

## Name of Protected Area: Ranba 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>	Bernard Suruman, CEPA, bsuruman@dec.gov.png
<i>Person 2: Name, Organisation, Address, Email, Phone</i>	Fiona Leverington, Protected Area Solutions, Fiona@protectedareas.com.au
Today's Date	25/8/2016
Name (or names) of protected area	Ranba Wildlife Sanctuary
Size of protected area (ha)	15,724
PNG Code or number	
World Database of Protected Areas site code (these codes can be found on <a href="http://www.unep-wcmc.org/wdpa/">www.unep-wcmc.org/wdpa/</a> )	12888
What level or kind of protected area is it? (National Park, Wildlife Management Area, Sanctuary, Reserve, Locally Managed Marine Area etc)	Sanctuary
IUCN Category	
International protected area? e.g. World Heritage or Ramsar?	
Country	Papua New Guinea
Province/s	Madang
District/s	Rai District
Local level governments	Saidor LLG
Ward/s	32, 33, 34
Nearest big town	Madang (120kms away)
Location of protected area (brief description)	Ranba Wildlife Sanctuary is the core of Long Island, which is located approximately 120 km east of Madang and can be reached in about three hours by dinghy. The Sanctuary is surrounded by Ranba Wildlife Management Area (see separate report). The Sanctuary is situated in a caldera between the peaks of Remus (1212m) and Cerisy (1112m) and has active volcanic vents. The caldera was caused by an immense volcanic eruption, thought to be in the 17 <sup>th</sup> century, and believed to have killed all the island's inhabitants (Eaton 1985). Lake Wisdom occupies a large portion of the caldera and is reported to be very deep, with under-researched benthic fauna. The vegetation is mainly secondary forest that has established subsequent to the last major eruption (300 year ago). Numerous streams flow from the top of the crater to the coastal fringe. The island's poor transport and communication make it very remote.
Map references	Topo. map 1:100,000 - Long Island sheet 8387.

When was the protected area gazetted or formally established?	21/6/1977
Reference for gazettal or Memorandum of Understanding (MoU)	No G61 – 4/8/1977
Who owns the protected area? please enter Government Private Community/ customary landowners, private, Other (name) and include <b>Clan name(s)</b>	Customary landowners of Long Island – all clans on the island own the Lake.
Number of households living in the protected area	0 (people live around the coastline and not in the Sanctuary)
Population size within the protected area	0
Who manages the protected area? (e.g. please enter government, customary landowners [ <b>add clan names</b> ] management committee [ <b>how many and what gender</b> ])	Customary landowners (The lake is managed by all the clans. There is no management committee as all the original members are deceased).
Total number of staff (this means anyone working on the protected area in <b>paid jobs</b> – whether NGOs, community, rangers or customary landowners	0
<i>Temporary paid workers</i>	0
<i>Permanent paid workers</i>	0
Annual budget (US\$) – excluding staff salary costs	0
Operational (recurrent) funds	0
Project or special funds	0
Reason for park establishment	To protected the fish in the lake (However, in the last two years yellow-fin tuna have come in to the lake and there are no native fish. There is a dragon-like creature also in lake, and a spider site).
What are the main values for which the area is designated (Fill this out after data sheet 2)	Geologic features (e.g. volcano and caldera lake), cultural values and animals.
List the primary protected area management objectives (add lines if needed after the most important objectives): <i>Management objective 1</i>	Conserve as a traditional site to protect the dragon and cultural values.
<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>Naizel T</i> , Malala, Long Island; <i>David Manase</i> , Land Mediator, Long Island, 79265016; <i>Tangi Elisha</i> , Police Department, Madang Police Station, P.O. Box 748, Madang, 79772039/4221499.
Customary landowners/other community; CEPA, Other national government agency; Provincial govt; local level govt; Protected area staff (anyone working on the protected	Customary Landowners (the Wildlife Sanctuary is owned by all the people on the island and there are multiple clans); and national government.

area in paid jobs; NGO; Donors; External experts; Others	
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?

Our Sanctuary contains a lake (Lake Wisdom) and volcano with a caldera, and a range of wildlife. There is forest, coconut trees, pigs, kapul (tree kangaroo/possum), lizards, cats and, chicken. In the lake there are carp but no native fish. The lake water is a mix of salt and fresh water and there is now yellow fin tuna in the lake, but we don't know how it got there. It arrived about two years ago. The water flows from the top of the mountain to the coast. No people live in the Sanctuary. The caldera lake was caused by an immense volcanic explosion, possibly in the 17<sup>th</sup> century (Eaton 1985). It killed all the inhabitants and the area has since been resettled. Lake Wisdom is deep lake (one of the deepest in SE Asia/Australasian region), with important limnological values and unusual benthic fauna (Mitchell 2005). The participants at the workshop had little awareness of the boundary of Ranba Wildlife Sanctuary or Ranba WMA, which cover all of Long Island, and they were not aware that the Sanctuary was designated as an area where no hunting should occur. They regard the caldera lake as a place of mystery, with various descriptions of a spirit animal living in the depths. The lake is surrounded by forest.

**Table 2. Key values of the protected area**

No.	Key values	Brief description	Note if endangered species or ecosystem (IUCN)
1	Geologic features (e.g. volcano, caldera lake)	Lake Wisdom is a deep caldera lake with important limnological values and unusual benthic fauna (Mitchell 2005). The volcano is active and the lake is situated in the volcano's caldera in the centre of Long Island.	
2	Cultural values	The customary landowners believe that there is a masalai, dragon or crocodile in the lake.	
3	Animals	Animals on the island include cuscus, pigs and bird species including wildfowl. Wildlife within the Sanctuary area are not well known but due to the relatively recent volcanic explosion there may be a limited diversity of wildlife, except for birds which can disperse widely.	

**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	0	Flying foxes, various water-birds in the lake, fish and secondary forest around the lake. The Sanctuary's remoteness means that people mainly hunt and fish in more accessible areas closer to the coast.
2. Presence of rare, threatened, or endangered species (plants and animals)	0	
3. Ecosystems (e.g. wetlands, grasslands, coral reefs etc) that are rare because they have been cleared or destroyed in other areas	0	
4. Protecting clean, fresh water	0	Water in the lake is brackish and not drinkable.
5. Sustaining important species in big enough numbers that they are able to survive here	0	

6. Providing a source of employment for local communities now	0	
7. Providing resources for local subsistence (food, building materials, medicines etc.)	0	
8. Providing community development opportunities through sustainable resource use	0	
9. Religious or spiritual significance (e.g. tambu places)	0	There is a masalai in the lake but this is just a story. It is not important to the people.
10. Plant species of high social, cultural, or economic importance	0	
11. Animal species of high social, cultural, or economic importance	0	
12. Attractive scenery	1	The Sanctuary contains high peaks and a deep lake in a caldera.
13. Tourism now	0	
14. Potential value for tourism in the future	1	
15. Educational and/or scientific value	1	Some research was undertaken in the past and there may be potential for this in the future.
16. Maintaining culture and tradition on customary land and passing this on to future generations	2	Maintaining culture is important.

### 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

**See list for Ranba WMA. Most of the threats do not apply to the Sanctuary area as it is not inhabited and is more remote.**

Threat type	Score (H,M,L,0)	Notes
1.1 Housing and settlement	0	Housing and settlement are mainly on the coastal fringe of the island and have no impact on the Sanctuary.
1.1a Population increase in the protected area community	0	Population increase in the coastal areas may have minor impact in the future due to garden expansion towards the Sanctuary.
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	0	
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	0	
4.4 Flight paths	0	

Threat type	Score (H,M,L,0)	Notes
5.1 Hunting, killing and collecting terrestrial animals (including killing of animals as a result of human/wildlife conflict)	0	
5.2 Gathering terrestrial plants or plant products (non-timber)	0	
5.3a Logging and wood harvesting for local/customary use	0	
5.3b Logging and wood harvesting – commercial logging	0	
5.4a Fishing, killing and harvesting aquatic resources for local/customary use	0	
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)	L	Burning occurs in the dry season every year and subsequently the land along the coastal fringe is turned into gardens. Burning may also be used to help with hunting. Increased use of fire may have potential to impact on the forests in the Sanctuary.
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	0	Non-native fish species (e.g. carp) are found in Lake Wisdom.
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	0	
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	

Threat type	Score (H,M,L,0)	Notes
9.6 Excess energy (e.g. heat pollution, lights etc.)	0	
10.1 Volcanoes	0	While the Sanctuary is located in and around a volcanic caldera, this is not perceived to be a threat to the Sanctuary.
10.2 Earthquakes/Tsunamis	0	
10.3 Avalanches/Landslides	0	
10.4 Erosion and siltation/ deposition (e.g. shoreline or riverbed changes)	0	
11.1 Habitat shifting and alteration	0	
11.2 Droughts	M	Droughts may result in greater incidence of fire and their escape into the Sanctuary.
11.3 Temperature extremes	M	
11.4 Storms and flooding	M	
11.5 Coral bleaching	0	
11.6 Intrusion by saltwater into gardens etc.	0	
11.7 Sea level rise	0	
Other (please explain)		
12.1 Loss of cultural links, traditional knowledge and/or management practices	H	
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	Climate change (drought, fire)	11.2	Increases in temperature extremes and more frequent droughts may result in a higher incidence of fires and fires escapes.

## 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 Sanctuary	
1b. Legal status			
2a. Protected area regulations	0	Previous regulations prohibited hunting within the caldera. Due to no surveillance or monitoring it is difficult to know if this rule is adhered to.	
2b. Protected area regulations			
3. Law enforcement	0	The area is remote and there is no law enforcement.	

Issue	Score (0,1,2,3, NA)	Comment	Next steps
4. Protected area objectives	0	The main objective was to prohibit hunting in the caldera. There is no evidence that the community support this objective.	
5. Protected area design	3	The Sanctuary includes Lake Wisdom and its surrounds. However, the Sanctuary is surrounded by a WMA, which is populated and is affected by increasing population numbers. A more holistic approach to the design of the Sanctuary may help to achieve more effective long term outcomes.	Enter negotiations with the customary landowners and relevant levels of government to develop a comprehensive Management Plan for all of Long Island and potentially Crown Island. This would include a landuse plan that would identify areas of high conservation value, areas for settlement and gardening to ensure sustainable livelihoods into the future.
6. Protected area boundaries	1	The boundary of the Sanctuary was gazetted and mapped, but there is no agreement with the customary landowners.	As above.
7. Management plan	0	No Management Plan was developed and none is in place.	
7a. Planning process	0		
7b. Planning process	0		
7c. Planning process	0		
8. Regular work plan	0	No regular work plan is in place.	
9. Resource inventory	0	No resource inventory.	
10. Protection systems	0	No protection systems as the Sanctuary is remote and difficult to access.	
11. Research and monitoring	0	No recent research or monitoring.	Basic research and data are important to form a basis for future management and to highlight the key values and importance of the area to the customary landowners, who should be involved in all decisions concerning future research on Long Island.
12. Resource management	0	There has not been a functioning Management Committee for some time and there has been no active resource management.	Following consideration of a potential whole of island approach to management, develop a new Management Plan that identifies key actions to ensure effective resource management (e.g. land use plan with identified zones and targets).
13a. Staff numbers	0	There are no staff employed to manage the Sanctuary	
13b. Other people working on the protected area	0	The remote location of the Sanctuary has meant that no customary landowners are engaged in the site's management.	

Issue	Score (0,1,2,3, NA)	Comment	Next steps
14. Training and skills	0	No training has occurred.	If the Management Committee and Plan are resurrected, an important issue for the future is to effectively train the Committee members and the wider community (e.g. leadership, park administration, on-ground ranger training, finance skills and environmental awareness raising).
15. Current budget	0		Funding is essential if the first steps towards more integrated planning and management are to be achieved.
16. Security of budget	0		
17. Management of budget	NA		
18. Equipment	0		
19. Maintenance of equipment	NA		
20. Education and awareness	0		Environmental awareness raising will help to channel support for the Sanctuary.
21. Planning for land use or marine activities	0		
22. State and commercial neighbours	0		
23. Indigenous people/ Customary landowners	0	Customary landowners have no input into planning and management as all relevant structures have disintegrated.	
24a. Impact on communities	0		
24b. Impact on communities	0		
24c. Impact on communities	0		
25. Economic benefit	0		
26. Monitoring and evaluation	0		
27. Visitor facilities	0		
28. Commercial tourism operators	NA		
29. Fees	NA		
30. Condition of values	2	The remote location of the Sanctuary has helped to conserve its values. However, carp and yellow fin tuna are now present in the lake and there are no native fish.	
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 <b>HOW the condition can be IMPROVED</b>
Lake Wisdom	VG	S	The Lake and its surrounds are largely undisturbed.
Cultural values	VG	S	Cultural values are strong, but have shown some decline due to the presence of Christian missionaries. The belief in the masalai spirits of the Sanctuary are declining.
Animals	DK	DK	The area is remote and the species and their status are unknown, but thought to be in relatively good condition.

**Table 8. Recommendations and ways forward**

1.	2.	3.
Establish processes to discuss the possibility of united planning and management of Ranba Wildlife Sanctuary, Ranba WMA and Crown Island Wildlife Sanctuary.	Invest in training and skills development to raise awareness and interest in the Sanctuary's conservation and management.	Establish improved consultation and collaboration with all levels of government.

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

	Strengths	Challenges
1	The Sanctuary's values remain largely intact, primarily due to its remoteness.	Providing effective support (i.e. from all levels of government and potential tourist operators) in the face of remoteness (i.e. no roads, infrequent boat transport, no electricity, no visitor facilities) and encouraging the customary landowners to take a lead in the future sustainable management of their Sanctuary and island.
2	Participants at the workshop expressed interest in improved planning and management of the Sanctuary and all of Long Island and Crown Island.	Addressing the conflict concerning the different views about the boundary of the Sanctuary and ensuring transparent community consultation with all affected stakeholders.
3		Maintaining the values of the Sanctuary and interest in the conservation of the Sanctuary with no budget, limited skills and lack of communication with all levels of government.
4		Negotiating the integrated management of Ranba Wildlife Sanctuary, Ranba WMA and Crown Island Wildlife Sanctuary when there has been little or no management of the three protected areas over several decades.
5		Identifying and promoting sustainable livelihoods that reduce impact on the Sanctuary's values (e.g. biodiversity).
6		Developing a range of income generating activities that will reduce hunting pressure, when tourism potential is limited currently due to poor transport and lack of facilities.

### References

- Eaton, P. 1985. Customary land tenure and conservation in Papua New Guinea. In Culture and Conservation: the human dimension in environmental planning, eds J. McNeely, D. Pitt, London, New York.
- Mitchell, N. 2005. Ranba WMA and Ranba Sanctuary, Rappam Survey and register. WWF.