

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:

Akan-ko

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):

144°6' 3" E, 43°27' 5" N

7. General location:

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

Kushiro / Hokkaido region

It is located in Kushiro City, Hokkaido Prefecture (population c. 200,000, area c. 1,363 sq. km)

8. Elevation: (average and/or max. & min.)
+ 420 m

9. Area: (in hectares) **1,318ha**

10. Overview:

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

Akan-ko is a large caldera lake located in the inland area of eastern Hokkaido. The site is an important habitat for endangered alga, fishes and shellfish. It is also renowned as a habitat for the rare round green alga Marimo *Cladophora aegagropila*.

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: Akan-ko is a caldera lake created by volcanic activity. It is a representative caldera lake in Japan.

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: mainly quaternary volcanic mountain

Geomorphology: A caldera lake formed after collapse of a mountain caused by volcanic activity.

Origins: Natural

Hydrology: 11 inflow streams, 1 outflow stream

Water quality: pH8.1(8.1 ~ 8.2)(1991), DO 10.3(10.1 ~ 10.7)ppm(1991), EC 0.219(0.217 ~ 0.222) μ s/cm(1991), Alkalinity 0.938(0.932 ~ 0.937)mg/L(1991), COD 2.2(1.9 ~ 2.5)ppm(1991), T-N 0.19(0.17 ~ 0.21)ppm(1991), T-P 0.021(0.019 ~ 0.023)ppm(1991), Chl-a 1.2(0.96 ~ 1.56) μ g/L(1991), SS <1ppm(1990), Cl⁻ 12ppm(1990), SO₄²⁻ 34ppm(1990), NH₄-N 0.11ppm(1990), NO₂-N <0.005ppm(1990), NO₃-N <0.05ppm(1990), PO₄-P <0.003ppm(1990), Ca 14.9ppm(1990), Mg 6.82ppm(1990), K 2.41ppm(1990), Na 17.4ppm(1990)

Water level fluctuation: fluctuation by intake for electric power

Water depth: 17.8 m on average, 45.0m at maximum

Climate: Annual temperature fluctuation is large and rainfall is observed mainly from August to October. Annual precipitation: 1,207 mm, annual mean temperature: 3.7 degrees Celsius, fluctuation of mean temperature in each month: -10.7-+17.7 degrees Celsius (average of Akan-ko lakeside 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: 161.3 sq. km

General geology and geomorphological features:

The area where Akan-ko exists has once been a huge Akan caldera which had been formed by volcanic activity followed by collapse in middle Diluvium. The caldera was gradually filled with water and it became Ko-Akan-ko (Old Akan-ko lake). The Ko-Akan-ko was almost filled by later volcanic activities. Then, lava flow from O Akan-dake dammed up Ko-Akan-ko and present Akan-ko was formed.

Three rivers flow into Akan-ko at northern side of the lake: Ibeshibetsu-gawa that originates from Lake Akanpanke-ko, Kinetanpe-gawa and Chuurui-gawa.

General land use: forest

Climate: Annual temperature fluctuation is large and rainfall is observed mainly from August to October. Annual precipitation: 1,207 mm, annual mean temperature: 3.7 degrees Celsius, fluctuation of mean temperature in each month: -10.7-+17.7 degrees Celsius (average of Akan-ko lakeside 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.

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.

Endangered alga species *Nitella flexilis*, *Chara globularis*, *Chara braunii*, and *Cladophora aegagropila* are growing in the lake.

As to fish species, endangered *Hucho perryi* (Japanese huchen) and *Phoxinus phoxinus sachalinensis* (Sakhalin lake minnow) are recorded. The site is the southern limit of natural distribution of *Oncorhynchus nerka nerka* (Sockeye Salmon) in Asia. Diversity of freshwater shellfish species is high and *Margaritifera laevis* and *Pisidiidae* species live 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.*

Nitella flexilis [critically endangered species (CR)*1 + endangered species (EN)*1]

Chara globularis [critically endangered species (CR)*1 + endangered species (EN)*1]

Chara braunii [critically endangered species (CR)*1 + endangered species (EN)*1]

Cladophora aegagropila [critically endangered species (CR)*1 + 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.*

[Birds]

Grus japonensis (Japanese Crane) [vulnerable species (VU)*1, endangered species (EN)*2, Domestic Endangered Species*3]

[Fishes]

Hucho perryi (Japanese huchen) [endangered species (EN)*1]

[Shellfishes]

Margaritifera laevis [vulnerable species (VU)*1]

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

*2 IUCN Red List of Threatened Species (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.

Fishery of *Oncorhynchus nerka nerka* (sockeye salmon), *Cyprinus carpio* (carp), *Hypomesus nipponensis* (pond smelts), *Salmo gairdneri* (rainbow trout), and *Pacifastacus trawbridgii*.

Annual yield: 90tons by 11 Fishermen.

22. Land tenure/ownership:

(a) within the Ramsar site:

National land (publicly-owned water body)

(b) in the surrounding area:

National land, private land

23. Current land (including water) use:

(a) within the Ramsar site:

- Water intake for hyrdoelectric power generation
- Fishery of *Oncorhynchus nerka nerka* (sockeye salmon), *Cyprinus carpio* (carp), *Hypomesus nipponensis* (pond smelts), *Salmo gairdneri* (rainbow trout), and *Pacifastacus trawbridgii*. Annual yield: 90tons by 11 Fishermen.
- Aquaculture
- Pleasure boat

(b) in the surroundings/catchment:
Forest

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:
None

(b) in the surrounding area:
Tourism, mountain climbing

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 Zone (283ha) and Special Zone (1,035ha) of National Park (total: 1,318ha) (The Natural Parks Law) * From September 20, 1974

In the special zone, activities such 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]

Akan Lakeside Eco-Museum Center

28. Current conservation education:

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

At Akan Lakeside Eco-Museum Center and Marimo Exhibition Center, visitors can learn about the history of Akan-ko, the status of the rare algae species Marimo *Cladophora aegagropila* and fish species that features the ecosystem of Akan-ko.

29. Current recreation and tourism:

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

Fishing, pleasure boat, canoeing, motor boat and others. Annual visitors are c. 1.56 million.

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 Park)

Hokkaido Kushiro Construction Office (publicly-owned water body)

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.

- Environment Agency 1993 “The Fourth National Surveys on the Natural Environment Report on Lake and Marsh Survey”
- Ministry of the Environment Nature Conservation Bureau 2002 “500 Important Wetlands in Japan”
- 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 9, Bryophytes, Algae, Lichens, Fungi”
- Ministry of the Environment 2003 “Threatened Wildlife of Japan -Red Data Book 2nd ed.- Volume 4, Pisces-Brackish and Fresh Water Fishes”
- Ministry of the Environment 2005 “Threatened Wildlife of Japan –Red Data Book 2nd ed.- Volume 6, Land and Freshwater Mollusks”
- Simon Delany et al. 2002 “Waterbird Population Estimates 3rd Edition” Wetlands International
- The IUCN Species Survival Commission "IUCN Red List of Threatened Species 2004"
- The Ornithological Society of Japan 2000 “Check-list of Japanese Birds Sixth Revised Edition”

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