

Name of Protected Area: Crown Island Wildlife Sanctuary

Part 1: Basic information about the protected area

Table 1. Protected area information

Name, organisation and contact details for person(s) conducting the assessment <i>Person 1: Name, Organisation, Address, Email, Phone</i>	Gregory Peterson, SPREP/Protected Area Solutions, 283 Madill Road, Tandur, Q4570, Australia
<i>Person 2: Name, Organisation, Address, Email, Phone</i>	Bernard Suruman, CEPA, bsuruman@dec.gov.png
Today's Date	25/08/2016
Name (or names) of protected area	
Size of protected area (ha)	58,969 (1,365 ha from GIS measurement by WWF; 72 ha is marine; area needs to be confirmed)
PNG Code or number	
World Database of Protected Areas site code (these codes can be found on www.unep-wcmc.org/wdpa/)	15789
What level or kind of protected area is it? (National Park, Wildlife Management Area, Sanctuary, Reserve, Locally Managed Marine Area etc)	Wildlife Sanctuary
IUCN Category	VI
International protected area? e.g. World Heritage or Ramsar?	
Country	Papua New Guinea
Province/s	Madang
District/s	Rai
Local level governments	Saidor
Ward/s	34
Nearest big town	Madang
Location of protected area (brief description)	Crown Island Wildlife Sanctuary is located in the southern Bismarck Sea off the north coast of the Papua New Guinea mainland and about 25 kilometres from Long Island. It lies in the northern-western extreme of the Vitiaz Strait, which is the body of water which separates the PNG mainland from the island of New Britain. The island rises steeply from the ocean, with little coastal plain. It is a heavily forested small island surrounded by fringing reefs. The Sanctuary extends about 1km from the coast. The closest main centre is Madang (120km).
Map references	Topo. map 1:100,000 - Long Island sheet 8387
When was the protected area gazetted or formally established?	4/08/1977 (also recorded in the Register as 21/7/1977)
Reference for gazettal or Memorandum of Understanding (MoU)	

Who owns the protected area? please enter Government Private Community/ customary landowners, private, Other (name) and include Clan name(s)	Sosoko Maplana clan
Number of households living in the protected area	10
Population size within the protected area	54
Who manages the protected area? (e.g. please enter government, customary landowners [add clan names] management committee [how many and what gender])	There is no Management Committee. The area is managed by the Sosoko Maplana clan.
Total number of staff (this means anyone working on the protected area in paid jobs – whether NGOs, community, rangers or customary landowners	No staff
<i>Temporary paid workers</i>	0
<i>Permanent paid workers</i>	0
Annual budget (US\$) – excluding staff salary costs	No budget
Operational (recurrent) funds	0
Project or special funds	0
Reason for park establishment	Protecting breeding site for turtles
What are the main values for which the area is designated (Fill this out after data sheet 2)	Breeding site for turtles
List the primary protected area management objectives (add lines if needed after the most important objectives): <i>Management objective 1</i>	To conserve and manage resources for use on Crown Island and Long Island, e.g. timber, fish and other marine resources (e.g. sea shells). (The original objectives were to protect biodiversity by excluding people from settling on the island and hunting with shot guns).
<i>Management objective 2</i>	
<i>Management objective 3</i>	
Number of people involved in answering the assessment questions	3
Name/organisation/contact details of people participating the assessment (<i>Please do not insert return/enter or dot points</i>)	<i>Tongi Elisha, Police Station Madang P.O. Box 748, 79772039 or 4221499; David Manase, land mediator, Long Island, 79265016; Samson Gaima, 73667286</i>
Customary landowners/other community; CEPA, Other national government agency; Provincial govt; local level govt; Protected area staff (anyone working on the protected area in paid jobs; NGO; Donors; External experts; Others	Customary landowners
Please note if assessment was carried out in association with a particular project, on behalf of an organisation or donor.	SPREP through the PNG Protected Area Assessment Project, which is a component of the GEF Community-based Forest and Coastal Conservation and Resource Management Project in PNG

Part 2: What makes this protected area special and important?

The island has been a wildlife sanctuary for a long time. There are snakes (gold python), lizards (skin is used to make the kundu drum), fish, turtle (no longer nesting on the island), clam shells and sea cucumber. There are plenty of fish and customary landowners sell fish and trochus shells in Madang. The reefs and marine environment are in good condition (although there has been no research to confirm this), despite a lack of management and a focus on resource (mainly marine) extraction to enable people to live on the island. There are no pigs and no tree kangaroos on the island. In the past people did not live on the island, but in the late 1990s people moved from Long Island to establish a permanent settlement and now there are over 50 settlers. There is dispute about the legality of these settlers and it has proved difficult for the people from Long Island to remove them. Some species (e.g. dugong) have been overharvested and are no longer seen around the island. The increasing erosion around the island has resulted in the loss of sandy beaches and nesting sites for turtles.

Table 2. Key values of the protected area

No.	Key values	Brief description	Note if endangered species or ecosystem (IUCN)
1	Trochus shells, sea cucumber	Trochus shell meat and pearl are used for economic benefit – they are collected and sold in Madang.	
2	Breeding ground for fish	No significant visible negative impacts on breeding habitats and numbers of fish.	
3	Fish diversity and fish stock	There are many different fish species (specific types were not identified).	
4	Dolphins	There are many dolphins and they are increasing in numbers (unsure of the types of dolphins).	

Table 3. Checklist of values/benefits

Not important 0; Important 1; Very important 2; Don't know DK

How important is the protected area for each of the listed values/benefits?	Score (0,1,2, DK)	Comment
1. Biodiversity – the presence of many different kinds of plants, animals and ecosystems	1	The island is forested, but the people do not rely on these resources for the livelihoods. Fish and sea cucumbers are important and there are also sharks, trochus shells, giant clams, cowrie shells, sharks and turtles (e.g. green and leatherback). There is reported to be few native fauna on the island, other than the giant lizard (used in making kundu drums).
2. Presence of rare, threatened, or endangered species (plants and animals)	0	Over harvesting of dugong and now they don't exist. There is limited research, although it is likely that other rare species are found here.
3. Ecosystems (e.g. wetlands, grasslands, coral reefs etc) that are rare because they have been cleared or destroyed in other areas	1	Erosion has effected the turtle breeding grounds.
4. Protecting clean, fresh water	2	The only source is fresh water is from a well.
5. Sustaining important species in big enough numbers that they are able to survive here	2	
6. Providing a source of employment for local communities now	0	
7. Providing resources for local subsistence (food, building materials, medicines etc.)	1	The residents live almost entirely subsistence lives and rely mainly on the marine resources for the livelihoods.
8. Providing community development opportunities through sustainable resource use	0	
9. Religious or spiritual significance (e.g. tambu places)	0	

10. Plant species of high social, cultural, or economic importance	0	
11. Animal species of high social, cultural, or economic importance	1	Trochus shells are sold and provide some minimal income.
12. Attractive scenery	2	Tourists are very happy to look at the scenery. This is a small forested island surrounded by largely intact fringing reefs with plentiful coral and fish species.
13. Tourism now	0	No tourists are visiting the island now.
14. Potential value for tourism in the future	0	It is difficult attract tourists due to the lack of infrastructure and long distance from Madang.
15. Educational and/or scientific value	1	There has been minimal human intervention into the island, and hence it retains educational and scientific value, especially the marine areas.
16. Maintaining culture and tradition on customary land and passing this on to future generations	0	Land is too small to support a big population and there has been no settlement on the island until more recent times. Hence there are no sites that have significant cultural significance to the people who live there.

Part 3: What are the threats to the protected area?

Table 4: Threats to the protected area

- H** High significance threats are seriously degrading values. This means they are badly damaging some value –it might be a kind of animal or plant, or your traditional gardens
- M** Medium threats are having some negative impact – they are damaging values but not so badly
- L** Low threats are present but not seriously damaging values
- 0** N/A where the threat is not present in the protected area or where something is happening but is not threatening the values at all

Threat type	Score (H,M,L,0)	Notes
1.1 Housing and settlement	H	The island now has some settlers and there is limited area for expansion. There is a plan to return all settlers to Long Island.
1.1a Population increase in the protected area community	H	There is limited area for expansion.
1.2 Commercial and industrial areas	0	
1.3 Tourism and recreation infrastructure	0	
2.1 Customary land owner and community gardens and small crops	H	There is limited area for expansion of gardens, which currently exist on the fringes of the island. Further gardening may result in the loss of the coastal fringe vegetation.
2.1a Drug cultivation	0	
2.1b Commercial plantations	0	
2.2 Wood and pulp plantations	0	
2.3 Livestock farming and grazing	0	
2.4 Marine and freshwater aquaculture	0	
3.1 Oil and gas drilling	0	
3.2 Mining and quarrying	0	
3.3 Energy generation	0	
4.1 Roads and railroads (include road-killed animals)	0	
4.2 Utility and service lines (e.g. electricity cables, telephone lines)	0	
4.3 Shipping lanes	L	International and national shipping lanes close by. Siting of ships every day and this may cause damage in the future.
4.4 Flight paths	0	
5.1 Hunting, killing and collecting terrestrial animals (including killing of animals as a result of human/wildlife conflict)	L	

Threat type	Score (H,M,L,0)	Notes
5.2 Gathering terrestrial plants or plant products (non-timber)	H	Unsustainable use of limited resources e.g. thatching for houses and plants for firewood.
5.3a Logging and wood harvesting for local/customary use	H	Unsustainable use of limited resources e.g. timber for house construction.
5.3b Logging and wood harvesting – commercial logging	0	
5.4a Fishing, killing and harvesting aquatic resources for local/customary use	L	Species taken include fish, trochus and cowrie shells, clam shells and turtles. Trochus shells are sold in the Madang market. There is a belief that there will always be an abundance and this may result in the loss of our marine resources in the future. Fish provide the main protein source for the community and increased population will place more pressure on fish and shell species.
5.4b Fishing, killing and harvesting aquatic resources for commercial use	0	
6.1 Recreational activities and tourism	0	
6.2 War, civil unrest and military exercises	0	
6.3 Research, education and other work-related activities in protected areas	0	
6.4 Activities of protected area managers (e.g. construction or vehicle use)	0	
6.5 Deliberate vandalism, destructive activities or threats to protected area staff and visitors	0	
7.1 Fire and fire suppression (including arson)	0	
7.2 Dams, hydrological modification and water management/use	0	
7.3a Increased fragmentation within protected area	0	
7.3b Isolation from other natural habitat (e.g. deforestation)	0	
7.3c Other 'edge effects' on park values	0	
7.3d Loss of keystone species (e.g. top predators, pollinators etc.)	0	
8.1 Pest plants	0	
8.1a Pest animals	M	Crown of thorns is present on the reef.
8.1b Diseases such as fungus or viruses that make native plants or animals sick	0	
8.2 Introduced genetic material (e.g. genetically modified organisms)	0	
9.1 Household sewage and urban waste water	H	Toilets over the water result in effluent impacting on the reef and if population increases this will have a more serious outcome for water quality, reef health and human health.
9.1a Sewage and waste water from protected area facilities	0	
9.2 Industrial, mining and military effluents	0	
9.3 Agricultural and forestry effluents (e.g. excess fertilizers or pesticides)	0	
9.4 Garbage and solid waste	0	
9.5 Air-borne pollutants	0	
9.6 Excess energy (e.g. heat pollution, lights etc.)	0	

Threat type	Score (H,M,L,0)	Notes
10.1 Volcanoes	0	
10.2 Earthquakes/Tsunamis	L	Occasional minor earthquakes.
10.3 Avalanches/Landslides	0	
10.4 Erosion and siltation/ deposition (e.g. shoreline or riverbed changes)	0	
11.1 Habitat shifting and alteration	H	Turtle habitat has been lost due to rising sea level and increased erosion.
11.2 Droughts	H	Big effect on water catchment as we rely on well water for our drinking supply.
11.3 Temperature extremes	M	Higher daytime temperatures and lower night temperatures.
11.4 Storms and flooding	M	The island is susceptible to storms.
11.5 Coral bleaching	0	
11.6 Intrusion by saltwater into gardens etc.	0	
11.7 Sea level rise	H	Trochus shells destroyed and this is reducing the already limited area where they can be collected.
Other (please explain)		
12.1 Loss of cultural links, traditional knowledge and/or management practices	H	Loss of local language – it is being mixed with tok pisin, and loss of cultural traditions related to ceremonies (e.g. sing sings).
12.2 Natural deterioration of important cultural site values	0	
12.3 Destruction of cultural heritage buildings, gardens, sites etc.	0	
Other (please explain)		

Table 5. Worst threats and ways forward

Threat No.	Threat (Most significant first)	Threat number or name (copy no. from Table 4)	Nature of the threat, impact and how to reduce the impact.
1	Population and housing and gardens	1.1; 2.1	There won't be enough land to accommodate an increase in population
2	Climate change including sea level rise.	11.1; 11.2; 11.7.	Increased sea level rise will only reduce the already limited land area
3	Destruction of cultural heritage	12.3	Threat to language and ceremonial traditions.

Part 4: What is the management like in the protected area?

Table 6. Management effectiveness scores, comments, next steps

Issue	Score (0,1,2,3, NA)	Comment	Next steps
1a. Legal status	3	Legally gazetted as a Sanctuary.	
1b. Legal status			
2a. Protected area regulations	1	There were some original rules: firearms cannot be taken into the Sanctuary; and the taking of sea-shells is restricted to customary landowners in their customary areas (Register). There is no evidence of a traditional resource use plan. It is unclear whether these rules are applied.	

Issue	Score (0,1,2,3, NA)	Comment	Next steps
2b. Protected area regulations			
3. Law enforcement	0	There is no government presence on the island and no funding or capacity for enforcement. The presence of the settlers is disputed by the people from Long Island and they want them removed.	
4. Protected area objectives	0	There is lack of clarity on the objectives. The original objectives relate to the exclusion of people from inhabiting the island and hunting with shotguns. If these are objectives, it is clear that no one is aware of them or implements the objectives. For example, if one of the objectives is to have no settlement on the island (as reported by the assessment participants), then this is not being achieved and is possibly the main threat to the island's resources. The participants cited objectives relating to the protection of the island's resources to provide for the sustainable livelihoods of the people from Long Island and Crown Island. There is also no knowledge of a traditional resource use plan.	
5. Protected area design	3	The design includes both the island and the surrounding marine areas (to 1km) and thus provides a sound basis for management. There is no internal zoning within the marine area.	Discuss the possibility of merging Crown Island with Long Island (about 8km to the south east) to form one WMA and maximise management outcomes.
6. Protected area boundaries	1	The land boundaries are obvious, but the sea boundary extends 1km from the shore and is not marked. Settlers are now living on the island, which was established as a place where there would be no settlement.	
7. Management plan	0	There is no Management Plan or Management Committee. Management rules were identified by Eaton (1986) including: protect all wildlife; shells can only be collected by those with traditional hunting skills. These were not known by the participants.	Need to re-establish a Management Committee and develop a Management Plan for the WMA.
7a. Planning process	0	The community is not aware of the Sanctuary rules and boundaries and has no input into management.	
7b. Planning process	0	There is no Management Plan and hence no review processes.	
7c. Planning process	0	No monitoring or evaluation informs planning and management.	
8. Regular work plan	0		
9. Resource inventory	0	No recent research has been conducted on the island.	
10. Protection systems	0		

Issue	Score (0,1,2,3, NA)	Comment	Next steps
11. Research and monitoring	0		Research is needed on all ecological and social aspects related to the island (terrestrial and marine).
12. Resource management	0		
13a. Staff numbers	0		
13b. Other people working on the protected area	0		
14. Training and skills	0		Provide reef monitoring training. Species identification. Land use planning. Training to write an application or proposal for funding. Training in English for business writing.
15. Current budget	0		
16. Security of budget	0		
17. Management of budget	NA		
18. Equipment	0		
19. Maintenance of equipment	NA		
20. Education and awareness	0		Contact local school to encourage environmental education program.
21. Planning for land use or marine activities	0		
22. State and commercial neighbours	0		
23. Indigenous people/ Customary landowners	0		
24a. Impact on communities	0		
24b. Impact on communities	0		
24c. Impact on communities	1		
25. Economic benefit	1		There are very minor benefits to individuals from the sale of fish and trochus shells.
26. Monitoring and evaluation	0		
27. Visitor facilities	0		As settlement is not supposed to be on Crown Island, the construction of visitor facilities is not recommended.
28. Commercial tourism operators	0		
29. Fees	NA	There is no system for collecting fees for visitors e.g. divers or others.	
30. Condition of values	2		
30a. Condition of values	0		
30b. Condition of values	0		
30c. Condition of values	0		

Part 5: Condition and trends of protected area values

Table 7. Values, condition and trend

Key value (from Table 2)	Condition Score (VG, G, F, P, DK)	Trend Score (I, S, D, DK)	Information source and justification for Assessment and HOW the condition can be IMPROVED
Trochus shells and sea cucumber	G	S	Information is based on continuing availability of shells and sea cucumbers.
Fish stocks and fish diversity	VG	S	Sustainable fishing around Crown Island has contributed to very good fish stocks.
Breeding ground for fish	VG	S	As above.
Dolphins	VG	I	Dolphins are not fished or hunted. Numbers are strong. Often whales are sited also.

Table 8. Recommendations and ways forward

1.	2.	3.
To join Crown and Long Islands to make one protected area	Move the people back to Long Island	

Table 9. Strengths and challenges (facilitator/recorder synthesis)

	Strengths	Challenges
1	Large fish stocks in the surrounding sea	Addressing the issue of continuing settlement on the island. Negotiating the movement of people living on Crown Island back to Long Island to ensure more sustainable resource use. If people remain there needs to be an effective management structure (i.e. either independently, or in conjunction with Long Island).
2	A current abundance of trochus shells and sea cucumber	Gaining access to training so customary landowners can increase skills in: reef monitoring; species identification; business letter writing in English to assist in application writing for funding; and land use planning.
3	Sustainable fishing practices mainly due to distance from larger population sources and lack of motorized fishing boats	Opening dialogue to consider the merger of Crown Island and Ranba Wildlife Management Area (and also Ranba Wildlife Sanctuary) into one management area with one Management Committee.
4		Lack of capacity to implement the original objectives and enforce them due to failure of governments at all level to provide funding, training and capacity building. Being ignored for so long is a major challenge. It is important to keep in contact to provide incentives for people to engage in conservation.
5		Lack of leadership – without an effective Management Committee, future progress is very difficult.

References:

- Eaton, P. (1986) Potential World Heritage Areas: Karkar and Long Island Ples 2:63-72.
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 Lindgren E. (1975). Long Island - A Preliminary Land Use Plan. Dept. Agric. Stock and Fisheries, Wildlife Section Research Group.
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