

Name of Protected Area: Siwi Utame Wildlife Management Area

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>	James Sabi, Conservation and Environment Protection Authority, PO Box 6601, Boroko, National Capital District, Port Moresby, james.sabiroaming@gmail.com, jsabi@dec.gov.pg, 301 4520; and Warren Jano, SPREP, +(675) 7538 8867, wjano2009@gmail.com
<i>Person 2: Name, Organisation, Address, Email, Phone</i>	Ovin Wafewa, UNDP, PO Box 1041 Port Moresby, ovin.wafewa@undp.org, 3212877
Today's Date	10/04/2017
Name (or names) of protected area	Siwi Utame Wildlife Management Area
Size of protected area (ha)	12,540
PNG Code or number	G07
World Database of Protected Areas site code (these codes can be found on www.unep-wcmc.org/wdpa/)	NA
What level or kind of protected area is it? (National Park, Wildlife Management Area, Sanctuary, Reserve, Locally Managed Marine Area etc)	Wildlife Management Area
IUCN Category	NA
International protected area? e.g. World Heritage or Ramsar?	NA
Country	Papua New Guinea
Province/s	Southern Highlands
District/s	Ialibu Pangia
Local level governments	Kewabi Local Level Government
Ward/s	17 ward councils (Ponowi 1, Ponowi 2, Kumbame 1, Kumbame 2, Kurane 1, Kirane 2, Makura, Paware1, Paware2, Tiri 1, Tiri 2, Mambi 1, Mambi 2, Pale 1, Pale 2, Mungumapa 1, Mungumapa 2)
Nearest big town	Mt Hagen and Mendi (Siwi Utame WMA communities lie between these towns and people can decide where to go depending on the goods and service needed. It is about 1hr 30minutes drive to each town).
Location of protected area (brief description)	Siwi Utame is surrounded by villages. The area is pristine and with minor disturbance from human activity. The non-timber forest resources are used to make crafts to generate income.
Map references	
When was the protected area gazetted or formally established?	13/01/1977
Reference for gazettal or Memorandum of Understanding (MoU)	G07
Who owns the protected area? please enter Government Private Community/ customary	Customary landowners

landowners, private, Other (name) and include Clan name(s)	
Number of households living in the protected area	1,200 (12 wards, 6 villages, 200 houses per village)
Population size within the protected area	>7000 (estimated 600 x 12 wards)
Who manages the protected area? (e.g. please enter government, customary landowners [add clan names] management committee [how many and what gender])	The customary landowners through the Wildlife Management Committee and a prominent leader in the area, Mr. Roy Yaki, who is also the initiator of the protected area. A few of the committee members have died and there are only two current people who manage the protected area (Pange Kende and Kapu Lia).
Total number of staff (this means anyone working on the protected area in paid jobs – whether NGOs, community, rangers or customary landowners	NA
<i>Temporary paid workers</i>	NA
<i>Permanent paid workers</i>	NA
Annual budget (US\$) – excluding staff salary costs	NA
Operational (recurrent) funds	NA
Project or special funds	NA
Reason for protected area establishment	To protect the birds, animals and forest habitats which were being depleted. The initiative also wanted to breed and keep captive animals in a "refugee and/or zoo".
What are the main values for which the area is designated (Fill this out after data sheet 2)	Fresh water, eels and fish; wild animals (cuscus, tree kangaroo and wallaby); trees - hard wood species; non-forest products; landscape of Siwi and Utame Mountains; birds (e.g. circle bird [bird of paradise species] and cassowary); and salat.
List the primary protected area management objectives (add lines if needed after the most important objectives): <i>Management objective 1</i>	To protect forest fauna (in the tree canopies - tree kangaroo, cuscus, birds of paradise, and forest floor – cassowary, including the three different types - lowland, dwarf and mountain species, and non-forest resources such as vines, palms and basket weaving grass.
<i>Management objective 2</i>	To protect the fresh water systems and the aquatic fauna.
<i>Management objective 3</i>	To protected the iconic landscape of the Siwi and Utame Mountains
Number of people involved in answering the assessment questions	5
Name/organisation/contact details of people participating in the assessment	<i>Roy Yaki</i> , Department of Works, Strategic Advisor - Government Interface, PO Box 1108 Boroko, National Capital District, roy.yakisi@gmail.com, 324 1596, 7031 4156, 7349 3181; <i>Nelson Yamba</i> , Department of Agriculture and Livestock, PO Box 251, Mendi, SHP, nelsonyamba@gmail.com, 71883648/ 75567128; <i>Daniel Ponde Ruma</i> , Siwi Utame WMA Committee, 72138627; Page Kende, WMA Committee, 71317220; <i>Kapu Lia</i> , Siwi Utame WMA Committee.
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, government officers.

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

No text inserted. **Additional information:** The area may have a high number of rare, threatened and endangered species, including endemic birds. The area was selected as a WMA because of traditionally significant plants and animals, historic sites and the need to protect the bush. Surrounding areas are impacted by development and clearing (Rappam 2006).

Table 2. Key values of the protected area

No.	Key values	Brief description	Note if endangered species or ecosystem (IUCN)
1	Fresh water, eels and fish	Water is important for drinking and provides habitat for fish which are important as a food source.	
2	Wild animals (cuscus, tree kangaroo and wallaby)	These animals are used for bride price, in traditional attire and the meat is an important source of protein and is also used for compensation and marriage	Tree kangaroos
3	Trees - hard wood species	This is called Karape in the local dialect - Pawa, Muku, Walu, Mauma and Kili are important and are used as posts for houses and bridges and for commercial purposes, such as milling and selling to other buyers.	Forest hard woods
4	Non-forest products	This includes ropena and melerari (cane like plants), yakipu (fern) and palm trees. These are used for basket making and placemats; the palm tree is used in the walls of the house and for flooring, the leaves are used for roofing, the roots are used for the roofs before placing the leaves, and palm trees are also sold to buyers who want to build houses. Fruits are important for the cassowary. Salat is an important plant used as a local medicine.	
5	Landscape of Siwi and Utame Mountains	This is a very scenic landscape.	
6	Birds (e.g. circle bird [bird of paradise species] and cassowary)	Birds are used in marriage rituals and for compensation and also for meat (especially cassowary); the feathers are important in bride price and for customary dressing and sing sings.	Brid of paradise, and cassowary

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	2	Biodiversity is important to provide medicines and for commercial purposes.
2. Presence of rare, threatened, or endangered species (plants and animals)	2	Cassowary; and hardwood timber species are rare and take a long time to grow.
3. Ecosystems (e.g. wetlands, grasslands, coral reefs etc) that are rare because they have been cleared or destroyed in other areas	2	Ecosystems provide sustenance to the environment and the people.
4. Protecting clean, fresh water	2	Pure clean water has minerals for healing.
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	2	The resources in the protected area are used for making baskets and placemats and when sold they generate income.
7. Providing resources for local subsistence (food, building materials, medicines etc.)	2	
8. Providing community development opportunities through sustainable resource use	1	There is not a lot of development in the WMA.
9. Religious or spiritual significance (e.g. tambu places)	1	There is a gas coming out of small caves/holes and this is important to the people.
10. Plant species of high social, cultural, or economic importance	2	
11. Animal species of high social, cultural, or economic importance	2	
12. Attractive scenery	1	Mountain top views.
13. Tourism now	1	There is little tourism now.
14. Potential value for tourism in the future	2	Tourism may be important in the future.
15. Educational and/or scientific value	2	The WMA provides opportunities to study medicinal plants.
16. Maintaining culture and tradition on customary land and passing this on to future generations	2	

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	L	There are not many houses in the WMA.
1.1a Population increase in the protected area community	L	
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	L	
2.1a Drug cultivation	0	Outside the protected area there is some drug cultivation.
2.1b Commercial plantations	0	
2.2 Wood and pulp plantations	0	There are some plantations outside the WMA.
2.3 Livestock farming and grazing	0	
2.4 Marine and freshwater aquaculture	L	There is some small fish ponds and farming, but the impact is low.
3.1 Oil and gas drilling	0	There is potential for oil and gas development.
3.2 Mining and quarrying	0	There is potential for mining and quarrying in the future.
3.3 Energy generation	0	There is potential for energy generation in the future.
4.1 Roads and railroads (include road-killed animals)	L	There is a small road running beside the boundary of the WMA.
4.2 Utility and service lines (e.g. electricity cables, telephone lines)	0	
4.3 Shipping lanes	0	
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)	L	
5.3a Logging and wood harvesting for local/customary use	L	
5.3b Logging and wood harvesting – commercial logging	H	There is logging (using Lucas sawmills) for commercial use.
5.4a Fishing, killing and harvesting aquatic resources for local/customary use	L	
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)	L	A road separates Siwi Utame and Mt Giluwe.
7.3c Other 'edge effects' on park values	M	There are some small logging activities undertaken by locals using Lucas sawmills along the highway.
7.3d Loss of keystone species (e.g. top predators, pollinators etc.)	L	Keystone species (e.g. cassowary) are still intact.
8.1 Pest plants	0	There is potential for the invasion from introduced pit pit.
8.1a Pest animals	M	There are introduced fish species (tadpole like head) that are eating the local trout eggs.
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	
9.6 Excess energy (e.g. heat pollution, lights etc.)	0	
10.1 Volcanoes	0	
10.2 Earthquakes/Tsunamis	0	
10.3 Avalanches/Landslides	0	

Threat type	Score (H,M,L,0)	Notes
10.4 Erosion and siltation/ deposition (e.g. shoreline or riverbed changes)	0	
11.1 Habitat shifting and alteration	L	
11.2 Droughts	0	
11.3 Temperature extremes	0	
11.4 Storms and flooding	0	
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	M	
12.2 Natural deterioration of important cultural site values	0	
12.3 Destruction of cultural heritage buildings, gardens, sites etc.	0	
Other (please explain)	0	

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	Logging wood harvesting for local/customary use	5.3a,5.3b	We need to impose restrictions on protected area resource use, especially wood harvesting.
2	Pest animals	8.1a	The invasive fish are eating and chasing away the local native fish; we need outside sources to help us find how to reduce or eradicate this fish species.
3	Loss of cultural links, traditional knowledge and/or management practices	12.1	We need to teach the younger generations about cultural values and practices.

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 WMA (it was one of the first three WMAs established in the early 1970s).	
1b. Legal status			
2a. Protected area regulations	2	There are traditional laws for controlling land use activities.	
2b. Protected area regulations			
3. Law enforcement	1	There are major deficiencies in human capacity/resources to enforce the WMA rules.	We need funding to provide regular patrols and awareness raising. We need to revisit the gazetted rules and empower the WMA Committee to enforce the law.

Issue	Score (0,1,2,3, NA)	Comment	Next steps
4. Protected area objectives	2	There are agreed objectives, but the WMA is only partly managed according to these objectives.	Re-instate or revive the WMA Management Committee and review the objectives.
5. Protected area design	2	The protected area boundaries could be better and there is potential for the WMA to be extended.	Work on extending the current boundaries and engage in community consultations.
6. Protected area boundaries	3	The current map is based on survey description from the National Gazette (the old system). The people are generally aware of the boundaries which follow natural features such as rivers and mountains.	We need to revisit the boundaries and map the boundaries using GPS.
7. Management plan	0	The WMA Management Committee is inactive and the management plan does not exist.	Develop a written Management plan and activate the WMA Committee by updating the membership.
7a. Planning process	0		
7b. Planning process	0		
7c. Planning process	0		
8. Regular work plan	0	No regular work plan exists. There were plans for walking tracks and for the Forest Conservation Project, but this was dependent on funding and resources.	Develop a written Management plan and activate the WMA Committee by updating the membership.
9. Resource inventory	2	Traditional values and knowledge of the WMA exist.	Need scientific studies to identify the species of plants and animals in the WMA.
10. Protection systems	1	The WMA is old and the Committee is inactive and several members have died.	Develop a written Management plan and activate the WMA committee by updating the membership.
11. Research and monitoring	1	In the past there was some inventory/research e.g. some studies were completed by Navu Kwapena.	New research is needed to provide better information to manage the WMA.
12. Resource management	0		The WMA Committee needs to be elected and their capacity improved; and resources are needed to implement management actions.
13a. Staff numbers	0		
13b. Other people working on the protected area	2		We need more resources to do more work in the WMA and funding is needed to get people interested and committed to work.
14. Training and skills	1	There is no current training and skills are low.	Training needs to be revived e.g. wildlife management.
15. Current budget	0	We have received no support from any source.	
16. Security of budget	0		
17. Management of budget	NA		
18. Equipment	0		
19. Maintenance of equipment	NA		
20. Education and awareness	0	There is no education and awareness	We would like to have an education and awareness programme in the future.

Issue	Score (0,1,2,3, NA)	Comment	Next steps
21. Planning for land use or marine activities	3	There is a feasibility study to have water piped to Queensland and a land use plan is on the way to account for resources covering the WMA.	
22. State and commercial neighbours	2	There are some feasibility studies related to the water project recognised by the Government.	
23. Indigenous people/ Customary landowners	1		We would like future input from the ward councillors and local level government members.
24a. Impact on communities	0	There is no open communication.	We would like to revive the WMA and implement work on the protected area.
24b. Impact on communities	0		We need to bring awareness to the landowners about the benefits of keeping your forest intact.
24c. Impact on communities	1	The community have supported and kept the forest. They are committed to supporting conservations e.g. Roy Yaki is buying caucus and birds to release back into the forest.	
25. Economic benefit	2	There are some economic benefits from the WMA e.g. the material and resources used is placemats, which are sold and also the sale of palm stems, which are used in the walls of houses.	
26. Monitoring and evaluation	0	Monitoring and evaluation used to happen in the past through the village rangers (who had a badge and uniform).	
27. Visitor facilities	0		
28. Commercial tourism operators	0		
29. Fees	0	Fees used to be collected through the rangers when the protected area was established, but currently nothing has happened.	
30. Condition of values	2	There is some impact on values from the loss of hardwood species.	
30a. Condition of values	0	There is community monitoring through observation.	Need scientific survey and studies.
30b. Condition of values	0	There is no scientific programs and data collected for specific management.	Need scientific surveys/studies.
30c. Condition of values	1	There is community commitment to protect the site.	Need scientific information/data and support from relevant organisations working on protected areas.

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
Fresh water, eels and fish	VG	S	The water quality is good and there is current interest in piping fresh water to Queensland.
Wild animals (cuscus, tree kangaroo and wallaby)	VG	D	
Trees - hard wood species	VG	D	The trees are decreasing slightly due to small scale saw milling.
Non-forest products	VG	S	As the value of making and selling baskets increases this will place pressure on the forest resources.
Birds (e.g. circle bird [bird of paradise species] and cassowary)	VG	D	Birds of paradise are in decline, but another species is migrating into the forest. It has been affected by small scale logging, which has chased the birds away. In the past these birds were not seen near the villages. For the cassowary, these are stable and the species are noticed near the villages again.
Landscape of Siwi and Utame Mountains	VG	S	

Table 8. Recommendations and ways forward

1.	2.	3.	4
Revive the WMA Management Committee and membership and re-gazette the WMA and work in partnership with council wards.	Review the WMA laws and boundaries and provide training to raise awareness.	Allocate a specific budget to the WMA for management, to conduct awareness raising, training for rangers to coordinate activities and monitor the area and to assist in enforcement of the laws in the WMA.	The government should provide a circular to provide advice on existing areas.

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

	Strengths	Challenges
1	The community and their leaders respect the WMA.	Walkabout sawmill removing wood surrounding the WMA area.
2	The Siwi Utame community has a bigger plan to expand the WMA.	Supporting of the WMA activities, obtaining funding and building capacity to manage the protected area.
3	Prominent leaders still support the conservation efforts e.g. Mr. Roy Yaki, a three term politician and the community chief.	Achieving outcomes in the face of lack of support from government.
4	The area is still intact for environmental protection efforts to be continued.	