A. Carino)

As of June, our nursery holds 28,254 seedlings of assorted native species. The dominant species in the nursery are *Koordersiodendron pinnatum*, “Basa”, *Syzygium claviflorum*, *Azadirachta excelsa*, *Pterocarpus indicus*, “Betad”, “Bulabog/Bolabog” and rattan. As the rainy season started a total of nearly 9000 assorted native seedlings were planted in the buffer zone and the Critical Habitat area within the period.

Conservation education

The 10th Kalabukay Festival in June had the theme “Forests - nature at your service”. About 200 native tree seedlings were planted by farmer co-operators after the Alay Lakad Tanim as a kick off to the festivity. This year’s festival was filled as usual with fun-learning activities with quiz bee and interpretative reading contests.

Focus of information campaigns within the period is on protection of forests. IEC materials such as lecture flip charts and tarpaulins have been developed. Lectures and/or FGD have been conducted with elementary and high school students, 4P and KALAHI-CIDSS members, LGUs and community members during fiestas and foundation days from November 2012 to November 2013. A total of 128 or an average of 10.7 IEC per month reaching 6,176 people was conducted.



Figure 25. Dr. Schoppe welcomed farmer cooperators and students who participated in the walk for a cause in celebration of the 10th Kalabukay Festival (left). Municipal officials took part in the tree planting which followed after the Alay Lakad (right; Photo: KFI)

Systematic collection of data on breeding and feeding biology and population dynamics of Philippine Cockatoo continued

Roosting

Numbers of cockatoos on the roost remain stable over the longer term, with highest counts of 24 individuals in July and fluctuate seasonally (Fig. 26). Begging calls of birds in July indicate that cockatoo numbers were augmented by this year’s fledglings and their parents. Cockatoos are still observed during in dusk in the Bohol mangrove area, but the suspected roost site remains elusive due to the inaccessibility of the extensive mangrove forest.

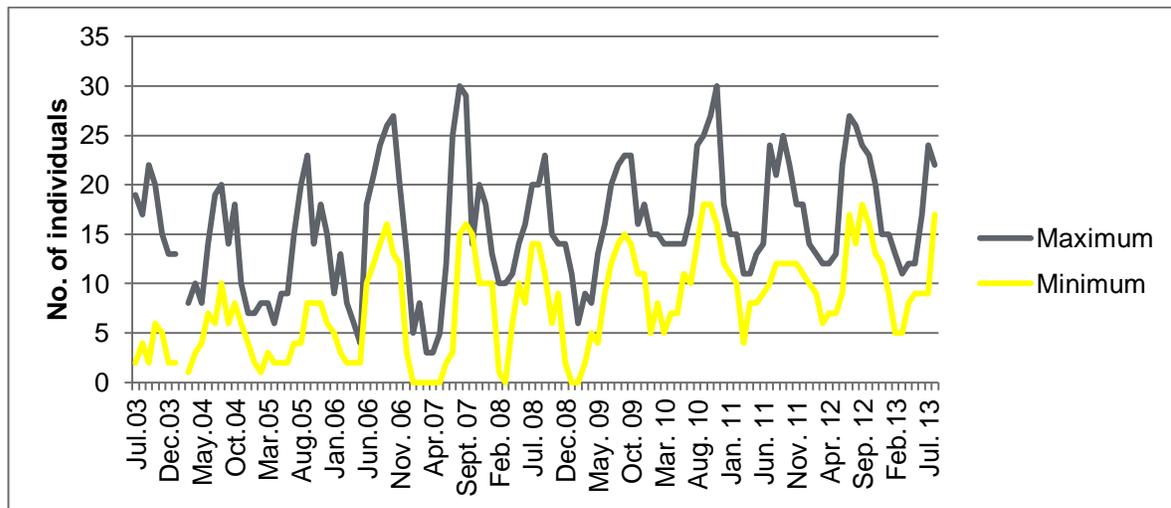


Figure 26. Maximum and minimum monthly counts of cockatoos roosting in Lagan, Dumarán

Breeding

As usual in this project site, breeding season starts later than in Rasa and Pandanan. By end of March six pairs showed indication of breeding activity but only three nests contained eggs, whereas the other three nests were still being cleaned. Nest chambers were treated with anti-mite powder as early as January since there were indications of mite infestation.

Clutch sizes were two, three and four eggs respectively. In five nests only the breeding pairs seem to be present, in one nest three cockatoos were around during controls. Supplemental feeding of two nestlings was undertaken in May and early June. Seven hatchlings fledged successfully.

An occupied cockatoo nest tree in Manambaling Cockatoo Reserve had an active nest of Brown Hawk-Owl *Ninox scutulata* in a cavity on a different branch.

Two new artificial nest boxes were installed. Four data loggers were installed. Artificial nest boxes were inspected by cockatoos and Blue-naped Parrots, but no breeding attempt was recorded.

Constraints and measures taken

- In April, some seed bags were carried with the flooding near the nursery area as they were left along the rivers. We had established a recovery area away from the river to accommodate newly collected seedlings and wildlings.
- Only few pairs actually initiate breeding, whereas some occupy and clean nest holes, but do not lay eggs. Food scarcity in this season could be a possible explanation, since hatchlings in one nest needed to be supplemented with food by wardens. Number of eggs per pair is 2.7, markedly higher than in Rasa.

Output 6. Support for Polillo Islands Parrot Project

No field activity was conducted within the reporting period due to the coal plant issue.

Output 7. Conservation of cockatoo population in Culasian Managed Resource Protected Area (CMRPA), Rizal continued

Warden scheme

Wardens surveyed the nest tree in Bgy. Ransang and yielded no good results as the only known nest tree had finally fallen. According to reports from tribal members within the area, the last cockatoos might have moved. Wardens surveyed areas in higher elevation to check on cockatoo nest trees but were only surprised to see vast areas opened for kaingin. In interviews conducted two reasons were given by residents there for kaingin activities (1) former kaingin areas are not productive anymore (2) to prevent transients especially from the Visayas to squat in their areas.

The other cavity beside the known cockatoo nest tree in Ransang was occupied by Blue-naped Parrot already. According to tribal people near this nest tree, Blue-napes have increased number based on the number visiting their kaingin farms during harvest. No cockatoo so far was observed in the crop fields.

Four and three known nesting trees of Blue-naped Parrots and Hill Myna respectively fell already.

PCCP wardens continue to plant and monitor progress of the seedlings planted under the National Greening Program (NGP) of the DENR. In total nearly 5000 were planted by wardens within the PA. Most Ipil trees planted withered under the strong heat in March. Thirty five monuments were installed in NGP planted areas.

Cutting of mangroves for charcoal was rampant within the period. Some trees were in close proximity to known nesting trees. In July, charcoal production within the PA was observed destroying about two hectares of forest. This was reported to barangay but no perpetrators caught. Wardens warned the perpetrators. Reports to authorities were made but yielded no concrete actions so far. There were cases of illegal fishpond establishment also reported. Some were clearing to expand plantation areas for root crops and coconut.

Not only mangrove was illegally cut this period, there were also reports between February and May that highly valued trees were cut with chainsaws allegedly for government projects but were also reportedly illegally traded. The timbers observed by wardens were already in different sizes. This illegal activity was observed again in July and August. Highly valued Kamagong *Diospyros philippensis* and Ipil and another one locally called Tambulian were observed cut in specific sizes already and were kept ready for transport for Puerto Princesa City. This was reported to authorities. Allegedly a local official is involved as well as leaders of the tribal community. We had also observations of hardwood trees being peeled to slowly kill the tree (Aripa and Apitong).

In March, we also reported the illegal buying of sea turtles in Culasian.

In June, actual illegal chainsaw operation was witnessed by wardens. This resulted to the confiscation of said chainsaw. The documentation and relevant actions were taken cared by MMPL PASu Pador. Partner organizations like CI and DENR Region 4B were informed of the case.

The regular LPAMC meeting was held on 25th February. Highlight was the approval of the workplan for 2013.

Potential for cockatoo supplementation explored

CMRPA does not any more support a viable cockatoo population. In the past year, no cockatoo has been recorded any more from within the protected area. We assume that the few remaining birds either died or moved somewhere else. The area is still one of the best forests for cavity nesters within the Philippines, particularly with high numbers of Blue-naped Parrots present. However, dry and mangrove forest are disappearing at an alarming rate, due to illegal logging for timber, charcoal, and mangrove barks, slash-and-burn agriculture and fishpond construction in mangrove areas. Poaching of wildlife still occurs but has been reduced due to the warden scheme.

Despite intensive patrolling and reporting of violations to the concerned law-enforcing bodies, persecution of illegal resource users was with very few exceptions non-existent or inefficient. Reasons for this are lack of resources among law-enforcers and political will among law-makers. It appears that illegal activities in the area are on the increase, presumably because perpetrators are aware that chances of being caught are slim, or they even enjoy protection from influential parties. An indication of how weak the law enforcement in the area actually has become was recorded by PCCP wardens during this reporting period. About 800 to 1,000 hardwood seedlings were destroyed by burning an area for cultivation, which just months earlier has been planted in the framework of DENR's National Greening Program.

Southern Palawan is the only place in the Philippines where Asia's tallest tree *Koompassia excelsa* occurs; it is the Philippines equivalent to the famous redwoods of the USA. Despite the area being declared as protected landscape on national and managed resource protected area on local level, it will be lost within the next decade, if rule of law will not apply for poachers and land grabbers. Therefore, the area is presently unsuitable for translocation of cockatoos (supplementation).

Constraints and measures taken

- The only known cockatoo nesting tree in Bgy. Ransang is disturbed by kaingin activities in the area. This has grown even larger than in previous years. We hope authorities will investigate on the expansion of kaingin areas.
- There were some issues regarding payment of wardens helping out in the NGP. Lack of transparency in the case of DENR officials handling this program sometimes creates problems among the wardens themselves. At some point, probably some residents also are not so clear about the program that vandalism had been reported e.g. loss of monuments, destruction of ca. 1000 planted seedlings.
- The unresolved issues of illegal cutting in the area probably prove some connivance or involvement of local officials in the activity hence the absence of concrete actions taken. The unresolved case of B. Toto's illegal construction of fishpond was also dealt with less seriousness and this brings down morale of wardens who expose themselves to several threats.

Output 8. Katala Institute for Ecology and Biodiversity Conservation

Captive management of Philippine cockatoo and other threatened target species

Philippine Cockatoo

Three birds are kept in the large aviary in the public area, whereas Silver remains isolated in an outdoor aviary in the quarantine area due to continued aggression. In addition to the

basic food, birds regularly receive wild fruits still attached to branches and foliage. Driftwood and cuttlefish ‘bones’ are regularly exchanged. A sprinkler system has been installed to give the birds opportunity to take a bath during longer dry spells. Despite these efforts, behavioral problems persist, particularly with Blue, one of the original batches which were recaptured during the translocation experiment in 2005. He is now equipped with a permanent neck collar to prevent him from mutilating himself in the breast area. In order to handle him without causing too much stress, he is now accommodated in a compartment within the large area, but with contact to the other birds.

On May 10, an injured cockatoo nestling from Rasa was handed over to KIEBC. The body cavity was injured during handling while nest monitoring. The wound was closed with six stitches and disinfected. Streptophen was given with the drinking water. The bird accepted only little food and succumbed to its injury on the following day.

Freshwater Turtles

Turtles were inventoried on a monthly basis and growth was monitored in February and May 2013. Turtles were dewormed in February. Food ratio was set at 5% of the body weight per week and animal protein feeding was reduced from four times to two times monthly. The food was diversified and supplemented with vitamins and minerals. It was found out that egg texture of *Siebenrockiella leytensis* improved with diversification of food and adding of food supplements. However no hatchings were produced. Experimenting with different food items showed us that even food unknown to *S. leytensis* can be used to



diversify the diet of the species. *Siebenrockiella leytensis* prefers animal proteins over plant matter and tends to obesity in captivity hence the provision of animal protein needs to be strictly controlled and should not exceed twice a month. Weights of turtles were stable and so were sizes since all are adults (Schoppe, 2013).

Palawan Pangolin

One individual was turned over to KIEBC and released after stabilization by Mr. Alfaro of CENRO-Narra.

Figure 27. A Palawan Pangolin was turned over to KIEBC (Photo: KFI)

Landscaping with native species propagated in the Katala nursery continued

Due to continued planting, a number of woodland islands are now developing in the area. Wild cockatoos are seasonally foraging on fruiting trees and are also interacting with the birds in the aviary. All branches with foliage and fruits used for environmental enrichment for the captive cockatoos can now be harvested within the boundaries of KIEBC.

As of August, 1,200 tree seedlings in 32 species have been planted within the reporting period; a total of 2,956 seedlings of 36 plant species was present in the nursery.

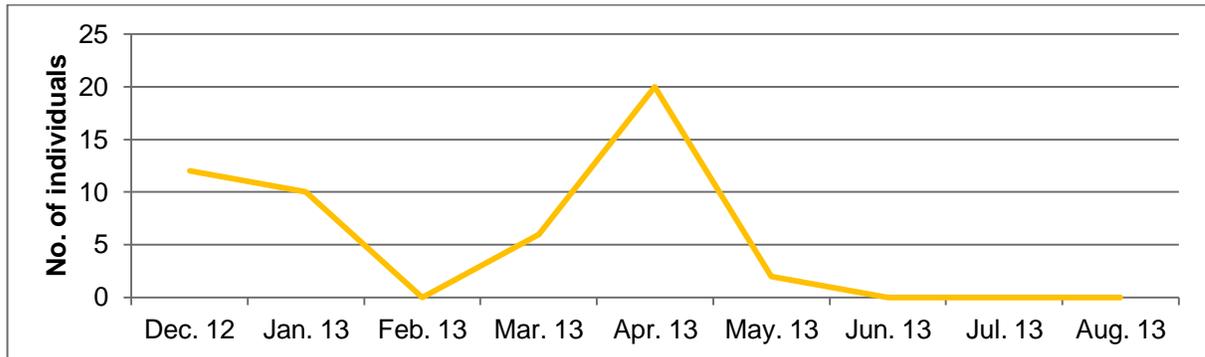


Figure 28. Highest simultaneous numbers of wild cockatoos by month foraging in KIEBC, Narra

Educational trail, enclosures and visitors facilities upgraded

The aviary underwent minor repairs and improvement e.g. rotten nest boxes were replaced using drift wood from Rasa Island and two showers were put up in the aviary. The smaller aviary that is used to isolate aggressive cockatoos was also repainted and installed.



Figure 29. A smaller aviary is prepared for the rescue or emergency needed at KIEBC facility (Photo: KFI)

A loop trail for visitors was laid out within the public area. This partially involved the creation of dykes in the more swampy portions of KIEBC. Culverts were produced on site to bridge canals. Ditches were excavated for better drainage. The trails will successively be stabilized with boulders and covered with gravel. New electrical posts were erected from the main line to KIEBC.

A weather station was established within the quarantine area, including sensors for temperature and humidity inside the bird clinic.



Figure 30. Temporary trails in grass-and wetland portion of KIEBC (Photo: P. Widmann, KFI)

A display pond measuring 1.9x1m of which 1x1m are pond and 0.9x1m land area has been constructed in June 2013. Water depth of the pond is 0.7m. The land area has a den. The display pond harbors one adult male *S. leytensis* that quickly adjusted to the new environment and uses den and pond.

Fencing project was continued mainly from funds from the local government of Narra in order to secure the perimeters of KIEBC. A total of 130 linear meters had already been completed. Some areas could yet not be accessed due to being waterlogged.

Constraints and measures taken

- There is urgent need to address the fluctuating electricity in the premises of KIEBC so not to cause more damage to equipment. We had changed as well some posts within the period; however, these are still needing the more durable and reliable posts.
- No funding could so far be secured for the proposed education center, partly due to time restrictions in identifying potential donors, and partly due to the high costs of the project. Proposals will be prepared, as soon as time permits.

Output 9. Cockatoo Advocacy

The approval of PAMB-RIWS Resolution No.2013-001 (Annex 2) through the leadership of its Co-Chair, Mayor Clarito Demaala Jr. was a strong legal document that helped our fight against the proposed coal power plant in Panacan, Narra. In the following months, three impact barangays in the vicinity of the proposed site issued and approved through the resolutions their strong opposition against the DMCI coal power plant (Annex 2):

- Bgy. Panacan 2: Resolution 2013-10 (May 2013)
- Bgy. Antipuluan: Resolution 06-2013 (May 2013)
- Bgy. Poblacion: Resolution 2013-13 (March 2013)

In June, the Municipality of Narra passed SB Resolution 2013-1935 opposing and denying the endorsement of the construction and operation of coal-fired power plant of DMCI Power Corporation at Purok Uliran, Barangay Panacan, Narra, Palawan (Annex 2). This was complemented by SB Resolution 2013-1969 (Annex 2) approved by the new set of municipal officials after the mid-term elections. The said resolution vehemently opposes the endorsement of the construction and establishment/operation of the same coal plant.

LPF and its funding partners sent letters to PCSD, the Governor and to Mayor Demaala seeking support for the rejection of the proposed plant. We also got support letters from the UNESCO, the International Union for the Conservation of Nature, and BirdLife International through the Haribon Foundation.

We also got resolutions from the Wildlife Conservation Society of the Philippines and the Wild Bird Club of the Philippines (Annex 2) which expressed support against the proposed site of the coal plant. Other support statements were from the Palawan Alliance for Clean Energy, Environmental Legal Assistance Center and the Philippine Movement for Climate Justice.

We submitted our position papers and our assessment of DMCI's Initial Environmental Examination Report prepared by Gaia South, Inc. for DMCI to all line agencies of DENR relevant to the approval of the coal plant in Panacan. This includes Protected Areas and Wildlife Bureau, DENR Region 4B, PENRO, and the Environmental Management Bureau. In July, we were privileged to present our position to the DENR top ranking officials to include USEC Manual Gerochi, EMB Director Cuna, PAWB Dir. Lim. We were joined by KFI President J.M. Zubiri and UP Biology Professor Dr. Perry Ong who also supported our cause.

We engaged members of the PCSD and reached out to them individually to articulate our vehement opposition to the controversial proposal of DMCI. We had meetings with directors and representatives from the Philippine National Police, the Western Command, Philippine Navy, Mayor's League of Palawan and PCSD Technical Staff. We also were engaged in discussions with the Department of Energy (DOE). We participated in the initial meeting with DOE on the development of Palawan Energy Development Plan in August.

We also engaged the Provincial Government under the leadership of the newly elected Governor JC Alvarez on the issue of the proposed coal plant. We had the chance to meet with Gov. Alvarez in Manila along with our KFI President. We also met with his staff in the province. We likewise vented our concerns on the coal plant to Puerto Princesa Mayor elect Hon. Bayron and Congressman elect Hon. Abueg.

IEC in Narra and Puerto Princesa City

In March 25-26, we organized an Information and Education Forum in Narra (first day) and in Puerto Princesa (second day). The Forum also coincided the launching of Palawan Alliance for Clean Energy (PACE). Guest speakers for the forum were Atty. Aaron Pedrosa from Freedom from Debt Coalition-Cebu (FDC-Cebu), Gerry Arances of Philippine Movement for Climate Justice (PMCJ) Manila, Reuben Muni of Greenpeace (Manila), and Zeph Danieles of 350.org (Dumaguete). From the local pool of speakers, we had Atty. Grizelda Mayo-Anda (ELAC), Dr. Welthy Villanueva (Heaven's Eye Mission), Dr. Miguel (internist from Puerto Princesa City), Kathryn Leuch (PACE), Bart Duff (Palawan Chamber of Commerce) and Dr. Lita Sopsop (WPU). The talks covered the following the following topics: National Situationer: Dirty energy project in the Philippines; Health impacts of coal plants; Naga, Cebu experience on coal power plant; Renewable energy potentials in Palawan; Regional and global initiatives against dirty energy and the Critique on the DMCI IEE. This initiative was very well received by residents of Panacan and was instrumental in gathering support from the community. An estimated 230 residents attended which ended with the ceremonial commitment signing of the participants and the speakers. In Puerto, main targets were the leaders from the tricycle organization in the city, students from Palawan State University and members of the Palawan NGO Network Inc.

On June 6, together with strong Panacan 2 residents in particular the fishing community who reject the coal plant proposal attended the information and education activity held by the proponent, DMCI. Dr. Lita Sopsop graced the meeting and raised issues and concerns which were not fully entertained by DMCI.

We organized another major activity in Panacan, Narra on June 12 and 13. The IEC was held at three different sites and gathered about 430 residents of Panacan, Narra. It was during these occasions that Mayor-elect Lucena D. Demaala informed that a resolution opposing the coal-fired power plant project will be submitted by the current Sangguniang Bayan and that the next administration will also be opposing the project. Guest speakers included Dr. Roger Dolorosa, Chair of the Aquatic Biology Division of the Western Philippines University, who spoke about his research results conducted in Rasa Island and the effects of the coal plant to fisheries in Panacan. We also had Mr. Fidel DeLeon, Legal Assistant of WPU, who engaged with the residents on the legal and economic issues.



Figure 31. The high number of attendees from different sectors of Panacan during the IEC conducted was very encouraging. In the two-day IEC in June, we were honored by the participation of the Mayor-elect of Narra Lucena Demaala (left) who expressed its official stand against the coal plant (Photo: KFI)

On June 20, our annual celebration of the Katala Festival revolved around the coal issue with the theme “Cockatoos instead of Coal”. Very informative and interactive lectures given by Dr. Dolorosa of WPU and PACE Coordinator K. Leuch were enthusiastically received by around 300 students from different high and elementary schools in Narra. The annual festivity kicked off with Lakad Alay sa KKK: Kabuhayan, Kalusugan at Kalikasan laban sa coal-fired power plant (Walk for Cause: For health, environment and livelihood). A short program followed which was graced by the Mayor elect Lucena Demaala and then the boodle breakfast. Fish (fried and dried) were served to all participants. These were mostly donated by the fisherfolks from Panacan.



Figure 32. Anti-coal supporters from Narra display their placards during the short program after the Alay Lakad (left). Students from Narra with their signage against the coal plant (right). Photo: KFI

In July, PCCP management presented before the Narra municipal council to update about the PCCP’s progress and to personally thank and seek the continued support of the LGU.

On the same month, a letter was submitted to the DENR Secretary and PCSD Chair to appeal for rejection of the proposed coal plant. The said letter was an initiative of a group of community leaders from Panacan, Narra who hoped their voices are heard.

Earth Day celebration

We sponsored an activity with the theme “The Faces of Climate Change” in the Narra Plaza in commemoration of the global Earth Day celebration in April. We had exhibited during this event the comments and support we received from all over the world through our online petition in change.org. Kids had also time to make their own slogan against coal plant. We also launched the new online petition against the coal plant which was initiated by fisherfolks of Panacan, Narra. Kataly performed with the members of the Narra Youth Organization for Environmental Conservation. In Puerto Princesa, our counterparts in PACE, Atty. Anda and Beth Maclang had press engagements while others posted anti-coal banners at strategic locations within the city and on public vehicles.

MGA PAGMUMUKHA NG NAGBABAGONG KLIMA:

Hindi cool ang coal!



EARTH DAY CELEBRATION

April 22, 2013 • Narra, Palawan

Figure 33. “The Faces of Climate Change” was the theme during the Earth Day activities.

Press conference

On May 8, we organized a Press Conference in Puerto Princesa City. Resource speakers were Peter Widmann of Katala Foundation Inc, Atty. Grizelda Mayo-Anda of ELAC, Bart Duff of the Palawan Chamber of Commerce, Mr. Rolando Esperancilla from Panacan, Nelson Devanadera of DENR-PAWB (formerly PCSD Executive Director) and Atty. Terry Ridon (counsel who handled the case against RP Energy in Subic). Twelve other Panacan residents strongly opposing the coal plant attended the press conference.

Outside the conference hall, we had our exhibit showcasing the different comments of prominent people who signed our online petition. Stickers, tarpaulins and pamphlets were prepared in time for the press conference and were distributed.

The press conference was attended by 12 local press members from radio, print and TV. Three articles appeared in local papers and a feature on local TV Patrol was aired same day along with the guesting of Indra Dayang Lacerna-Widmann (KFI) in the same news program (<http://www.abs-cbnnews.com/tvpatrol/palawan#.T9nG8RvtAc.email>). An article in Phil. Daily Inquirer was also published after the press conference.



Figure 34. We announced during the press conference the mounting opposition against the coal power plant as manifested by more than 80,000 signatures collectively gathered through www.change.org and www.regenwald.org. Katala mascot also was there to express its serious concern over the issue. Local TV, radio and print media were able to highlight the issues (Photo: KFI)

PCSD engagements

Despite the absence of a quorum, the PCSD granted full clearance to DMCI to construct and operate the 15MW coal plant in its April meeting in Manila. This Executive Committee decision has to be ratified by PCSD en banc during the May meeting. This has angered and agitated many supporters against the proposal as it blatantly disregards the principle of consent considering that the Municipality of Narra has not endorsed the said project. The rejection of Narra was not only expressed by the outgoing municipal council officials but also by the incoming officials. Hence, the PCSD Meeting in May 31 was met with loud roar of protest with about 250 residents from Narra, the proposed site. Since the Council again had no quorum, a louder gathering of protesters nearly 500 people to include those from Puerto Princesa gathered in June during the regular PCSD Meeting. Fortunately, there was again no quorum reached by the Council, hence, no ratification was done on the proposed coal plant. In both occasions, the LGU of Narra provided us free use of two transportation that helped ferry protestors from Narra to Puerto. Participants themselves were equipped with their own food, water and some others were very kind to make available the use of their truck free of charge.

In August, we attended in two PCSD meetings where the coal plant was discussed. In both occasions we were joined by wardens and anti-coal supporters from Narra. The local government of Narra was very kind to help with logistics. The decision reached by the council in the August 2 meeting was to relocate the project and that endorsements from all levels of LGUs must be secured before the SEP clearance is issued. Atty. Adobo of DENR defended the position to protect the Philippine Cockatoos from imminent danger the coal plant poses to this critically endangered species. Meanwhile, Mayor Lucy Demaala, Mayor of Narra took oath of office as member of the PCSD as the newly elected President of League of Mayors in Palawan during the Aug. 30 meeting. She announced in public that ***“the proponent must find another local government that would host the coal plant since Narra will not endorse said project”***.

Meanwhile, we wrote to PCSDS in June regarding the illegal trapping of birds and bats by allegedly students from UPLB and volunteers within the proposed coal power plant site in Panacan. It was learned that said party was contracted by the consultancy group hired by the DMCI to do studies in the area in support to their arguments in favour of the coal plant. This illegal activity was apprehended by Narra Police through the efforts of the good Mayor Demaala. PCSDS's reply to our query said that the matter is at their legal department.

Online petitions, signature campaigns and media and information material productions

Three online petitions were put up and had gathered nearly 82,000 signatures all over the world. Two of these were run by change.org. One was initiated by KFI appealing to Honorable Governor Abraham Kahlil Mitra, PCSD Chairman to withdraw the granted clearance <http://www.change.org/petitions/palawan-council-for-sustainable-development-stop-the-coal-plant-near-rasa-island-wildlife-sanctuary> and the other by fisherfolks from Narra urging the Municipality of Narra to reject the proposal of DMCI in Narra www.change.org/HindiCoolAngCoal. There was another online petition through www.regenwald.org that garnered nearly 72,000 signatures from all over the world. In all online signatures, most touching comments were from those who had visited Rasa Island or had known the conservation efforts in Narra. A signature campaign on the ground also gained support very well and was submitted to LGU Narra, PCSDS and relevant decision-making bodies. This petition mostly by fisherfolks and parents was of great consideration in the rejection of the proposal by the municipal officials.



Figure 35. Painting in canvass depicting the plight of the birds on Rasa Island Wildlife Sanctuary by J Benitez. Said painting was donated to KFI for educational purposes.

A package of information materials were also distributed to the council members with some latest reference materials on Renewable Energy. PACE had outlined 15 reasons why the PCSD should revoke its approval of the DMCI coal-fired power plant.

NO TO COAL stickers, streamers and tarpaulins were produced and distributed to target areas and affected residents in Narra and Puerto Princesa City. A pamphlet was also produced and distributed all over. Local artist Jonathan Benitez also shared his painting on coal near Rasa Island.

Networking activities and other engagements

In February 2013, the Alliance for Clean Energy (ACE) which was later called the Palawan Alliance for Clean Energy (PACE) was organized by various groups and individuals involved in the IEC work on coal power in order to sharpen the civil society's focus and organized efforts towards the pursuit of clean energy sources. Since mid-2012, civil society organizations have written officials of the Department of Energy (DOE), Department of Environment and Natural Resources (DENR), Palawan Council for Sustainable Development, provincial government of Palawan, municipal government of Narra and Puerto Princesa City government in order to raise a wide range of issues in connection with the planned establishment of the DMCI coal-fired power plant in Narra, southern Palawan.

On April 5, PACE members (Atty. Gidor Manero, Indira Widmann, and Beth Maclang) attended a meeting in Manila with the WWF to strategize the national campaign for Renewable Energy.

With PACE, we were able to raise issues with the Energy Regulation Commission (ERC) and the Palawan Electric Company (PALECO). We sent letters seeking support from different foreign groups such as USAID, UNDP, JICA, European Union and ADB, among others to inform these groups about the goal of PACE to make Palawan the number one proponent and champion of renewable energy in the Philippines.

The International Union for the Conservation of Nature (IUCN) also expressed their support through a letter sent to concerned local authorities to reject the approval of the proposed coal plant in its proposed site. Meanwhile, Haribon Foundation also issued their letter of support and included our campaign in their program. Through Haribon, BirdLife International also expressed support. We met with GIZ MIA in August to discuss the options of renewable energy in Narra. The visit resulted to the presentation by one of the authors of the study, Jens Marquardt, before the SB on the recently published study of GIZ on "Renewable Energy in the Philippines: costly or competitive?" During this regular session, SB Councilor Ryan Maminta in his privilege speech emphatically promoted renewable energy for Narra.



Figure 36. Snapshots taken during the peaceful rally of anti-coal supporters from Panacan, Narra before the PCSD Meeting in June. Protestors brought their own baon (provisions) while transport expenses were supported by PACE members, LGU Narra and individual donors (Photo: KFI)

Sticker courtesy of: Chris Shanks

Cockatoos...



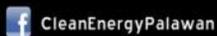
.... instead of coal!

NO to coal plant in Panacan



NO TO COAL

DMCI and PALECO say we need a coal power plant.
But do we need it next to Rasa Island, home of the critically endangered Philippine Cockatoo?



For more info: 0906 248 4366



Figure 37. No to coal stickers (above) were distributed all over target communities during the conduct of information campaigns and similar events. Tarpaulins (below) were effective prompts to saturate the community with the conservation message.

Constraints and measures taken

- The consultation process for the proposed coal-fired power plant is deeply flawed, since, unlike other projects in the past, it is deliberated in PCSD even before the complete set of local endorsements is collected by the proponent. Furthermore, the barangay (village) endorsement was given even before a public hearing was conducted. Crucial information on the project is not shared with the public. Legal advice has been obtained by KFI.

Other highlights

Other reported wildlife within the reporting period:

Giant clam *Hippopus hippopus* (IUCN: least concern). Sixteen individuals of this locally and nationally protected mollusc were confiscated in Pandanan and released back in the reef.

Palawan Horned Frog *Megophrys ligayae* (IUCN: endangered). One individual was recorded in the reforestation site in Dumarán on May 23, and July 19, as well as in Omoi Cockatoo Reserve on August 21. The species is possibly more common than thought, but often overlooked.



Busuanga Wart Frog *Limnonectes acanthi* (IUCN: vulnerable). This globally threatened frog species was tentatively recorded from Pandanan. The record needs further documentation.

Hawksbill Turtle *Eretmochelys imbricata* (IUCN: critically endangered). One hatchling was found by a gleaner on Malinsuno (adjacent Pandanan) on March 31, indicating that the species is nesting in the vicinity. It was released back into the sea.

Malayan Box Turtle *Cuora amboinensis* (IUCN: vulnerable). Two individuals were found in a creek near the reforestation site in Dumarán on March 8.

Malayan Night-Heron *Gorsachius melanolophus* (IUCN: near-threatened). On April 4 this elusive species was for the first time recorded from Pandanan when during a patrol it was flushed from a forest trail. Only six days later, on April 10, one individual was retrieved from a snare set for jungle fowl and released (Fig. 38)

Figure 38. Malayan Night-heron rescued from a snare on Pandanan Island (Photo: R. Antonio, KFI)

Philippine Collared-dove *Streptopelia dusumieri* (IUCN: least concern). Six individuals of this species which was recently split from Island Collared-dove *S. bitorquata* were recorded feeding on the edge of a slash-and-burn field. The species is becoming rare in Palawan.

Grey Imperial-pigeon *Ducula pickeringii* (IUCN: vulnerable). Six birds were feeding on a *Ficus* on Rasa in February.

Nicobar Pigeon *Caloenas nicobarica* (IUCN: near-threatened). Up to ten recorded during single patrols in January on Rasa.

Blue-headed Racquet-tail *Prioniturus platenae* (IUCN: vulnerable). Groups up to eight birds in February on Rasa and up to 30 in April on Pandanan. This species and Blue-naped Parrot were observed feeding on sorghum in Dumarán. Up to eight fed on *Ficus* in Candez, Dumarán in July.

Blue-naped Parrot *Tanygnathus lucionensis* (IUCN: near-threatened). A single individual could be observed on Rasa in all months of the reporting period.

Palawan Hornbill *Anthracoceros marchei* (IUCN: vulnerable). Up to 45 individuals have been encountered during patrols on Pandanan in April. Three breeding attempts were recorded there, resulting in six fledglings. Up to 14 individuals were feeding on *Ficus* in CMRPA, Rizal in July and up to four in Kasipolo, Dumarán in January.



Figure 39. Male (left) and female (right) Palawan Blue-Flycatcher on nest (Photos: P. Widmann, KFI)

Great Slaty Woodpecker *Mulleripicus pulverulentus* (IUCN: vulnerable). Recorded in all months in Omoi and Manambaling Cockatoo Reserves in Dumarán.

Palawan Blue-Flycatcher *Cyornis lemprieri* (IUCN: near-threatened): A pair with two nestlings was photographed on the nest in a tree stump (ca. 1.2m from the ground) on June 3 in residual forest along Balsahan Trail, Iwahig Penal Farm. This appears only to be the second breeding record for this species.

Palawan Flying Squirrel *Hylopetes nigripes* (IUCN: near-threatened). On April 16

one was observed leaving a hole situated on a cockatoo nest tree on Pandanan and gliding to a neighboring tree where three juveniles were present.

Cooperations

- We are participating in a study on parrot haemoparasites initiated by Dr Juan Masello of Giessen University, Germany. Three parrot species were sampled in Rasa, Pandanan and Dumarán. Sampling will continue in the 2014 breeding season.
- As follow-up on Peter's trip to Burung Indonesia's (BI) parrot conservation project in Halmahera last year a BI delegation visited three different KFI project sites in Palawan from 30 May to 06 June 2013. Three representatives from the Halmahera and Sumba projects were accompanied by BI Director Dr Agus Utomo. Purpose of the visit was to present KFI's approaches in the fields of participatory conservation (warden scheme), monitoring of parrot populations and collection of ecological data,

cooperation with local governments, conflict resolution in the face of large destructive development projects.

- We established cooperation with UP Biology Department through Dr. Perry Ong in July. This will cover collaborative study on DNA sequencing of cockatoos and pangolins. Dr. Ong has offered the services of his department to do the DNA sexing and PBFDD tests for Philippine Cockatoos this year.



Figure 40. Banding of cockatoos on Rasa with visitors from burung Indonesai (left); Dr Agus Utomo, Director of Burung Indonesia, discussing with Agui, first-generation wildlife warden of PCCP (Photos: P. Widmann, KFI)

Summary of relevant seminars, expeditions and workshops organized and attended

- DILG-Civil Society Organization Orientation and Planning. 31 January 2013. Legend Hotel, Palawan.
- ADB Orientation on grants for Balabac. 18 March 2013. Balabac, Palawan. Attended by RAntonio.
- Climate Change and Vulnerability Assessment Training. 09 April 2013. WPU, Puerto Princesa City, Palawan. Attended by R. Antonio.
- During the International Hornbill Conference from April 24-26 in Manila we presented a paper titled “ASPECTS OF BREEDING BIOLOGY AND CONSERVATION OF THE PALAWAN HORNBILL *ANTHRACOCEROS MARCHEI* IN THE PALAWAN FAUNAL REGION, PHILIPPINES”
- MDC Dumarán Workshop – Planning for Annual Investment Programs 2014. KFI was asked to submit proposal and is now in review. July 10-11, 2013, Dumarán.
- Indira and Peter attended a Workshop on Social Marketing conducted by RARE Philippines in July 29-31 in Cebu City. Indira was elected president of the RARE Philippine Alumni after the said workshop.
- IDLW, RA and PW attended a symposium on migratory raptors in Asia organized by the Wild Bird Club of the Philippines on August 17 in Manila. Pandanan was identified as one of the potential exit and entry points of migrating raptors from and to Palawan and we will monitor bird movements during the autumn migratory season.

Papers published, submitted for publication to relevant journals, relevant reports and media mileage

- Article on proposed coal plant in Philippine Inquirer on October 28
- A report on the Burung Indonesia project visit in Halmahera was submitted to LPF and ZGAP.
- A paper on Palawan Hornbill was submitted for publication in the proceedings of the hornbill conference.
- Selected local and international online sources regarding the coal issue (Annex 3):
 - ✓ <http://www.interaksyon.com/article/64359/palawan-town-council-nixes-dmci-proposed-coal-plant-near-cockatoo-sanctuary>, June 18, 2013
 - ✓ <http://ph.news.yahoo.com/ph-cockatoo-s-last-refuge-in-peril-023807188.html>
 - ✓ <http://www.energycentral.com/articles/article/2665#.UcF-sIrdR0w.facebook>
 - ✓ TV patrol guesting – May 8, 2013 – after the press con <http://www.abs-cbnnews.com/tvpatrol/palawan#.T9nG8RvtAc.email>
 - ✓ <http://newsinfo.inquirer.net/405141/conservationists-mount-signature-drive-vs-coal-fired-power-plant-in-palawan>, May 9, 2013
 - ✓ <https://www.facebook.com/CleanEnergyPalawan?fref=ts>
 - ✓ <http://www.gmanetwork.com/news/story/305969/scitech/science/in-palawan-conserving-the-cockatoo-means-saving-the-hornbill-too>, April 28, 2013
 - ✓ <http://www.manilatimes.net/index.php/sunday-times/the-sunday-times-magazines/44882-negative-effects-of-a-coal-power-plant-in-palawan> April 6, 2013
 - ✓ <http://newsinfo.inquirer.net/390375/proposed-coal-plant-in-palawan-may-doom-katala-conservation-efforts>, April 13, 2013
 - ✓ <http://news.mongabay.com/2013/0402-hance-philippine-cockatoo-coal.html> , Mongabay.com April 2, 2013
 - ✓ <http://www.malaya.com.ph/index.php/column-of-the-day/27632-why-not-wind-and-solar-for-palawan>, April 1, 2013
 - ✓ <http://interaksyon.com/article/57351/dmci-proposed-coal-plant-in-palawan-a-threat-to-endangered-cockatoo---pamb>, March 18, 2013
 - ✓ <http://www.gmanetwork.com/news/story/297850/news/regions/palawan-power-plant-may-push-endangered-philippine-cockatoo-to-extinction>, March 6, 2013
 - ✓ <http://opinion.inquirer.net/48137/clear-and-critical-danger>, March 4, 2013
 - ✓ <http://www.journal.com.ph/index.php/news/national/45932-zubiri-bucks-palawan-power-plant-construction>, March 4, 2013
 - ✓ <http://noticias.terra.es/espana/comunidades-autonomas/canarias/la-fundacion-loro-parque-teme-la-extincion-de-la-cacatua-filipina-por-la-implantacion-de-una-central-electrica.ef52358b04fed310VgnCLD2000000ec6eb0aRCRD.html>
 - ✓ <http://www.20minutos.es/noticia/1782622/0/>
 - ✓ http://fotos.lainformacion.com/fotos/la-fundacion-loro-parque-teme-la-extincion-de-la-cacatua-filipina-por-la-implantacion-de-una-central-electrica_RwNQNIwhujFeFRzFZaZTw7/

- ✓ <http://www.europapress.es/islas-canarias/noticia-fundacion-loro-parque-teme-extincion-cacatua-filipina-implantacion-central-electrica-20130410153714.html>
- ✓ <http://www.noticias.com/la-fundacion-loro-parque-teme-la-extincion-de-la-cacatua-filipina-por-la-implantacion-de-u.2050239>

Equipment, personnel and facility status

- Rasa campsite roofing was replaced. Toilet was also improved.
- The Katala tricycle was reconditioned to make available for the anti-coal campaign activities in Narra.
- The engine and outrigger of the service boat in Pandanan was repaired; but it is best to replace boat with bigger engine and hull.
- Our Katala Education Center in Dumarán was treated against termites. We also repaired kitchen sink and walls. However, the wooden trusses and beams need immediate replacement.
- We had to engage a research assistant to help consolidate data on mainland Narra cockatoo observations and conduct intensive information campaign against the proposed coal power plant.

Implications for further work

- It was frustrating to experience, how little scientific findings were considered in the discussion regarding the proposed coal plant in Narra. Despite the technical staff of the Palawan Council for Sustainable Development, KFI and other entities provided a data on adverse ecological, social and economic effects; these information were either ignored or even actively suppressed. Procedures of PCSD, e.g. regarding accountability and transparency need to be reassessed. The task to increase scientific literacy of some decision-makers in Palawan will be a daunting one.
- Due to the time-consuming campaign against the coal plant plans in Narra, other projects did not receive the attendance they deserved, particularly the reintroduction project, the new site in the Sulu plains and KIEBC. Due to the devoted field staff of KFI, breeding season activities went along widely unaffected, but after the coal plant issue is resolved, the mentioned projects will receive special attendance.

Planned targets and activities for the next reporting period

Objective 1: Conservation of cockatoo population on Pandanan and Bugsuk Islands, Balabac

- Warden scheme on Pandanan and Bugsuk Island continued and extended to adjacent mainland.
- Monitoring of cockatoo population and habitat on Pandanan and Bugsuk Island continued.
- Networking with local stakeholders, particularly Jewelmer Corporation, the largest private landowner, continued.
- Conservation education in Pandanan Island and adjacent mainland continued.
- Research on conservation-related aspects of cockatoo biology on Rasa continued, with focus on factors influencing breeding success and foraging ecology.

Objective 2: Re-introduction of Philippine Cockatoo

- Site evaluation continued.
- Conduct of 2nd National Workshop on Reintroduction of the Philippine Cockatoo.

Objective 3: Conservation of cockatoo population on Rasa Island, Narra

- Warden scheme continued.
- Members of Protected Areas Management Board in the management of the Philippine Cockatoo and Rasa Island Wildlife Sanctuary capacitated and meetings facilitated.
- Conservation education for stakeholders continued.
- Research on conservation-related aspects of cockatoo biology on Rasa continued, with focus on factors influencing breeding success and foraging ecology.

Objective 4: Conservation of cockatoo population in the Sulu-Sea coastal plain of Palawan

- Monitoring of new mainland flocks initiated (municipalities of Narra, Aborlan), and of existing one (Iwahig Penal Colony) continued.
- Intensive conservation education initiated for communities visited by foraging flocks.

Objective 5: Conservation of cockatoo population on Dumarán Island, Dumarán

- Warden scheme continued.
- Members of Local Protected Areas Management Committee in the management of the Philippine cockatoo, as well as Omoi and Manambaling Cockatoo Reserve assisted and capacitated.
- Research on conservation-related aspects of cockatoo biology on Rasa continued, with focus on factors influencing breeding success and foraging ecology.
- Buffer zone restoration around existing cockatoo reserves continued.
- Creation of forest corridor connecting the two existing cockatoo reserves continued.

Objective 6: Support for Polillo Islands Parrot Project

- Warden scheme for Philippine cockatoo and other parrot species continued.

Objective 7: Conservation of Culasian Managed Resource Protected Area

- Warden scheme continued.
- Members of Local Protected Areas Management Committee in the management of the Philippine cockatoo, as well as Culasian Managed Resource Protected Area assisted.
- Handing over to the Protected Area Management Board of the Mt. Mantalingahan Protected Landscape initiated.

Objective 8: Education and research at the Katala Institute for Ecology and Biodiversity Conservation

- Captive management of Philippine Cockatoo and other highly threatened species continued through employment and training of zookeepers and volunteers.
- Landscaping with native species propagated in the Katala nursery continued.
- Educational trail, enclosures and visitors facilities upgraded.

Objective 9: Cockatoo Advocacy

- Engaging with the Palawan Council for Sustainable Development and other law-enforcing bodies continued in particular in formulation and implementation in the fields

of wildlife trade, illegal logging, establishment of large-scale agricultural projects, particularly plantations.

- Vigilance in respect to the coal plant maintained. Advocacy against planned coal plant opposite Rasa Island continued, if necessary.

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ANNEXES:

Foraging and flight path of the Philippine cockatoo in Rasa Island Wildlife Sanctuary and adjacent mainland

Resolutions opposing the construction and operation of the DMCI coal-power plant in Panacan, Narra, Palawan: PAMB, Municipal Resolutions, Barangay Resolutions, WCSP Resolution and WBCP Resolution

Compilation of selected news articles regarding our fight against the coal plant in Narra