

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:

Kabukuri-numa and the surrounding rice paddies

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):

38°38'11"N, 141°06'06"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.

It is located in Kurihara City (population: c. 83,000, area: c. 805 sq. km), Toyoma City (population: c. 91,000, area: c. 536 sq. km), and Tajiri-cho (population: c. 13,000, area: c. 70 sq. km), approximately 40 km north-northeast of Sendai City (capital of Miyagi Prefecture, population: c. 1.03 million, area: c. 788 sq. km).

8. Elevation: (average and/or max. & min.)
min. 5.7 m

9. Area: (in hectares) 423 ha

10. Overview:

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

Kabukuri-numa and the surrounding rice paddies is located in the northern part of Miyagi Prefecture. Kabukuri-numa is a flood control basin formed in the flood plain of Kyu-hasama-gawa River which is a branch of Kitakami-gawa River. The site is one of the largest wintering sites for *Anser albifrons* (white-fronted goose), *Anser fabalis middendorffii* (bean goose), *Cygnus Cygnus* (whooper Swan) and duck species in Japan.

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 5: From 2000-2002, more than 23,000 Anatidae species visited for three consecutive years and thus, the site regularly supports over 20,000 of waterbirds.

Criterion 6: Approximately 10,000 – 24,000 (7.69-18.46%) *Anser albifrons* (White-fronted goose) visit the site and thus the site regularly supports over 1% of the East Asian region population of *Anser albifrons* (white-fronted goose) (1,300).

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: lowland sedimentary layer

Geomorphology: a dammed lake

Soil type: peat soil

Origins: Natural. It was dammed and formed by natural levee of Kitakami-river. Once it was over 1,000 ha flooded wetland, after river improvement work and land reclamation, it was returned to a previous form of a pond.

Hydrology: Once it was over 1,000 ha flooded wetland, but after the river improvement work, only 4 rivers flow into the pond from west. 1 outflow stream. Distance from the river-mouth is 40km. The ground height is 3m.

Water quality: pH6.64(1991), DO 6.98ppm(1991), EC 148 μ s/cm(1991), alkalinity 35.8mg/L(1991), COD 9.6ppm(1991), T-N 1.42ppm(1991), T-P 0.238ppm(1991), BOD 3.4ppm(1991), SS 63ppm(1991), Cl⁻ 9.2ppm(1991), NH₄-N 0.159ppm(1991), NO₂-N 0.019ppm(1991), NO₃-N 0.896ppm(1991), P₀₄-P 0.067ppm(1991)

Water depth: 0.5 m on average

Water level fluctuation: Water level is about 0.5m at ordinary time. In case of heavy rainfall (e.g.,

typhoon), the maximum water level sometimes exceeds 6m, since the lower reaches have not enough capacity and the water is temporarily stored in retarding reservoir.

Climate: Moderate amount of rain and four seasons are very distinct. Annual precipitation: 1,153 mm, annual mean temperature: 11.0 degrees Celsius, fluctuation of mean temperature in each month: 0.0-+23.2 degrees Celsius (average of Kashima-dai from 1979 to 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).

Surface area: 297 sq. km (4 rivers including Oyamada river)

General geology and geomorphological features: The geology of Kabukuri-numa may have been made by following stages:

1. elevation of the ground happened more than 20,000 years ago and collapse by volcanic activity,
2. erosion and outflow of soil and sand during last glacial age in 20,000 years ago,
3. alluvium deposition by Flandrian transgression,
4. slow coastline retreat in Jomon era,
5. formation of natural levee (flood plain) by flooded Kitakami-gawa river and Hasama-gawa river.

General soil types: gley soil

General land use: urban area, rice paddies, cropland, forest

Climate: Moderate amount of rain and four seasons are very distinct. Annual precipitation: 1,153 mm, annual mean temperature: 11.0 degrees Celsius, fluctuation of mean temperature in each month: 0.0-+23.2 degrees Celsius (average of Kashima-dai from 1979 to 2000)

16. Hydrological values:

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

Flood control

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 • Q • 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.

3,U,O

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 site shows the vegetation of typical lowland swamp, as horizontal transition of vegetation is well developed from wet herbaceous community to Manchurian wild rice *Zizania latifolia* community, reed

Phragmites australis community, and willow tree community. 22 species from 8 families of dragonflies inhabit in the site, which are adapted to open stop water environment in lowland. Freshwater fish including *Misgurnus anguillicaudatus* (weatherfish), *Oryzias latipes* (Medaka ricefish), and *Silurus asotus* (catfish) live in the ponds and channels. 230 species of wild birds including 122 species of waterfowls are recorded. The site is used as breeding, foraging and roosting place of these wild birds.

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.*

Penthorum chinense [vulnerable species (VU)*1]

Monochoria korsakowii [vulnerable species (VU)*1]

Gratiola japonica [vulnerable species (VU)*1]

Ricciocarpus natans [critically endangered species (CR)*1 + endangered species (EN)*1]

Euphorbia adenochlora [vulnerable species (VU)*1]

Nymphoides peltata (yellow floatingheart) [vulnerable species (VU)*1]

Nymphoides coreana [vulnerable species (VU)*1]

Salvinia natans (floating watermoss) [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.*

[Birds]

Branta canadensis leucopareia (Canada Goose) [endangered species (EN)*1, Domestic Endangered Species *3]

Anser fabalis serrirostris (Bean Goose) [vulnerable species (VU)*1]

Anser albifrons (White-fronted Goose) [Special National Natural Monument, near threatened species (NT)*1]

Haliaeetus albicilla albicilla (White-tailed Eagle) [endangered species (EN)*1, near threatened species (NT)*2]

Accipiter gentilis (Goshawk) [vulnerable species (VU)*1]

Circus spilonotus (Eastern Marsh Harrier) [vulnerable species (VU)*1]

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

[Fish]

Acheilognathus typus (Small scale bitterling) [vulnerable species (VU)*1]

Oryzias latipes (Medaka ricefish) [vulnerable species (VU)*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.

Agricultural irrigation, flood control

22. Land tenure/ownership:

(a) within the Ramsar site:

National land (Ministry of Land, Infrastructure and Transport): 164 ha

Private land 259ha

(b) in the surrounding area:

Private land

23. Current land (including water) use:

(a) within the Ramsar site:

Agricultural irrigation, agriculture, flood control basin

Organizing environmental education and nature observation programs, supporting hands-on learning and environmental education at elementary school and secondary school (Kabukuri Wetland Club).

Environmentally conscious rice farming (farmers, university, research institutes, local governments, national government)

Note: population of surrounding area is 186,950 (Kurihara City, Toyoma City, Tajiri Town)

(b) in the surroundings/catchment:

Urban area, rice paddies, cropland, forest, hunting

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:

Inflow of domestic wastewater, industrial wastewater

Sedimentation inflow

(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 Protection Area of National Wildlife Protection Area: 423 ha (Wildlife Protection and Appropriate Hunting Law) *From November 1, 2005

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]

Population Census Survey of Anatidae (Ministry of the Environment)

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

Monitoring-site 1000 (Ministry of the Environment)

Population Census Survey of Anatidae (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.

- Information hut, notice board for public awareness (Kabukuri Wetland Club)
- Signboard for providing local information (Miyagi Prefecture)
- Supporting environmental education at elementary school and secondary school, promoting environmental education using Kabukuri-numa (Kabukuri Wetland Club)
- "Mizube no gakko (Waterfront school) Project" was established by local government, non-profit organizations, university and designated the southern part of Shiratori district as environment education zone (Tajiri-cho).
- College students from Miyagi University of Education aiming to become teachers implemented environment education programs with local children. (Miyagi University of Education, Tajiri-cho, Sendai Science Museum, non-profit organizations)
- Conducting rice cultivation aiming to achieve co-existence with migratory birds by implementation of "winter flooded rice fields" (organic rice). Also conducting survey of organisms living in rice paddies and channels. (farmers, university, research institutes, local governments, national government)

29. Current recreation and tourism:

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

- Information hut, notice board for public awareness (Kabukuri Wetland Club)
- Signboard for providing local information (Miyagi Prefecture)
- About 5,400 tourists visit Kabukuri-numa annually to join nature observation programs. Most of them come to watch migratory birds from October to March.

30. Jurisdiction:

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

[Territorial]

Ministry of Land, Infrastructure and Transport (publicly-owned water body)

[Functional]

Ministry of the Environment (National Wildlife Protection Area)

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

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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, Nature Conservation Bureau 2000-2002 "Report on Population Census Survey of Anatidae"

- Simon Delany et al. 2002 “Waterbird Population Estimates 3rd Edition” Wetland International
- Environment Agency 1993 “The Fourth National Surveys on the Natural Environment Report on Lake and Marsh Survey”
- Environment Agency 1995 “The Fifth National Survey on the Natural Environment Report on Wetland Survey”
- Ministry of the Environment, Nature Conservation Bureau 2002 “500 Important Wetlands in Japan”
- History of Tajiri -town compiling committee 1982 History of Tajiri-town vol.1
- The Ornithological Society of Japan 2000 “CHECK-LIST OF JAPANESE BIRDS Sixth Revised Edition”
- Environment Agency 2000 “Threatened Wildlife of Japan -Red Data Book 2nd ed.- Volume 8, Vascular Plants”
- Environment Agency 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”
- Ministry of the Environment 2003 “Threatened Wildlife of Japan -Red Data Book 2nd ed.- Volume4, Pisces-Brackish and Fresh Water Fishes”
- NACS-J/ WWF Japan 1996 “RED DATA BOOK of PLANT COMMUNITIES IN JAPAN”
- Ichthyological Society of Japan “DICTIONALY OF JAPANESE FISH NAMES AND THEIR FOREIGN EQUIVALENTS”

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