2JP001

Information Sheet on Ramsar Wetlands (RIS)

Categories approved by Recommendation 4.7 of the Conference of the Contracting Parties

1. Date this sheet was completed/updated:
5 February 1999

2. Country:
Japan

3. Name of wetland:
Kushiro-shitsugen

4. Geographical coordinates:
43° 09'N 144° 26'E

5. Altitude:
Entire area is 3 - 10m above sea level.

6. Area:
7,863 ha

7. Overview:
The majority of the marsh is swamps and fens, including tracts of swamp forests. The swamps are scattered around the central area of the marsh. Kushiro-shitsugen is one of the most important habitats of the Japanese Crane, *Grus japanensis*, and contains Japan's largest tracts of peatland. Ten branches of the Kushiro River flow through the wetland. There are three large freshwater lakes in the eastern section of the marsh.

8. Wetland Type:

marine-coastal:	A	B	C	D	E	F	G	H	I	J	K
inland:	L	(M)	N	(O)	P	Q	R	Sp	Ss	(Tp)	Ts
	(U)	Va	Vt	(W)	(Xf)	(Xp)	Y	Zg	Zk		
man-made:	1	2	3	4	5	6	7	8	9		

Please now rank these wetland types by listing them from the most to the least dominant:
Tp, U, W, Xf, Xp, O, M

9. Ramsar Criteria: (please circle the applicable criteria; see point 12 below)
(1a) 1b 1c 1d (2a) (2b) 2c (2d) 3a (3b) 3c 4a 4b

Please specify the most significant criterion applicable to this site: 1a, 2a

10. Map of site included? Please tick YES --or-- NO

11. Name and address of the compiler of this form:
Shin INOUE,
Wildlife Protection Division, Nature Conservation Bureau, Environment Agency
1-2-2 Kasumigaseki Chiyoda-ku Tokyo 100-8975 Japan

12. Justification of the criteria selected under point 9
Kushiro-shitsugen faces the Pacific Ocean. It was formed by the enclosing of an ancient bay by the development of sandbars and sand dunes. Unlike other wetlands in Japan which have been destroyed by development, with the exception of one portion of the Kushiro Marsh, the area is in its original natural state. (Criteria for Identifying Wetlands of International Importance 1(a), 2(b))

This is an important habitat not only for *Grus japonensis*, which live only in Japan, Korea and China, but also for such rare species as the *Hucho perryi*, which are found in only a few places worldwide. (Criteria for Identifying Wetlands of International Importance 2(a), 2(d), 3(b))

13. General location:

In the eastern Hokkaido, approximately 5 km north of Kushiro city (population: approximately 200,000; area: approximately 220 km^2)

14. Physical features:

- Geology: The southern area opens out from the Pacific Coast into lowlands surrounded in the east, west and north by plateaus and hills rising 60-140 meters above sea level. The site is on an incline of 1/1000 - 1/2500. The Kushiro River traverses the marsh from north to south in its eastern part. The area is crisscrossed by large and small river branches, which converge into the Kushiro River. There are more than ten large and small crescent-shaped bogs within the wetlands. The three large freshwater lakes in the eastern part of the marsh Shirarutoro, Toro, Takkobu were once saltwater.
- Geomorphology: There is a layer of alluvial deposits several meters deep below the surface of the marsh. It has a base of conglomerate material, a layer of marine clay, and a top layer of peat deposits 1 to 4 meters deep.
- Origins: The area is in its natural condition. Some 4000 years ago, formation of the marsh began when the growth of sand dunes and sandbars began to enclose the bay facing the Pacific.
- Hydrology: The difference in the water level of the riversand the ground level of the marsh, even in dry season, does not exceed 1 meter. When the snow is melting and after heavy rains there is frequent flooding. During winter, most of the surface water freezes over, with some spots remaining unfrozen due to inflows from springs or hot springs.
- Water quality: The river areas have pH levels of 6.8 - 8.5, and the swamp and lake areas have levels of pH 6.5 - 8.5.
- Water depth: Average depths of the lakes are: Lake Shirarutoro,1.5 m; Lake Touro, 5.0 m; Lake Takkobu, 1.9 m.
- Catchment area: Kushiro River and its tributaries
- Climate: Boreal climate. Summer is wet and cool. Winter is dry and cold. Average annual temperature 5.7 degrees C; average annual rainfall, 1042.5 mm; average annual hours of sunlight,1944.0 hours (the lowest in Japan); annual number of days with fog, 112 (average figures from Kushiro City, 1961-1990).

15. Hydrological values:

Level of Kushiro River adjusted downstream. Purification of water flowing through the marsh.

16. Ecological features:

Some 80% of Kushiro-shitsugen is lowlands with distinctive clusters of *Carex sedges* and *Phragmites communis* reeds with swamp alders, *Alnus japonica*, scattered among them. The remaining 20% features *Molinia japonica* swamp grass and *Salix paludicola* at the medium level and clusters of *Sphagnum palustre* peat moss in the raised bogs. The bogs occupy less than 2% of the Kushiro Marsh, and also support clumps of the azalea *Ledum palustre* and the wild rosemary *Andromeda polifolia*, and other vegetation including *Primula jesoana* and *Scheuchzeria palustris*. Aquatic vegetation in pools and ponds, from the center towards the banks, includes *Vullisneria gigantea* and *Ultricularia vulgaris*, bladderworts which grow in the water, floating plants such as the water-lily *Nuphar pumilum* and the pondweed *Potamogeton natans*, as well as the bogbean *Menyanthes trifoliata* and rush *Scirpus lacustris*, which grow in shallow water.

At the upper end of the food chain, various raptors, the Japanese crane *Grus japonensis* , the northern fox *Vulpes vulpes schrencki Kishida* and Japan's largest freshwater fish, the *Hucho Perryi*, can all be seen.

17. Noteworthy flora:

- *Polemonium coeruleum ssp. companulatum* var. *paludosum* (Endangered: Red List Environment Agency)
- *Cardamine pratensis* (Vulnerable: The Red List of Japan)

18. Noteworthy fauna:

An important site for the birds listed below.

- *Grus japonensis* (Vulnerable: The Red List of Japan, National Endangered Species: Law for the Conservation of Endangered Species of Wild Fauna and Flora, Populasion in Japan: approximately 600)

- *Ketupa blakistoni blakistoni* (Critically Endangered: The Red List of Japan, National Endangered Species: Law for the Conservation of Endangered Species of Wild Fauna and Flora, Populasion in Japan: approximately 100)
- *Haliaeetus albicilla alcicilla* (Endangered: Red List of Japan, National Endangered Species: Law for the Conservation of Endangered Species of Wild Fauna and Flora, of an estimated 5000 pairs in the world, some 500 birds visit during the winter.)
- *Gallinago hardwickii* (Near Threatened: Red List of Japan, the scarce migratory snipe is endangered in Australia.)

Fishes

- *Hucho perryi* (Endangered: The Red List of Japan. Japan's largest freshwater fish, with a limited worldwide distribution.)

Amphibia

- *Salamandrella keyserlingii* (Near Threatened: Red List of Japan. Ice Age species. Kushiro-shitsugen is its only known occurrence in Japan.)

Important habitat for dragonflies. Dragon flies such as *Aeschna subacrtica* and *Leucorrhina intermedia ijimai* are Ice Age species with limited habitats centred on Kushiro-shitsugen in eastern Hokkaido.

19. Social and cultural values:

(Social values)

- Tourism, outdoor recreation (including scenic tours, nature observation, canoeing, fishing)
- Education (environmental education)
- Scientific research (using Kushiro Marsh as typical monitoring area)
- Water supply (water source for homes and industry)
- Industry (small-scale fishery in marshes; salmon and trout in rivers)

(Cultural values)

- Many artefacts dating from the Jomon to Satsumon cultural eras (BC 15000 - AD 1200) are found throughout the surrounding hills

20. Land tenure/ownership of:

(a) site

National Government owned land	6,224 ha
Local Government owned land	673 ha
Non-private owned lake	953 ha
Private owned lake	13 ha

(b) surrounding area

National Government owned, Local Government

21. Current land use:

(a) site

National park, small-scale fishery; zero population

(b) surroundings/catchment

grazing, farming, forestry, golf courses, fishery

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

(a) at the site

None

(b) around the site

- Inflow of excreta from farm animals grazed upstream of the marsh
- Inflow of agricultural chemicals used on pastures, farms and golf courses
- Inflow of earth and sand due to soil erosion caused by nearby development, timber-cutting for forestry
- Straightening of channels and widening of the banks due to river improvement projects
- Increasing population of minks (imported species) escaped from farms

23. Conservation measures taken:

- Special wildlife protection area 6,962 ha (Wildlife Protection and Hunting Law)
- Special protection zone of National Park 1,373 ha, Special zone of National Park 6,490 ha (National Parks Law)

- Natural Monument 5,012 ha (Law for the Protection of Cultural Properties)

All of the following are prohibited in this area: placement of man-made objects; changing the contours of the land; removal of stones or soil; landfill; artificial changes to the water level; tree or bamboo felling; taking plants; wildlife hunting; use of cars, carts, or engine-powered vessels, etc.

24. Conservation measures proposed but not yet implemented:

None

25. Current scientific research and facilities:

(Research)

- Study of habitats and ecology of rare wild species
- Survey on the link between changes in distribution of forest and the influx of soil from surrounding areas
- Monitoring marsh species through major environmental factors (water quality, underground water level, global warming gases, indicator organism groups, vegetation groupings, etc.)
- Corroborative studies to establish an assessment system for wetland ecosystems concentrated in the marsh forest and methods for wetland ecosystem maintenance and conservation

(Facilities)

- Environment Agency Kushiro Shitsugen Wildlife Center
- Kushiro City Museum
- Tsurui Ito Japanese Crane Sanctuary
- Akan International Crane Center

26. Current conservation education:

(Facilities)

- Environment Agency Kushiro Shitsugen Wildlife Center
- Environment Agency Onnenai Visitor Center
- Environment Agency Touroko Ecomuseum Center
- Kushiro City Museum
- Kushiro International Wetland Center
- Tsurui Ito Japanese Crane Sanctuary

(Contents)

- Museum displays, dissemination of information
- Nature observation activities, events including lectures
- Range of volunteer education, support for activities
- Operation of training courses

27. Current recreation and tourism:

- Observation stations (located in surrounding hills)
- Canoeing & fishing (on rivers and marshes within the wetland)
- Horse riding (on surrounding hills)
- Camping (lakeside campsites)
- Cross-country hiking
- Various trekking activities (roads, tracks)
- Museum displays
- Nature observation, Japanese crane observation

28. Jurisdiction:

(Territorial)

- Ministry of Finance (National Government owned land)
- Ministry of Construction (Non-private owned lake)

(Functional)

- Nature Conservation Bureau, Environment Agency (National)
- Agency for Cultural Affairs (National)
- Natural Environment Division, Office of Environmental Affairs, Department of Environment and Lifestyle, Hokkaido Prefecture Government (Prefectural)

29. Management authority:

- East Hokkaido National Park and Wildlife Office
  2-2101 Hokuto, Kushiro city, Hokkaido Prefecture, 084-0922 Japan
- Environment and Lifestyle Division, Local Policy Planning Department, Kushiro Sub-prefectural Office, Hokkaido prefectural Government
  2-2-54 Urami, Kushiro city, Hokkaido Prefecture, 085-0835 Japan
- Akan town Board of Education
  2 chome, Chuou, Akan town, Hokkaido Prefecture, 085-0215 Japan
- Shibecha town Board of Education
  550-2 Shibecha, Shibecha town, Hokkaido Prefecture, 088-2312 Japan
- Tsurui village Board of Education
  1-1 Tsurui nishi, Tsurui village, Hokkaido Prefecture, 085-1203 Japan

30. Bibliographical references:

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- Research Report on the Kushiro-shitsugen Conservation Assessment, 1985, Hokkaido Prefecture Government
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- Special Report on the Habitats of the Japanese Crane, 1991, Hokkaido Prefecture Government
- Report on the Vegetation of Kushiro-shitsugen, 1991, Environment Agency
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- Research Report on the Protection of Rare Species and Conservation of Wetland Ecosystems as Their Habitats and the Development of Methods for Integrated Control of Surrounding Areas, 1998, Environment Agency & Ministry of Agriculture, Forestry, and Fisheries
- Soil Influx and Changes in Marsh Vegetation Caused by Changes in Land Use around Kushiro-Shitsugen,1998, Nakamura and others.