

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:

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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:

Kuju Bogatsuru and Tadewara-shitsugen

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):

Bogatsuru area: 33° 6' N, 131°15' E

Tadewara area: 33° 7' N, 131°14' E

7. General location: Oita prefecture/Kyusyu, Okinawa area

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

It is located in Takeda City (population: c. 28,000, area: c. 478 sq. km) and Kokonoe-cho (population: c. 12,000, area: c. 271 sq. km), approximately 40 km west-southwest of Oita City (the capital of Oita Prefecture, population: c.45,000, area: c. 361 sq. km).

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

Bogaturu: max. 1,270 m; min. 1,230 m

Tadewara: max. 1,040 m; min. 1,000 m

9. Area: (in hectares) **91 ha**

10. Overview:

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

Kuju Bogatsuru and Tadewara-shitsugen is located in the western part of Oita Prefecture. It is a marsh formed around the peak of Kuju volcano and piedmont fountain area.

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: The site is one of the largest intermediate moors formed in the mountainous areas in Japan. Its vegetation reflects various geological conditions and formations.

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.

Climate: Annual precipitation: 1,829mm, annual mean temperature: 14.2 degrees Celsius, fluctuation of mean temperature: 3.8-25.0 degrees Celsius (average of Takeda from 1979 to 2000)

[Tadewara]:

Geology: sand, gravel and peat soil

Geomorphology: A marsh developed at alluvial cone of volcanic form

Soil type: Mixture of gravel layer and peat layer. Top soil differs from gravel, silt to peat depending on the location.

Origin: Natural. A lake was formed by an avalanche of debris which dammed up a river 10,000-6,300 years ago. After that, sedimentation of gravel and plant residue caused by river floods continued, and eventually formed the Site.

Hydrology: The marsh is fed by surface water. Rainfall that infiltrates underground in surrounding mountains wells up all around Tadewara and flows together to form one river.

Water quality: pH4.3, a lot of CaSO₄ is included.

Water depth: Volume of water flow feeding the marsh (annual average) is 26±7m³.

[Bogatsuru]:

Geology: amphibole andesite

Geomorphology: valley plain, basin, alluvium

Soil type: peat soil

Origin: Natural. Intra-mountane basin formed at the contact of volcanic bodies surrounded by mountains of Hiji-dake, Daisen-zan, Mitsumata-yama. As each volcanic body was dissected, volcanic alluvial cone has been formed and sedimentation by gravel and sand is in progress.

Hydrology: fed by surface water and underground water, 5-7 inflow streams and one outflow stream

Water quality: pH 5.6, Na 4.0, K 1.2 mg/L, Ca 8.7 mg/L, Mg 9.0 mg/L, Cl 4.8 mg/L, So4 6.1 mg/L, HCO3 21.0 mg/L, SiO2 27.7mg/L

Water level fluctuation: None

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).

Climate: Annual precipitation is estimated more than 3,000 mm in the area above 1,000 m in elevation. Kuju area is considered as the southernmost point of 'Sea of Japan climate region'. Winter snowfall in the area is one of the heaviest in Oita Prefecture. In summer, it shows typical inland mountainous climate with many thermal convection rain falls. Annual precipitation: 1,829mm, annual mean temperature: 14.2 degrees Celsius, fluctuation of mean temperature: 3.8-25.0 degrees Celsius (average of Takeda from 1979 to 2000)

[Tadewara]: Kuju-Renzan mountain chain

Surface area: 38 ha.

General geology and geomorphological features: volcanic mountain chain

General soil types: volcanic ash, gravel, silt etc.

General land use: forest

[Bogatsuru]:

Surface area: 53 ha.

General geology and geomorphological features: volcanic mountain chain

General soil types: volcanic ash, gravel, silt etc.

General land use: forest

16. Hydrological values:

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

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.

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18. General ecological features:

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

The vegetation of the site is mainly reed community found in intermediate moor. There are *Moliniopsis japonica* - *Sphagnum fimbriatum* community, *Moliniopsis japonica* - *Carex meyeriana* community and *Carex omiana* community in Bogatsuru. The vegetation of Tadewara is composed of *Phragmites australis* (reed) - *Epilobium pyrricholophum* community, *Moliniopsis japonica* - *Sphagnum fimbriatum* community and *Hydrangea paniculata* - *Sphagnum fimbriatum* community.

Also, rare plants such as *Geranium soboliferum*, *Pterygopleurum neurophyllum* and *Sphagnum palustre* grow 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.*

Sphagnum palustre [critically endangered species (CR)*1+endangered species (EN)*1]

Geranium soboliferum var. *kiusianum* [endangered species (EN)*1]

Pterygopleurum neurophyllum [endangered species (EN)*1]

Aster maackii [vulnerable species (VU)*1]

Primula sieboldii [vulnerable species (VU)*1]

Arisaema heterophyllum [vulnerable species (VU)*1]

Hypericum ascyron var. *longistylum* [endangered species (EN)*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.*

Aquila chrysaetos japonica (Goden Eagle) [endangered species (EN)*1, Domestic Endangered Species*2]

Spizæetus nipalensis orientalis (Hodgson's Hawk-eagle) [endangered species (EN)*1, Domestic Endangered Species*2]

Falco peregrinus japonensis (Peregrine Falcon) [vulnerable species (VU)*1]

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

*2 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

22. Land tenure/ownership:

(a) within the Ramsar site:

National land (Ministry of the Environment): 17 ha

City-owned land (Takeda City): 44 ha

Private land: 30 ha

(b) in the surrounding area:

National land (national forests), town-owned land, private land

23. Current land (including water) use:

(a) within the Ramsar site:

Nature trails, mountain trails

(b) in the surroundings/catchment:

Forests, open space, roads

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

Because Tadewara was used as pasture in 1980's, many plants such as *Sanguisorba officinalis* and *Vicia amoena* and many insects such as butterfly species *Shijimiaeoidea divinus barine* and *Plebejus argus micrargus* declined.

Present

Human entry (stomp)

(b) in the surrounding 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 zone and special protection zone of National park: 91ha (The Natural Parks Law)

*From December 4, 1934

In the special zone, such activities as erecting structures, felling trees, mining minerals, and reclamation require permission from the Minister of the Environment. In the special protection zone, further activities such as planting trees and bamboos, grazing livestock, collecting and stocking products outside, firing, picking and catching plants and animals also require permission from the Minister of the Environment.

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)

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.

Other than interpretation activities of wetlands practiced at Chojabaru Visitor Center, fauna and flora observation programs are conducted at the wetland around the Center.

29. Current recreation and tourism:

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

Visitors can explore the nature trail

The number of annual visitors is more than 5 millions in Kokonoe-cho, 2 millions in Kuju-cho and more than 30,000 at Chojabaru Visitor Center.

30. Jurisdiction:

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

[Territorial]

Ministry of the Environment (National land)

Takeda City (City-owned land)

[Functional]

Ministry of the Environment (National Park)

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

Kyushu Regional Environment Office, Ministry of the Environment

1-6-22 Onoue, Kumamoto city,

Kumamoto prefecture, 862-0913 JAPAN

Tel: +81-96-214-0311

Fax: +81-96-214-0354

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

- Environmental Agency 1995 “The Fifth National Surveys on the Natural Environment Report on Wetland Survey”
- Ministry of the Environment Nature Conservation Bureau 2002 “500 Important Wetlands in Japan”
- HEIBONSYA “WILD FLOWERS OF JAPAN HERBACEOUS PLANTS”
- HEIBONSYA “FERNS AND FERN ALLIES OF JAPAN”
- Environment Agency of Japan 2000 “Threatened Wildlife of Japan -Red Data Book 2nd ed.- Volume 8, Vascular Plants
- Environment Agency of Japan 2000 “Threatened Wildlife of Japan -Red Data Book 2nd ed.- Volume 9, Bryophytes, Algae, Lichens, Fungi”
- Ministry of the Environment 2002 “Threatened Wildlife of Japan –Red Data Book 2nd ed.- Volume 2, Aves”
- NACS-J/ WWF Japan 1996 “RED DATA BOOK of PLANT COMMUNITIES IN JAPAN”
- The Ornithological Society of Japan 2000 “Check-list of Japanese Birds Sixth Revised Edition”
- Life and Environment Division, Life and Environment Department, Oita Prefecture "Aso-Kuju National Park, Nature of Kuju and Tadewara Area, Nature Guide"
- Health Department, Oita Prefecture 1988 "Report of Scientific Survey on Kuju Area, Aso-Kuju National Park"
- Department of Tourism and Regional Development, Oita Prefecture 2003 "Survey of tourism movement"
- Kokonoe-cho, Oita Prefecture 2002 "Report of Scientific Survey on Natural Environment of Kuju and Tadewara Area" Life and Environment Division, Life and Environment Department, Oita Prefecture
- Japan Wildlife Research Center "Checklist of Species of Wildlife of Japan"

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