Information Sheet on Ramsar Wetlands (RIS)

2009-2012 version

Available for download from http://www.ramsar.org/ris/key_ris_index.htm.

Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX. 22 of the 9th Conference of the Contracting Parties (2005).

Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.

2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 14, 3rd edition). A 4th edition of the Handbook is in preparation and will be available in 2009.

3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

1. Name and address of the compiler of this form:

Director General of Forest Protection and Nature Conservation, the Ministry of Forestry.
Manggala Wanabakti Building, Block VII / 7th floor,
Gatot Subroto Street, Kavling 52 – Jakarta 10270
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DD MM YY

Designation date | Site Reference Number

2. Date this sheet was completed/updated:

February 14th, 2011

3. Country:

Indonesia

4. Name of the Ramsar site:

The precise name of the designated site in one of the three official languages (English, French or Spanish) of the Convention. Alternative names, including in local language(s), should be given in parentheses after the precise name.

Rawa Aopa Watumohai National Park

5. Designation of new Ramsar site or update of existing site:

This RIS is for (tick one box only)**:**

a) Designation of a new Ramsar site ❑; or

b) Updated information on an existing Ramsar site ❑

6. For RIS updates only, changes to the site since its designation or earlier update:

a) Site boundary and area

The Ramsar site boundary and site area are unchanged: ❑

or

If the site boundary has changed:

i) the boundary has been delineated more accurately ❑; or

ii) the boundary has been extended ❑; or

iii) the boundary has been restricted** ❑

and/or

If the site area has changed:

i) the area has been measured more accurately ❑; or

ii) the area has been extended ❑; or

iii) the area has been reduced** ❑

** **Important note**: If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:

7. Map of site:

Refer to Annex III of the *Explanatory Note and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

a) A map of the site, with clearly delineated boundaries, is included as:

i**) a hard copy** (required for inclusion of site in the Ramsar List): ❑

ii**) an electronic format** (e.g. a JPEG or ArcView image) ❑

iii) **a GIS file providing geo-referenced site boundary vectors and attribute tables** ❑.

b) Describe briefly the type of boundary delineation applied:

e.g. the boundary is the same as an existing protected area (nature reserve, national park, etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The boundary is the same as Rawa Aopa Watumohai National Park boundary.

8. Geographical coordinates (latitude/longitude, in degrees and minutes):
Provide the coordinates of the approximate centre of the site and/or the limits of the site. If the site is composed of more than one separate area, provide coordinates for each of these areas.

Center coordinates for the largest section of the park: 4°28'30.72"S 121°59'11.97"E

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9. General location:
Include in which part of the country and which large administrative region(s) the site lies and the location of the nearest large town.

Administratively, Rawa Aopa Watumohai National Park is located in four municipalities, i.e. Konawe, South Konawe, Bombana and Kolaka, in the Province of South East Sulawesi. The national park's size is 105,194 ha or 2.75% of the Province of South East Sulawesi land (3,814,000 ha). The area can be reached easily from Kendari City (the capital city of South East Sulawesi Province) by 80 km road-trip to the Aopa swamp or 120 km to Lanowulu mangrove.

Regency / City	The Capital City of Regency	Population, 2008 (Number Person)
Konawe	Unaaha	228,706
South Konawe	Andolo	240,053
Bombana	Kasipute	109,883
Kolaka	Kolaka	281,450
Kendari City	Kendari	254,236

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10. Elevation: (in metres: average and/or maximum & minimum)

0 – 981 meters above sea level

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11. Area: (in ha)

105,194 ha

Rawa Aopa Watumohai National Park consists of swamp (13,236 ha), of mangroves (6,711 ha), and also of sub-montane forest to lowland tropical rain forest and savannah (85,247 ha).

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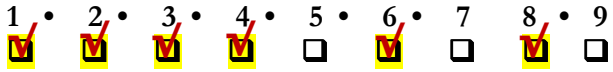
12. General overview of the site:
Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

This area is one of the most important conservation areas in Wallacea zone, located in the south eastern parts of Sulawesi Island. Ecologically, the national park has one of the most diverse ecosystem types, including mangroves, savannah, peat swamps and lowland tropical rain forests to sub-montane forests.

There are 2 (two) wetland types that have very important values, a) Aopa Swamp and the catchment area of Makaleleo comprises of peat swamp (further explanation in criteria 1) and mangrove and the catchment area of Watumohai – Mendoke. Mangrove is important as the spawning ground and

nursery area for fishes and shrimps. The mangrove also ecologically function to hold back the sea water intrusion and waves, and also to reduce down the wind. On the other site, the catchment area of Watumohai – Mendoke Mountain is the water source of the rivers which flow to the coastal area. The water used by surrounding communities is important for farming irrigation (among other, dams of Langkowala and Mokupa), fresh water (Drink Water Company of Atari and Pinanggotu).

13. Ramsar Criteria:
Tick the box under each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11). All Criteria which apply should be ticked.



14. Justification for the application of each Criterion listed in 13 above:
Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

Criterion 1: This site is a good example of a wetland type which maintains the hydrology of the area. Aopa Swamp is the only true swamp in Sulawesi (Whitten *et al.*, 1987 *in* Sibuea, T., 1996). Mangrove in the national park is a good example of the remaining large mangrove habitats in South East Sulawesi.

a. Aopa Swamp and the catchment area of Makaleleo Mountain
Aopa Swamp is the largest peat swamp in Sulawesi. The source of water in the swamp is rain water captured in the Makaleleo Mountain, which then flows to the Aopa Swamp. This water flows out of the national park through the Konaweha River and Aopa River. The swamp functions as a water reservoir and water flow controller. It provides run-off habitat and acts as a natural reservoir to preserve freshwater. Aopa Swamp also serves as a good example of a peat swamp habitat, mainly dominated by *Cyperaceae* family, such as wild sugarcane (*Hypolytrum nemorum*) and *Scleria scrobiculata*. This swamp is the sole representative of peat swamps in Sulawesi, and it is inhabitated by some very endemic fauna species.

Criterion 2 : The site is an important habitat for a number of threatened species.

English Name	Scientific Name	IUCN Status	CITES Status	CMS status	National Status
Birds					
Milky Stork	*Mycteria cinerea*	VU	I	-	P
Oriental Darter	*Anhinga melanogaster*	NT	-	-	P
Wooly-necked Stork	*Ciconia episcopus*	NT	-	II	P
Reptiles					
Salt-water Crocodile	*Crocodylus porosus*	LC	I	II	P
Booted Macaque	*Macaca ochreata*	VU	-	-	P
Mammals					
Lowland Anoa (endemic)	*Bubalus*	EN	I	-	P

English Name	Scientific Name	IUCN Status	CITES Status	CMS status	National Status
	depressicornis				
Mountain Anoa (endemic)	*Bubalus quarlesi*	EN	I	-	P
Babirussa	*Babyrousa babyrussa*	VU	I	-	P
Sulawesi Civet (endemic)	*Macrogalidia musschenbroeckii*	VU	-	-	-

P = Protected by Indonesian Law

Criterion 3 : The site is special for protecting genetic varieties and preserving ecological diversity in Wallacea zone, since this is an area of high uniqueness of flora and fauna. At least 501 species of flora have been listed, e.g *Livistona* spp., *Nephentes* sp., *Phalaenopsis amboinensis* and *Dendrobium phalaenopsis* (110 families). The fauna consists of 28 species of mammals (15 species are endemic to Sulawesi, such as the Lowland Anoa, Mountainous Anoa, Babirusa, Sulawesi Civet. There are 28 species of fish (e.g Bonefish), 11 species of reptiles (e.g Salt-water Crocodile and Reticulated Phyton), 3 species of amphibians, and 218 species of birds (e.g Maleo, Yellow-crested Cockatoo). In total, there are 52 species which are endemic to Sulawesi and 32 species are migrant species.

Criterion 4: Aopa Swamp is an important area for bird migration, especially for waterbirds and predatory birds. The route of migratory birds was tracked from the Philippine Islands, through Sangihe Talaud (North Sulawesi), Poa Togean Island (Central Sulawesi), transitting through Aopa Swamp (South East Sulawesi), before crossing to the Laut Island (South Borneo). Some of these birds include the Chinese Goshawk (*Accipiter soloensis),* and the Grey-faced Buzzard (*Butastur indicus).* For a list of bird species found in the area, refer to the appendix section.

Criterion 6 : At least 173 individuals of Milky Stork (*Mycteria cinerea*) are found in Aopa Swamp. The number is more than 3% of the world population. Wetland International waterbird population survey (2006) estimated Indonesia's population of Milky Stork as less than 5,000 individuals.

Unfortunately, there has been no survey or research conducted on Milky Stork stock population in the last 3-5 years. Both research and survey is proposed for 2011. The data generated will determine proper management needed to conserve Milky Stork.

Criteria 8 : Mangroves are permanent spawning grounds and nurseries for fish, which also supports high sea fishery, prawns and crabs. Mangroves are particularly important for the species listed here.

English Name	Scientific Name
Bonefish	*Albula neoguinaca*
Gizzard shad	*Anodontostoma chacunda*
Milkfish	*Chanos chanos*
Sicklefish	*Drepane punctata*
Estuary cod	*Epinephelus coioides*
Barred garfish	*Hemirhamphus far*
Halfbeak	*Hemirhomphodon pogonognathus*
Slender ponyfish	*Lates calcarifer*
Diamond fish	*Monodactylus argenteus*

Sea mullet	*Mugil cephalus*
Striped butterfish	*Selenotoca multifasciata*
Banded archerfish	*Toxotes jaculatrix*
Ribbon	*Acetes sp*
Tiger prawn	*Penaeus monodon*
Banana prawn	*Penaeus morguinensis*
Mud crab	*Scylla serrata*
Rondog/Berongan	*Telescopium telecospium*
Mud lobster	*Thallassina anomala*

15. Biogeography (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):
Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

a) biogeographic region:
Sulawesi, Indonesia, South East Asia

b) biogeographic regionalisation scheme (include reference citation):
Indomalayan Realm (Udvardy, 1975)

16. Physical features of the site:
Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

The site is an area that extends and stretches from the southeast side of Sulawesi Island to the north. The area comprises of mangrove, savanna, lowland to sub-montane tropical rain forest and swamp area. Aopa Swamp is the largest peat swamp in Sulawesi Island. Geological formation of this area includes 7 (seven) formations, i.e. alluvium; alangga; boeapinang; langkowala; pampangeo complex; ultramafik complex and mangan.

The landscape is generally flat, undulating and hilly in the south part, while in the middle and the north part are heavily undulating, this changes to mountainous steep slopes in the north with a gradient of 30^{o} - 40^{o}. The mountainous part includes Makaleleo Mountain (798 m above sea level) in the north, Watumohai Mountain (550 m above sea level) and Mendoke Mountain (981 m above sea level).

Generally, the Sulawesi area is influenced by southwest monsoon wind that blows between September-March, and the southeast monsoon wind that blows between April-June. In reference to the climate zone division, the area comprises of 3 (three) climate zones, i.e. C2 zone in the north, C3 in the middle and D3 in the south, according to Scmidth & Ferguson (1951), with various annual rainfall range from 1,500 – 2,000 mm and the air temperature ranges from 20°C - 33°C. Highest rainfall in the south occurs between January and May until October, while in the north between January and March until June.

The soil is dominated by podsolic soil type (35%). Other soil types are alluvial, cambisol, mediterranean and organosol.

Hydrologically, the site is a significant area for watershed protection. It comprises of Konaweha, Poleang and Roraya Watersheds. Water from this site is a source of water in many rivers (e.g Lambandia, Roraya, Langkowala, Aopa and Poleang rivers).

17. Physical features of the catchment area:
Describe the surface area, general geology and geomorphological features, general soil types, and climate (including climate type).

The water catchment in this site is divided into two parts:

a. Makaleleo Mountain, which is a source of water for Aopa Swamp. Aopa Swamp is a part of Konaweha Watershed.

b. The catchment area of Watumohai – Mendoke Mountain is a water source for rivers which flow to the mangrove area. The area is a part of Roraya and Poleang Watershed.

Rainfall is not uniform in this region, and hence it creates wet and semi-dry areas. The wet region has rainfall of more than 2,000 mm per year. This area covers the northern part of Kendari-Kolaka line (including catchment area of Makaleleo Mountain). Semi-dry region has rainfall of less than 2,000 mm per year, which includes the southern part of Kendari Kolaka lines (including catchment area of Watumohai-Mendoke Mountains).

18. Hydrological values:
Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

The area is important for water supply for households, farms, and agricultural areas.

- Water from the catchment area flows to Aopa Swamp, the outflow unites with Konaweha River, this then discharges into Sampara River (Sampara River is the water source of Kendari City Drink Water Territory Company).
- Aopa Swamp works as a water reservoir and water controller, from the catchment area to the run-off; in this regard, the site is a good example of run-off and freshwater reservoir.
- When river flow is high, water of Konaweha River (the unification of Aopa and Lahumbuti Rver) increases the amount of water in Aopa Swamp. So the function of the swamp is to control the water flow in the river systems downward the swamp (Anon, 1981 *in* Mustafa, M & Henderson, Gregory).
- Water from the catchment area of Watumohai – Mendoke Mountains eventually makes it's way to the coastal area. The water used by surrounding communities is important for farming irrigation (among other, dams of Langkowala and Mokupa), fresh water (Drink Water Company of Atari and Pinanggotu).
- Mangrove is important as the spawning ground and nursery area for fish and shrimps. The mangrove also ecologically function to prevent wave and sea water intrusion.
- This national park is important for groundwater recharge and is a source of fresh water for local communities.

19. Wetland Types

a) presence:
Circle or underline the applicable codes for the wetland types of the Ramsar "Classification System for Wetland Type" present in the Ramsar site. Descriptions of each wetland type code are provided in Annex I of the *Explanatory Notes & Guidelines*.

Marine/coastal: **F** • **G** • **I**

Inland: **L** • **M** • **N** • **O** • **Ts** • **U** • **Xp**

Human-made:1 • **2** • **3** • **4** • **5** • **6** • **7** • **8** • **9** • **Zk(c)**

b) dominance:
List the wetland types identified in a) above in order of their dominance (by area) in the Ramsar site, starting with the wetland type with the largest area.

Marine-coastal : I • G • F
Inland : Xp • O • Ts • U • M • N

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20. General ecological features:
Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

There are 11 habitat types, i.e: 1) estuary; 2) muddy beach; 3) mangrove; 4) savanna; 5) lowland forest; 6) sub-montane forest; 7) permanent river; 8) seasonal river; 9) seasonal fresh water swamp in grassland; 10) peat swamp; and 11) peat forest.

Aopa Swamp and mangroves provide fish and shrimp for domestic consumption and for commercial use.The surrounding area is used for cultivation of rice, agriculture, settlement, fishpond, nickel mining (at the northern part of Aopa Swamp) and gold mining (at the western part of the mangrove).

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21. Noteworthy flora:
Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 14, Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.*

At least, 501 species (110 Family); 73 species of orchids are listed in Appendix II in CITES Checklist; and 4 species of flora found in this national park.i.e. *Livistona* spp., *Nephentes* sp., *Phalaenopsis amboinensis* and *Dendrobium phalaenopsis* are protected by Indonesian law.

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22. Noteworthy fauna:
Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 14. Justification for the application of the Criteria) indicating,

e.g., which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. *Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS*.

For reference to other species, please refer to Appendix 2.

23. Social and cultural values:

a) Describe if the site has any general social and/or cultural values e.g., fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values:

Aopa Swamp is important for local communities because there are fish is a source of livelihood.

The Totole (*Hypolytrum nemorum*) leaves provide raw materials for handicrafts, such as plaited mats and hats.

The coastal area (mangrove) is the main area that produces the best shrimps and fish more than other coastal areas in south east Sulawesi. The total economic value of mangrove forest resource (direct use value) of Rawa Aopa National Park area (south Konawe) in 1 year is equal to Rp 1,224,147,750 (Prasetyo; 2008).

b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning?

If Yes, tick the box ❑ and describe this importance under one or more of the following categories:

i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:

From the mangrove area, local communities develop the concept of estuary area management and exploitation called "Togo". Togo is a trap for shrimps, Balaceng (*Acetes* sp.) and little fish. Togo is a fishery exploitation technique for mangrove areas only. Togo is made of wood taken from outside the national park. Togo can be applied 6-8 years.

The exploitation with Togo is passed on from one generation to the other, so the mangrove can be preserved.

ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:

iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:

iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

24. Land tenure/ownership:
a) within the Ramsar site:

The Government of Indonesia c.q. Forestry Ministry, with the National Park status based on the Minister of Forestry Decree number: 756/Kpts-II/1990 on December 17, 1990

b) in the surrounding area:

Generally, the location around Rawa Aopa Watumohai National Park area are individual cultivation areas which belong to the communities. While in the west, forest areas function as production forests, owned by the State and managed by local governments of Bombana and Kolaka Regency.

25. Current land (including water) use:
a) within the Ramsar site:

Recreation, research, and fisheries of swamp and mangrove.

b) in the surroundings/catchment:

Cultivation of rice, agriculture, settlement, fishpond, nickel mining (at the northern part of Aopa Swamp) and gold mining (at the western part of the mangrove).

26. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:
a) within the Ramsar site:

Land encroachment, illegal logging and illegal hunting. Illegal logging and encroachment can be found all around the peat swamp. Draining the swamp, by using channels to discharge water in order to open agriculture farms, occured in south Konawe and Kolaka regencies. This activity is a concern because it ruined the swamp's functions as a water regulator and destroys wild species habitat. Hunting and poaching of waterfowl eggs by local hunter's occured in Aopa Swamp. In mangrove, problems are dominated by illegal logging.

b) in the surrounding area:

Newly created subdistricts and villages (split up from original ones), has resulted in more farming areas which change river courses and affect wetland water supply (Aopa Swamp). Conservation areas are regarded as inhibiting factors for local development. Local poison and capture waterbirds that eat fish from community fish ponds

27. Conservation measures taken:
a) List national and/or international category and legal status of protected areas, including boundary relationships with the Ramsar site: In particular, if the site is partly or wholly a World Heritage Site and/or a UNESCO Biosphere Reserve, please give the names of the site under these designations.

Rawa Aopa Watumohai was declared a National Park by Minister of Forestry's Decree number: 756/Kpts-II/1990 on December 17, 1990

b) If appropriate, list the IUCN (1994) protected areas category/ies which apply to the site (tick the box or boxes as appropriate):

Ia ❑; Ib ❑; II ❑; III ❑; IV ❑; V ❑; VI ❑

c) Does an officially approved management plan exist; and is it being implemented?

Yes, the National Park published a long-term management plan (1997-2022) which has been legalized by Director General of Forest Protection and Nature Conservation, MoFor.

d) Describe any other current management practices:

The current management efforts are focused on protecting and preserving the area. This decision is made in order to maintain the area's ecosystems, especially the ones still intact. Socialization and outreach programs to local communities focusing on issues of protection and security (laws and regulations), law enforcement, and strengthening cooperation with public attorney offices of south-east Sulawesi, etc.

Other activities being conducted are local community economic improvement programs.

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28. Conservation measures proposed but not yet implemented:
e.g. management plan in preparation; official proposal as a legally protected area, etc.

Although the zonation of Rawa Aopa Watumohai National Park has been legalized by Director General of Forest Protection and Nature Conservation, the placement of zone boundary markers (function markers, in the field) is not yet implemented.

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29. Current scientific research and facilities:
e.g., details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

The site has a permanent research location for university students and researchers from domestic and foreign education and research institutions.

MOU dated February 20, 2009 had been signed by the Head of Rawa Aopa Watumohai National Park and the Head of Haluoleo University to increase research and develop a Science Development Center. Technically, the MOU will be followed up with cooperation agreement by all stakeholders that conducted studies in this site.

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30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:

e.g. visitors' centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

The site is visited by students from elementary schools, junior high schools, senior high schools and universities.

Management has prepared the forest of Tatangge as an Environment Education Center. The available facilities in the site comprise of: gate, interpretation trail, shelters, public toilets, information sign boards, guest houses, information center and camping ground.

From local communities, there are community organizised conservation activities, such as: 1) Asosiasi Kerukunan Masyarakat Pelestari Rawa (AKMAPER); 2) Lembaga Komunitas Mangrove (LKM); 3) Forum Pencinta Alam Lingkungan Air Terjun Pinanggosi (Forum PALAPA); 4) Masyarakat Peduli Lingkungan (MPL); 5) Forum Masyarakat Tirawuta Peduli (FORMASTRIP); and 6 groups of Asosiasi Kerukunan Antar Desa (AKAD). The scope of community activities comprise of security patrolling, maintaining the boundary markers, national park conservation information through community radio (by FORMASTRIP), and rehabilitation program.

31. Current recreation and tourism:
State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

The greatest number of visitors to the site come for the purpose of education and research activities. The visitors rarely come for recreation activities. Recreation activities in wetland include traveling along the river, canoeing, bird watching, while traditional fishers still conduct their activities at the site.

Research	Recreation	Camping	Education	Others	Estimated (Number person)
21	34	20	127	58	260

Source : Annual report, 2009. Rawa Aopa Watumohai National Park Management.

32. Jurisdiction:
Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept of Agriculture/Dept. of Environment, etc.

The area is managed by the Government of Republic of Indonesia, c.q. the Ministry of Forestry, c.q. Directorate General of Forest Protection and Nature Conservation.

33. Management authority:
Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Technically, Rawa Aopa Watumohai is managed by an apparatus of Directorate General of Forest Protection and Nature Conservation – The Ministry of Forestry. Name and address of the unit:

Rawa Aopa Watumohai National Park Office
Central office : Tatangge village, Subdistrict of Tinanggea, South Konawe Regency
Connecting office : Bunga Kana Street 6, Watu-Watu village, Subdistrict of West Kendari
Kendari City, Province of South East Sulawesi
Telephone/Faximile : +62 401 3128138
E-mail : btnraw@yahoo.com

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34. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

BirdLife International,. 2001. Threatened birds of Asia: the BirdLife International Red Data Book. Cambridge, UK: BirdLife International.

BirdLife International,. 2009. Species factsheet: *Mycteria cinerea*. Downloaded from http://www.birdlife.org on 27/10/2009

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DG of Forest Protection and Nature Conservation; 2000. 5 Years Management Planning of Rawa Aopa Watumohai National Park. Kendari.

DG of Forest Protection and Nature Conservation; 1994. 19 National Parks in Indonesia. Jakarta.

Direktorat Perlindungan dan Pengawetan Alam,. 1978. Laporan Survei Inventarisasi Satwa di Rawa Aopa dan sekitarnya Sulawesi Tenggara. Direktorat Perlindungan dan Pengawetan Alam.

Sibuea, T,. 1996. Pengkajian potensi lahan basah di Taman Nasional Rawa Aopa Watumohai, Sulawesi Tenggara. PHPA/Wetlands International-Indonesia Programme.

Silvius, M.J,. Djuharsa E., A.W. Taufik, A.P.J.M. Steeman and E.T. Berczy,. 1987. The Indonesian Wetland Inventory. A Preliminary Compilation of Information on Wetlands of Indonesia. Vol. II. PHPA-AWB/Interwader & Edwin, Bogor, Indonesia.

Smith and Ferguson,. 1951. Climate Classification.

Udvardy,. 1975. A Classification of The Biogeographical Provinces of The World.

Appendix 1: Species (protected and underprotected by National Law) occuring in Rawa Aopa Watumohai National Park (includes land and waterbirds).

English Name	Scientific Name	National Status
Sulawesi Goshawk	*Accipiter griseiceps*	P (endemic)
Lilac-cheeked Kingfisher	*Cittura cyanotis*	P
Green-backed Kingfisher	*Actenoides monachus*	-
Sulawesi Dwarf Kingfisher	*Ceyx fallax*	P
Snoring Rail	*Aramidopsis plateni*	-
Blue-faced Rail	*Gymnocrex rosenbergii*	P
Pied Cuckoo-shrike	*Coracina bicolor*	-
Rufous-throated Flycatcher	*Ficedula rufigula*	-
Red-billed Hanging-parrot	*Loriculus exilis*	P
Yellow-crested Cockatoo	*Cacatua sulphurea*	P
Maleo (endemic)	*Macrocephalon maleo*	P
Chinese Goshawk	*Accipiter soloensis*	P
Grey-faced Buzzard	*Butastur indicus*	P
Osprey	*Pandion heliaetus*	P
Sacred Kingfisher	*Halcyon sancta*	P
White-throated Needletail	*Hirondapus caudacutus*	-
Intermediate Egret	*Egretta Intermedia*	P
Red-necked Stint	*Calidris ruficollis*	P
Greater Sand-plover	*Charadrius leschenaultia*	-
Lesser Sand-plover	*Charadrius mongolus*	-
Pacific Golden Plover	*Pluvialis fulva*	-
Common Dollarbird	*Eurystimus orientalis*	-
Oriental Cuckoo	*Cuculus saturates*	-
Australian Pratincole	*Stiltia Isabella*	-
Barn Swallow	*Hirundo rustica*	-
Rainbow Bee-eater	*Merops ornatus*	-
Grey Wegtail	*Motacilla cinerea*	-
Yellow Wegtail	*Motacilla flava*	-
Grey-streaked Flycathcer	*Muscicapa griseiticta*	-
Common Sandpiper	*Actitis hypoleucos*	-
Grey-tailed Tattler	*Heteroscelus brevipes*	-
Bar-tailed Godwit	*Limosa laponica*	-
Far Eastern Curlew	*Numenius madagascariensis*	-
Little Curlew	*Numenius minutes*	P
Whimbrel	*Numenius phaeopus*	-
Wood Sandpiper	*Tringa glareola*	-
Common Redshank	*Tringa tetanus*	-
Terek Sandpiper	*Xenus cinereus*	-
Black-necked Stilt	*Himantopus himantopus*	-
Whiskered Tern	*Chlidonias hybridus*	P
White-winged Black Tern	*Chlidonias leucopterus*	P
Little Tern	*Sterna albifrons*	P
Great Crested Tern	*Sterna bergii*	P

Black-naped Tern	*Sterna sumatrana*	P
Bear cuscus	*Aliurops ursinus*	P
Sulawesi drawf cuscus	*Phalanger celebensis*	P
Booted macaque	*Macaca ochreata*	P
Sulawesi tarsier	*Tarsius spectrum*	P
Reticulated pyton	*Phyton reticulates*	P
Sailfin lizard	*Hydrosaurus amboinensis*	P
Monitor lizard	*Varanus salvator*	-
Sulawesi Goshawk	*Accipiter griseiceps*	P
Small Sparrow-Hawk	*Accipiter nanus*	P
Spot-tailed Goshawk	*Accipiter trinotatus*	P
Rufous-winged Buzzard	*Butastus liventer*	P
Spoted Harrier	*Circus assimilis*	P
Black-winged Kite	*Elanus caeruleus*	P
White-bellied Sea-eagle	*Haliaeestus leucogaster*	P
Brahminy Kite	*Haliastur Indus*	P
Black Eagle	*Ictinaetus malayensis*	P
Sulawesi Serpent-eagle	*Spilornis rufipectus*	P
Sulawesi Hawk-eagle	*Spizaetus lanceolatus*	P
Green-backed Kingfisher	*Actenoides monachus*	-
Blue-eared Kingfisher	*Alcedo meninting*	P
Sulawesi Dwarf Kingfisher	*Ceyx fallax*	P
Lilac-cheeked Kingfisher	*Cittura cyanotis*	P
Collared Kingfisher	*Halcyon chloris*	P
Black-billed Kingfisher	*Pelargopsis melanoryncha*	P
Oriental darter	*Anhinga melanogaster*	P
Cattle Egret	*Bubulcus ibis*	P
-	*Casmerodius albus*	P
Great Egret	*Egretta alba*	P
Little Egret	*Egretta garzetta*	P
Sulawesi Dwarf Hornbill	*Penelopides exarrhatus*	P
Knobbed Hornbill	*Rhyticeros cassidix*	P
Pied Cuckoo-shrike	*Coracina bicolor*	-
Wooly-necked stork	*Ciconia episcopus*	P
Spotted Kestrel	*Falco moluccensis*	P
Oriental Hobby	*Falco severus*	P
Lesser fregatebird	*Fregata ariel*	P
Philippine Scrubfowl	*Megapodius cumingii*	P
Rufous-throated Flycatcher	*Ficedula rufigula*	-
Crimson Sunbird	*Aethopyga siparaja*	P
Brown-throated Sunbird	*Anthreptes malaccensis*	P
Black Sunbird	*Nectarinia Aspasia*	P
Olive-backed Sunbird	*Nectarinia jugularis*	P
Australian pelican	*Pelecanus conscipilatus*	P
Sulawesi Nightjar	*Caprimulgus celebensis*	P
Red-billed Hanging-parrot	*Loriculus exilis*	P
Sulawesi Hanging-parrot	*Loriculus stigmatus*	-
Blue-backed Parrot	*Tanygnathus sumatranus*	P
Ornate Lorikeet	*Trichoglossus ornatus*	P
Snoring Rail	*Aramidopsis plateni*	-

Glossy Ibis	*Plegadis falcinellus*	P
Sulawesi Masked Owl	*Tyto rosenbergii*	-
Pale-bellied White-eye	*Zosterops consobrinorum*	P

P = Protected by Indonesian Law