

Information Sheet on Ramsar Wetlands (RIS)

Categories approved by Recommendation 4.7, as amended by Resolution VIII.13 of the Conference of the Contracting Parties.

Note 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. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Bureau. Compilers are strongly urged to provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of maps.

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

Ms. Noriko MORIWAKE
Wildlife Division, Nature Conservation Bureau,
Ministry of the Environment
1-2-2 Kasumigaseki, Chiyoda-ku,
Tokyo 100-8975, JAPAN
Phone: 03-5521-8284 Fax: 03-3581-7090
Email: wildlife@env.go.jp

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

24 October , 2005

3. Country:

JAPAN

4. Name of the Ramsar site:

Nagura Amparu

5. Map of site included:

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

a) hard copy (required for inclusion of site in the Ramsar List): *yes* -or- *no*

b) digital (electronic) format (optional): *yes* -or- *no*

6. Geographical coordinates (latitude/longitude):

24°23'46"N, 124°8'52"E

7. General location:

Include in which part of the country and which large administrative region(s), and the location of the nearest large town.

Ishigaki-jima, Okinawa Prefecture/ Kyushu, Okinawa region

It is located Nagura-gawa river mouth, western Ishigaki-jima (approximately 411km southwest of main island of Okinawa).

8. Elevation: (average and/or max. & min.)

0 m

9. Area: (in hectares) **157 ha**

10. Overview:

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

Nagura Amparu is located in the western part of Ishigaki Island in Okinawa Prefecture. The site is mainly composed of tidal flats and mangrove forests that spread around Nagura river mouth. A compound of typical and also diverse subtropical natural ecosystems can be seen at the site. Therefore, the area is a habitat for various bird species including waterfowls, raptors that are typical in Yaeyama islands, and forest bird species. Also the diversity of benthos and shellfish is high.

11. Ramsar Criteria:

Circle or underline 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).

1 • 2 • 3 • 4 • 5 • 6 • 7 • 8

12. Justification for the application of each Criterion listed in 11. 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: A compound of diverse natural environment that is a representative example of subtropical region in Japan composed of mangrove forests, tidal flats, and natural seashore can be seen.

Criterion 3: A compound of diverse natural environment supports rich biodiversity in the area. Also rich is the diversity of species that comprise the mangrove forest ecosystem. The rich benthic biota includes rare crustaceans including *Neocaridina ishigakiensis*, and the site is the northern limit of *Caridina brevicarpalis* habitat.

Criterion 7: The site supports the whole life cycle of the endemic crustacean species including *Neocaridina ishigakiensis*, *Neocaridina brevirostris* and *Ryukyum yaeyamense* that are only distributed in Ishigaki-jima Island and Iriomote-jima Island.

13. 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:

Japan

b) biogeographic regionalisation scheme (include reference citation):

Japan is recognized as single biogeographic region, because Japan is an island country which has unique and rich biota with many endemic species.

14. 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.

Geology: Alluvium of soft silt and clay spreads from river mouth to the upstream riverbed up to 3 km. Alongside the coast, new sand dune layers composed by bits of mundane coral reef sediment are distributed.

Geomorphology: As a result of sedimentation to the underwater basin open to the sea, mangrove forests and a sand spit along the coast were developed, which formed a lagoon as a whole.

Soil type: acid sulphate soil

Origins: Natural

Hydrology: mainly developed at Nagura-gawa river mouth

Water quality: BOD1.6 (1994)

Water depth: 82 cm - 114 cm at high tide

Water level fluctuation: Fluctuation caused by sea tide.

Tidal variation: 39cm at lowest tide, 285cm at highest tide (1999)

Climate: Subtropical marine climate and annual temperature fluctuation is small. Annual precipitation: 2,061 mm, annual mean temperature: 24.0 degrees Celsius, fluctuation of mean temperature in each month: +18.3- +29.3 degrees Celsius (average in Ishigaki-jima 1971-2000)

15. Physical features of the catchment area:

Describe the surface area, general geology and geomorphological features, general soil types, general land use, and climate (including climate type).

[Nagura river]

Surface area: 16.1 sq. km

Features of general geology and geomorphology: sand bar, lagoon

General soil type: acid sulphate soil

General land utilization: mangrove forests, marsh, cropland, rice paddies and broad leaf forests

Climate: Subtropical marine climate and annual temperature fluctuation is small. Annual precipitation: 2,061 mm, annual mean temperature: 24.0 degrees Celsius, fluctuation of mean temperature in each month: +18.3- +29.3 degrees Celsius (average in Ishigakijima 1971-2000)

16. Hydrological values:

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

Flood control, sediment trapping

17. 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: A • B • C • D • E • F • G • H • I • J • K • Zk(a)

Inland: L • M • N • O • P • Q • R • Sp • Ss • Tp • Ts • U • Va •
Vt • W • Xf • Xp • Y • Zg • Zk(b)

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.

G, I, F

18. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site.

Benthos, fish juvenile, and crustacean are abundant in the site. Waterfowls including *Ardeidae* species such as *Platalea minor* (black-faced spoonbill) and *Himantopus himantopus* (black-winged stilt), migratory shorebirds, and ducks use the site for resting and foraging because the environment is quiet and safe. As for the raptors, *Spilornis cheela perplexus* (crested serpent eagle) is a characteristic raptor in Yaeyama islands, and as for the forest bird species, rare birds like *Chalcophaps indica yamashinai* (emerald dove) and *Rallina eurizonoides* (slaty-legged crane) have been observed in the site.

19. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. 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.*

Avicennia marina [endangered species (EN)*1]
Lumnitzera racemosa [critically endangered species (CR)*1]
Enhalus acoroides [vulnerable species (VU)*1]

Note: *1 Red List of Threatened Wildlife of Japan. Ministry of the Environment

20. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. 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.*

This site is used as a stopover, wintering site, or foraging site by the endangered bird species listed below. Species such as *Ciconia boyciana* (oriental stork) and *Haliaeetus albicilla albicilla* (white-tailed eagle) are recorded as vagrant in the past.

Sandworms and decapods which are consumed by birds are abundant, and the rare crustaceans listed below have been observed.

[Birds]

Botaurus stellaris stellaris (Bittern) [endangered species (EN)*1]
Ixobrychus eurhythmus (Schrenck's Bittern) [endangered species (EN)*1]
Platalea minor (Black-faced Spoonbill) [critically endangered species (CR)*1, endangered species (EN)*2]
Anser fabalis serrirostris (Bean Goose) [vulnerable species (VU)*1]
Tadorna tadorna (Shelduck) [endangered species (EN)*1]
Spilornis cheela perplexus (Crested serpent eagle) [critically endangered species (CR)*1, Domestic Endangered Species*3]
Falco peregrinus japonensis (Peregrine falcon) [vulnerable species (VU)*1, Domestic Endangered Species*3]
Rallina eurizonoides sepiaria (Banded Crane) [vulnerable species (VU)*1]
Tringa totanus ussuriensis (Redshank) [vulnerable species (VU)*1]
Numenius madagascariensis (Far Easter Curlew) [vulnerable species (VU)*1]
Numenius minutus (Little Curlew) [critically endangered species (CR)*1]
Himantopus himantopus himantopus (Black-winged Stilt) [endangered species (EN)*1]
Glareola maldivarum (Indian Pratincole) [vulnerable species (VU)*1]
Larus saundersi (Saunders's Gull) [vulnerable species (VU)*1, vulnerable species (VU)*2]
Sterna albifrons sinensis (Little Tern) [vulnerable species (VU)*1]
Chalcophaps indica yamashinai (Emerald Dove) [vulnerable species (VU)*1, Domestic Endangered Species*3]

[Crustacean]

Neocaridina ishigakiensis [vulnerable species (VU)*1]
Neocaridina brevisrostris [near threatened species (NT)*1]
Macrobrachium gracilirostre [near threatened species (NT)*1]
Geothelphusa minei [near threatened species (NT)*1]
Geothelphusa miyazakii [near threatened species (NT)*1]
Ryukyum yaeyamense [near threatened species (NT)*1]
Caridina brevicarpalis [near threatened species (NT)*1]

note: *1 Red List of Threatened Wildlife of Japan. Ministry of the Environment

*2 IUCN Red List of Threatened Animals (2004)

*3 Designated under the Law for Conservation of Endangered Species of Wild Fauna and Flora (Species Conservation Law)

21. Social and 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.

Attractive landscapes

Outdoor recreation (shellfish harvesting, bird watching, etc.), fishery (harvesting crab species *Scylla serrata*, etc.)

22. Land tenure/ownership:

(a) within the Ramsar site:

Prefectural land (Okinawa Prefecture): 1ha

City-owned land (Ishigaki City): 2ha

Private land: 94ha

Publicly-owned water body: 60ha

(b) in the surrounding area:

National Wildlife Protection Area: 1,145ha

Prefecture-owned land: 5ha

City-owned land: 3ha

Private land: 15ha

Publicly-owned water body: 986ha

23. Current land (including water) use:

(a) within the Ramsar site:

None

(b) in the surroundings/catchment:

mangrove forests, marsh, cropland, rice paddies, broad leaf forests

24. 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:

[past and present]

- sediment inflow
- decrease of outflow water
- inflow of fertilizer and pesticide

(b) in the surrounding area:

[past and present]

- agricultural land development in upstream area

[future]

- agricultural land development in river basin
- construction of facilities that disconnect the water system in upstream area

25. Conservation measures taken:

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

Special Protection Area of National Wildlife Protection Area: 157 ha (Wildlife Protection and Appropriate Hunting Law) * From November 1, 2004

Capture of wildlife is in principle prohibited in the area. It is required to obtain permission from the Minister of the Environment when installation of artificial structure, reclamation of the water body and tree felling.

26. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.

None

27. Current scientific research and facilities:

e.g., details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

Scientific research:

National Survey on the Natural Environment (Ministry of the Environment)

Comprehensive survey for conservation of natural environment of Nagura-bay estuary region (1999)

Facilities established for research: None

28. Current conservation education:

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

Nature observation is incorporated as a school curriculum for each primary or junior high school in Ishigaki City, as well as school trips from outside Okinawa Prefecture.

Local organizations such as Yaeyama branch of Japan Wildbird Society provide bird walks periodically. Brochures which are developed by Ishigaki City government and distributed to each primary or junior high school in Ishigaki City, provide interpretive information on the nature of Nagura Amparu and reminder for the users in an effort to disseminate good manners.

A parking lot and a sign board are installed at the north end of Nagura-Ohashi bridge for the visitors.

29. Current recreation and tourism:

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

Fishing, clam harvesting, observation of tidal flats and bird watching

30. Jurisdiction:

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

[Territorial]

Okinawa Prefecture (Prefectural land): 1 ha

Ishigaki City (City-owned land): 2 ha

Public water (Okinawa Prefecture) 60 ha

[Functional]

Ministry of the Environment (National Wildlife Protection Area)

Okinawa Prefecture (class B river)

31. 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

Naha Nature Conservation Office, Kyushu Regional Environment Office

Ministry of the Environment

5-21 Yamashita-cho, Naha city, Okinawa prefecture, 900-0027 JAPAN

Tel: +81-98-858-5824

Fax: +81-98-858-5825

32. Bibliographical references:

scientific/technical references only. If biogeographic regionalisation scheme applied (see 13 above), list full reference citation for the scheme.

- Ministry of the Environment 2004 Special Protection Area Designation Plan of National Nagura Amparu Wildlife Protection Area

- Ministry of the Environment, Nature Conservation Bureau 2002 “500 Important Wetlands in Japan”
- Environment Agency 1995 “The Fifth National Survey on the Natural Environment Report on Wetland Survey”
- Ministry of the Environment 2002 “Threatened Wildlife of Japan –Red Data Book 2nd ed.- Volume 2, Aves”
- Environment Agency of Japan 2000 “Threatened Wildlife of Japan -Red Data Book 2nd ed.- Volume 8, Vascular Plants”
- Environment Agency of Japan 2000 “Red List of Japan, Invertebrate”
- The Ornithological Society of Japan 2000 “Check-list of Japanese Birds Sixth Revised Edition”

Please return to: **Ramsar Convention Bureau, Rue Mauverney 28, CH-1196 Gland, Switzerland**
Telephone: +41 22 999 0170 • Fax: +41 22 999 0169 • e-mail: ramsar@ramsar.org