

Name of Protected Area: Iomare 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 Person 1: Name, Organisation, Address, Email, Phone	Warren Jano, SPREP, wjano2009@gmail.com, 73780347, 75388867.
Person 2: Name, Organisation, Address, Email, Phone	Agnes Bevi, Administration and Events Officer, Kokoda Initiative PO Box 6601 Boroko NCD, abevi572@gmail.com, abevi@dec.gov.pg, 71755286 email; Margret Sibona Kilapat - Senior Staff Development & Training Officer, PO Box 6601 Boroko NCD PNG, msibona@dec.gov.pg, mskilapat@gmail.com, 3014500, 79944301.
Today's Date	22/6/2016
Name (or names) of protected area	Iomare Wildlife Management Area
Size of protected area (ha)	3828
PNG Code or number	G81
World Database of Protected Areas site code (these codes can be found on www.unep-wcmc.org/wdpa/)	15782
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	
International protected area? e.g. World Heritage or Ramsar?	
Country	Papua New Guinea
Province/s	Central
District/s	Kairuku-Hiri
Local level governments	Brown River
Ward/s	17
Nearest big town	Port Moresby City
Location of protected area (brief description)	Located approx. 30km north-north-east of Port Moresby, ranging from about 50-400m, consisting of savannah and forest woodland.
Map references	Longitude 147.2600; Latitude -9.2600
When was the protected area gazetted or formally established?	24/12/1987
Reference for gazettal or Memorandum of Understanding (MoU)	G81
Who owns the protected area? please enter Government Private Community/ customary landowners, private, Other (name) and include Clan name(s)	Customary landowners, Varagardi Clan.

Number of households living in the protected area	150
Population size within the protected area	2500 plus
Who manages the protected area?(e.g. please enter government, customary landowners [add clan names] management committee [how many and what gender])	Customary landowners, and a Management Committee which has 10 members (9 males, 1 female), including the Ward 17 Councillor (Chair), and a Magistrate (Vice Chair).
Total number of staff (this means anyone working on the protected area in paid jobs – whether NGOs, community, rangers or customary landowners	10 (the management committee)
<i>Temporary paid workers</i>	0
<i>Permanent paid workers</i>	10
Annual budget (US\$) – excluding staff salary costs	Approx. K24,000 (paid by the national government)
Operational (recurrent) funds	0
Project or special funds	There were some funds provided by PNG Forestry to manage the teak wood plantation (the amount of funding was unknown).
Reason for park establishment	To protect customary land for gardening and hunting.
What are the main values for which the area is designated (Fill this out after data sheet 2)	Wildlife, landscape (Mountains), forest, clean water.
List the primary protected area management objectives (add lines if needed after the most important objectives): <i>Management objective 1</i>	Providing sustainable hunting and gardening opportunities.
<i>Management objective 2</i>	Providing teak wood plantations.
<i>Management objective 3</i>	
Number of people involved in answering the assessment questions	2
Name/organisation/contact details of people participating the assessment	Steven Revo and Andrew Revo, 73604972.
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?

Iomare Wildlife Management Area has landforms (e.g. mountains with blue rocks) that are economically valuable and it previously had animals such as deer, birds of paradise and hardwood such as rosewood, pine and kwila, fresh water eels and prawns, and clean water for the people to utilize. The National Forest Authority planted teak wood plantations in the WMA area and created jobs for the local people. Later, however, weathering began to wash away the good gardening soil and bushfires became more common. Also the National Forest Authority did not pay land and timber royalties to the community. The community now is taking a quarrying company to court. It is alleged that the company destroyed their land and water, which is currently being used for hydro-electric power generation.

Table 2. Key values of the protected area

No.	Key values	Brief description	Note if endangered species or ecosystem (IUCN)
1	Wildlife	Bird of paradise, wallaby, cassowary, tree kangaroo, wild pig, bandicoot, prawns, fish and eels.	
2	Forest habitat	Trees - kwila, rosewood, pine and masawa. Much of the area has teak plantations (non-native).	
3	Clean water	For drinking and cooking. This is important as this is a dry area.	
4	Good land	For gardening and hunting.	
5	Landscape/stones	Blue stone and limestone, river stone for gravel and sand.	

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	Important to protect the land, and support life in terms of soil fertility and quality, and the quality of the food produced.
2. Presence of rare, threatened, or endangered species (plants and animals)	2	They remain important but many have gone or moved further inland (e.g. birds of paradise).
3. Ecosystems (e.g. wetlands, grasslands, coral reefs etc) that are rare because they have been cleared or destroyed in other areas	2	The grasslands are important as the customary landowners would rather “eat food from the bush and fresh water than frozen food”.
4. Protecting clean, fresh water	2	Due to the destruction of land and forest, the people need to protect the water systems. There is plan for a hydro power plant at Edevu. There is clean water but due to damming the regular flow has been affected and the freshwater animals are decreasing and the water system is polluted.
5. Sustaining important species in big enough numbers that they are able to survive here	1	The people currently are advised to use larger size fishing nets to support fish life/stock in the river systems and ensure a sustainable harvest for future generations. They are also advised to fish on certain days only.
6. Providing a source of employment for local communities now	1	The employment provided by the WMA provides a benefit for a small number of people in the community rather than the majority.
7. Providing resources for local subsistence (food, building materials, medicines etc.)	2	For traditional medicine.
8. Providing community development opportunities through sustainable resource use	2	There is no political support in terms of providing personnel e.g. they have a police station and a clinic (however, the clinic is not operational and the police station has not been repaired).

9. Religious or spiritual significance (e.g. tambu places)	1	People have changed from a traditional and customary lifestyle to Christianity and have lost their traditional practices of managing and respecting secret sites and following the traditional ways of harvesting animals.
10. Plant species of high social, cultural, or economic importance	1	They have plants for perfume, and they have eaglewood.
11. Animal species of high social, cultural, or economic importance	2	For traditional costumes e.g. bird of paradise furthers for traditional singings and ceremonies.
12. Attractive scenery	2	They have a lookout, however, the picnic areas have been destroyed. With some help and guidance they can improve the lookout for visitors.
13. Tourism now	1	There are no fees paid so the landowners do not want tourists.
14. Potential value for tourism in the future	1	It is not important but can be improved if the benefits are received by the landowners from the visitors' use.
15. Educational and/or scientific value	2	Important for future generations to appreciate their environment.
16. Maintaining culture and tradition on customary land and passing this on to future generations	2	The younger generation needs to be told of the value of environment.

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	Landowners are having conflicts with settlers from Kerema and Goilala. These people are migrating into customary land and are depleting the lomare community's scarce resource which includes occupying customary land.
1.1a Population increase in the protected area community	H	Population is increasing within the customary landowner community and also as a result of settlers moving into or encroaching on the WMA.
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	M	There are rising demands on the resources of the WMA to meet the needs of the increasing population.
2.1a Drug cultivation	M	Cultivated by the settlers from outside lomare - Kerema and Goilalas. This has affected the community's young people.
2.1b Commercial plantations	0	
2.2 Wood and pulp plantations	H	Land degradation and erosion after the wood is harvested.
2.3 Livestock farming and grazing	L	For family consumption not on a large scale.
2.4 Marine and freshwater aquaculture	0	
3.1 Oil and gas drilling	0	
3.2 Mining and quarrying	H	Quarrying using dynamite affects wildlife, land and fresh water.
3.3 Energy generation	H	Fresh water prawns, fish, turtles, and eels are affected due to the low water flow.
4.1 Roads and railroads (include road-killed animals)	L	Only one road and not much impact.
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)	H	Improved method of hunting e.g. use of guns has allowed hunters to kill more animals than using bows and arrows.
5.2 Gathering terrestrial plants or plant products (non-timber)	L	Medicinal plants only.
5.3a Logging and wood harvesting for local/customary use	L	
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	L	Community disputes over land between landowners and migrants, and sometimes between the landowners themselves. This can occur when landowners bring outsiders to live within the Iomare community without the consent of other clan members
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)	M	Fires occur occasionally during the dry season when people accidentally cause fire, which results in vegetation and habitat change and loss of wildlife.
7.2 Dams, hydrological modification and water management/use	0	The hydro-electric power plant is yet to be developed, but there is potential for impact on water flow.
7.3a Increased fragmentation within protected area	H	The road has resulted in improved public accessibility for outsiders who enter the WMA and cause degradation within the area and this results in fragmentation of the WMA.
7.3b Isolation from other natural habitat (e.g. deforestation)	M	The WMA is becoming more isolated as the areas around the WMA are now savannah grassland. The forest has been cut by the landowners to establish gardens and the forest has also been impacted by bush fires.
7.3c Other 'edge effects' on park values	H	The WMA is subjected to increasing population and increased gardening and settlements on all of its boundaries and the natural habitat is being lost.
7.3d Loss of keystone species (e.g. top predators, pollinators etc.)	H	The Bird of paradise has reduced in numbers and is becoming rare due to population increase and the demand for traditional costumes for ceremonies.
8.1 Pest plants	H	Teak wood plantations and previous logging have resulted in clearance of the primary vegetation and pest plants such as mimosa are starting to colonise the area.
8.1a Pest animals	H	Wild pigs, and cane toads
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	

Threat type	Score (H,M,L,O)	Notes
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	H	Household waste is dumped in bushes and this causes habitat destruction and contributes to bush fires.
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	L	These result from clearing on the sides of the roads and bush fires which destroy the vegetation.
10.4 Erosion and siltation/ deposition (e.g. shoreline or riverbed changes)	L	From clearing and bushfire.
11.1 Habitat shifting and alteration	0	
11.2 Droughts	L	Result from both climate change and the clearing of vegetation.
11.3 Temperature extremes	L	Result from both climate change and clearing of vegetation. There was a comment that when there was more vegetation, temperature extremes were not felt.
11.4 Storms and flooding	L	As there is no vegetation to hold the water, storms are having a bigger impact (e.g. more erosion and sediment entering the rivers).
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	Due to modern religious beliefs and lifestyles people do not feel connected to traditional methods of harvesting, doing ceremonies with natural resources and this is diminishing the value people place on protecting the Wildlife Management Area.
12.2 Natural deterioration of important cultural site values	H	Erosion due to clearing of vegetation - there is an area in the Wildlife Management Area where traditional ceremonies were held and due to clearing and bushfires, erosion has occurred at that site and people are not using it anymore.
12.3 Destruction of cultural heritage buildings, gardens, sites etc.	H	Due to population increase and migration from other parts of PNG, the site has been destroyed.
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	Human settlements	1.1	The threat is high with squatters from other parts of PNG migrating to settle in the area and causing population increase. The clan members have suggested that they need to meet and agree on the people who can migrate into their community.
2	Pollution from garbage and solid waste	9.4	Pollution created from household waste, results in an increase in malaria, which is a major disease that kills and affects or reduces the time that people have to manage the WMA The community want to develop a waste disposal plan i.e. select a site for all garbage disposals.
3	Loss of culture and social values	12.1	There is a loss of traditional practises relating to wildlife and resource use approaches. The churches have influenced traditional beliefs related to the safe keeping and usage of the

			area. The leaders want to raise awareness on how rare their valued species are, especially in relation to other areas in PNG and the world. This will help people to value the wildlife and protect the WMA and finally promote their culture by creating tourist and picnic sites.
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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 protected area.	Communities need to be informed about the Wildlife Management Area and its importance.
1b. Legal status			
2a. Protected area regulations	3	Legally recognised, but there is a lack of enforcement.	Needs more collaboration from relevant people and authorities to better manage the area and provide benefit from the area to the customary landowners.
2b. Protected area regulations			
3. Law enforcement	0		
4. Protected area objectives	0		
5. Protected area design	2	The area is adequate.	This can be improved by developing a land use plan to improve wildlife and overall resource management.
6. Protected area boundaries	3	The boundary has been demarcated (by Steven).	New people from the community need to physically walk the boundary so that they know where it is.
7. Management plan	0		
7a. Planning process	0		
7b. Planning process	0		
7c. Planning process	0		
8. Regular work plan	0		
9. Resource inventory	1	CEPA has the inventories.	There is a need for an office at the Iomare WMA to provide information to assist management and future visitors.
10. Protection systems	0		
11. Research and monitoring	0		
12. Resource management	0		
13a. Staff numbers	3	There are enough people working in the WMA (10 – the Wildlife Management Committee).	There should be some special projects to support the WMA's activities and this must include other members of the community so they can appreciate the area and its values.
13b. Other people working on the protected area	0		
14. Training and skills	0		
15. Current budget	0		
16. Security of budget	0		
17. Management of budget	NA		
18. Equipment	0		

Issue	Score (0,1,2,3,NA)	Comment	Next steps
19. Maintenance of equipment	NA		
20. Education and awareness	2	An education and awareness program is done by CEPA with students.	This program should be expanded to include landowners, and would require capacity building to improve their skills in relation to providing a valuable experience for local visitors and tourists.
21. Planning for land use or marine activities	0		
22. State and commercial neighbours	0		
23. Indigenous people/ Customary landowners	2	There needs to be more communication with CEPA and the relevant government levels to support the WMA and any other projects to facilitate the WMA.	There needs to be more interaction with CEPA staff.
24a. Impact on communities	0		
24b. Impact on communities	0		
24c. Impact on communities	0		
25. Economic benefit	2	There are only 10 people benefiting from the protected area.	There must be more activities and opportunities for the people to be involved so that the people can create ownership and appreciate the benefits the protected areas provides.
26. Monitoring and evaluation	0		
27. Visitor facilities	0		
28. Commercial tourism operators	0		
29. Fees	0		
30. Condition of values	0		
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
Wildlife	P	I	Can be improved through land use plans.
Forest habitat	P	I	Develop land use management plans for different habitats, ecosystems and species to support wildlife.
Clean water	P	D	The hydro plant is affecting the waterways but can be improved.
Good land	P	D	Develop and train people to better manage resources.
Landscape	P	D	We want to benefit from the quarry or any development that may happen in the Wildlife Management Area.

Table 8. Recommendations and ways forward

1.	2.	3.
Work with CEPA to protect the area.	Capacity building – awareness raising, specific training in species and budgeting.	Develop tourism activities.

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

	Strengths	Challenges
1	Community is very supportive in terms of promoting the Wildlife Management Area.	The ability to bring in people, institutions and organizations that will be able to support the WMA's conservation efforts.
2	The established committee works and deals with social issues, and the WMA too.	Addressing the issue of migrants coming to the area without the landowner's permission to enter the WMA.
3	The customary landowners are able to fight in court for their rights in order to benefit from their resource utilization.	The community want to see CEPA regularly visit and provide support, particularly in relation to capacity building.
4		Creating/developing activities that will provide economic activities, tourism, better farming practices and better management approaches to manage the WMA.
5		Limited capacity to foster and make informed decisions that are based on community consensus.
6		The committee members are yet to be trained and informed about the values of WMA and effective management strategies.