



Ramsar Information Sheet

Published on 31 October 2023

Update version, previously published on : 30 October 2008

Japan Hyo-ko



Designation date	30 October 2008
Site number	1842
Coordinates	37°50'21"N 139°14'17"E
Area	24,00 ha

Color codes

Fields back-shaded in light blue relate to data and information required only for RIS updates.

Note that some fields concerning aspects of Part 3, the Ecological Character Description of the RIS (tinted in purple), are not expected to be completed as part of a standard RIS, but are included for completeness so as to provide the requested consistency between the RIS and the format of a 'full' Ecological Character Description, as adopted in Resolution X.15 (2008). If a Contracting Party does have information available that is relevant to these fields (for example from a national format Ecological Character Description) it may, if it wishes to, include information in these additional fields.

1 - Summary

Summary

The ponds that consist Hyo-ko were originally constructed as an irrigation reservoir. They now serve as habitats for various creatures: there are abundant wet or aquatic plants and aquatic organisms like fish. The plant and fish life also make the area a landing zone for migratory birds such as swans and ducks.

The Site is an important non-breeding habitat for migratory birds. Recorded birds come from 15 orders and 35 families with 117 species in all. *Anas acuta* (Northern Pintail), *Anas platyrhynchos* (Mallard), *Aythya ferina* (Common Pochard), *Aythya fuligula* (Tufted Duck), *Anas penelope* (Eurasian Wigeon), *Cygnus columbianus bewickii* (Tundra Swan), *Cygnus cygnus* (Whooper Swan) all fly into Hyo-ko. Hyo-ko is especially important for *Cygnus cygnus* (Tundra Swan) that visit with over three thousand individuals every year.

Fish typically live in the ponds of the alluvial plain. Rare species like *Tanakia lanceolata* (Yari-tanago, in Japanese) and *Lethenteron reissneri* (Far Eastern Brook Lamprey) are also observed.

The vegetation includes *Trapa natans* var. *japonica* (Water Caltrop), Lotus, and *Euryale ferox* (Prickly Water Lily), which cover the water surface. *Euryale ferox* (Prickly Water Lily), is designated as a natural monument "Hyo-ko's Gorgon Plant" by Niigata Prefecture.

Many insects depend on these aquatic plants, among which, Zytoptera (Damselfly) and *Deiella phaon* are frequently observed.

There is dense growth of aquatic plants, such as Reeds and *Zizania latifolia* (Manchurian Wild Rice), at the margins of the ponds. Among these plants, swans commonly eat *Zizania latifolia*. The surrounding land is grassland, predominantly *Miscanthus sinensis* Andersson (Japanese Silver Grass). A beautiful landscape is created by plantings of Cherry Blossom, *Iris sanguinea* (Siberian Iris), *Monochoria korsakowii* (Heartleaf False Pickerelweed), and *Lysichiton camtschaticensis* Schott (Asian Skunk Cabbage).

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Responsible compiler

Institution/agency	Kanto Regional Environment Office, Ministry of the Environment of Japan
Postal address	6F, Saitama-shintoshin Joint Government Building No.1 1-1 Shintoshin, Chuo Ward, Saitama City, Saitama Prefecture 330-9720, JAPAN

National Ramsar Administrative Authority

Institution/agency	Wildlife Division, Nature Conservation Bureau, Ministry of the Environment
Postal address	1-2-2 Kasumigaseki, Chiyoda-ku, Tokyo Japan

2.1.2 - Period of collection of data and information used to compile the RIS

From year	2018
To year	2021

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)	Hyo-ko
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2.1.4 - Changes to the boundaries and area of the Site since its designation or earlier update

(Update) A. Changes to Site boundary	Yes <input type="radio"/> No <input checked="" type="radio"/>
(Update) B. Changes to Site area	No change to area
(Update) For secretariat only: This update is an extension	<input type="checkbox"/>

2.1.5 - Changes to the ecological character of the Site

(Update) 6b i. Has the ecological character of the Ramsar Site (including applicable Criteria) changed since the previous RIS?	Not evaluated
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2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image

<1 file(s) uploaded>

Former maps	0
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Boundaries description

Hyo-ko is located at 37°50' North latitude and at 139°14' East longitude.

Hyo-ko is located in Agano City at the eastern end of the Echigo Plain, at the foot of the Gozu Mountain Range. It was created in the early Edo period as an agricultural water supply pond. Swans first flew into the lake in 1950, and the lake was expanded to include three ponds; Higashi-shin-ike, Ayame-ike and Sakura-ike, and is now maintained as the Hyko Suikin Park with a total lake area of 24ha and a total land area of 280 ha. It is surrounded by a vast area of rice paddy fields, and the Agano River flows through the south-west part of Hyo-ko.

The Site is also designated as the Special Protection Area of Hyo-ko National Wild Protection Area and the area of the Site is the same as the Special Protection Area.

2.2.2 - General location

a) In which large administrative region does the site lie?	Agano City, Niigata Prefecture
b) What is the nearest town or population centre?	Agano City, Niigata Prefecture

2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries?	Yes <input type="radio"/> No <input checked="" type="radio"/>
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b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party? Yes No

2.2.4 - Area of the Site

Official area, in hectares (ha):

Area, in hectares (ha) as calculated from GIS boundaries

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
Udvardy's Biogeographical Provinces	Oriental Deciduous Forest

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

<no data available>

Criterion 2 : Rare species and threatened ecological communities

Criterion 3 : Biological diversity

Justification

Hyoko's Euryale Ferox colonies are designated as a natural monument by Niigata Prefecture. They are found in the northern limit for the distribution along the sea of Japan.

Criterion 6 : >1% waterbird population

3.2 - Plant species whose presence relates to the international importance of the site

Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
Plantae								
TRACHEOPHYTA / MAGNOLIOPSIDA	<i>Euryale ferox</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>	National Red List : VU	Hyoko's Euryale Ferox colonies are designated as a natural monument by Niigata Prefecture. Northern limit for the distribution along the sea of Japan.

3.3 - Animal species whose presence relates to the international importance of the site

Phylum	Scientific name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
		2	4	6	9	3	5	7	8								
Fish, Mollusc and Crustacea																	
CHORDATA / ACTINOPTERYGII	<i>Carassius cuvieri</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				EN	<input type="checkbox"/>	<input type="checkbox"/>		
Birds																	
CHORDATA / AVES	<i>Anas acuta</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5933	Dec-Jan 2020	2.47	LC	<input type="checkbox"/>	<input type="checkbox"/>		
CHORDATA / AVES	<i>Aythya ferina</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				VU	<input type="checkbox"/>	<input type="checkbox"/>		
CHORDATA / AVES	<i>Circus spilonotus</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Designated endangered species, the Law for the Conservation of Endangered Species of Wild Fauna and Flora, the Government of Japan	
CHORDATA / AVES	<i>Cygnus columbianus bewickii</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4239	Sep-Nov 2019	4.24		<input type="checkbox"/>	<input type="checkbox"/>		

1) Percentage of the total biogeographic population at the site

The Act on the Conservation of Endangered Species of Wild Fauna and Flora designates endangered species of wild fauna and flora that inhabit Japan as the 'nationally rare species of wild fauna and flora'. Capturing, breeding, and transferring, etc. of the listed species is generally prohibited according to the Act. The Ministry of the Environment conducts surveys to understand the ecological status of species in danger of extinction with the National Guidelines for the Conservation of Endangered Species under Article 6 of the Act on the Conservation of Endangered Species of Wild Fauna and Flora (<https://www.japaneselawtranslation.go.jp/en/laws/view/4236>). Based on the results of the surveys and interviews with experts, the Ministry will ascertain the necessary information such as population numbers and distribution of target species, and conduct relevant meetings, in order to update the information on the 'nationally rare species of wild fauna and flora'.

One percent of Northern Pintail's regional population in East and South East Asia is equivalent to 2400.

One percent of Tundra Swan's regional population in East Asia is equivalent to 1000.

1. *Anas acuta*:

Monitoring Sites 1000 (Anatidae monitoring)

2018.9~2019.5 = 4,205

2019.9~2020.5 = 5,933

2. *Aythya ferina*:

Monitoring Sites 1000 (Anatidae monitoring)

2018.9~2019.5 = 680

2019.9~2020.5 = 557

2020.9~2021.5 = 472

3. *Circus spilonotus*

Management Report on Hyo-ko, Special Protection zone of National Wildlife Protection Area (2017 – 2021)

4 (2017)

0 (2018)

4 (2019)

4 (2020)

1 (2021)

4. *Cygnus columbianus bewickii*

Monitoring Sites 1000 (Anatidae monitoring)

2018.9~2019.5 = 4,645

2019.9~2020.5 = 4,239

3.4 - Ecological communities whose presence relates to the international importance of the site

<no data available>

4 - What is the Site like? (Ecological character description)

4.1 - Ecological character

The ponds were originally constructed as an irrigation reservoir. They now serve as habitats for various creatures: there are abundant wet or aquatic plants and aquatic organisms like fish. The plant and fish life also make the area a landing zone for migratory birds such as swans and waterfowl.

The Site is an important wintering spot for migratory birds. Recorded birds come from 15 orders and 35 families with 117 species in all. *Anas acuta* (Northern Pintail), *Anas platyrhynchos* (Mallard), *Aythya ferina* (Common Pochard), *Aythya fuligula* (Tufted Duck), *Anas penelope* (Eurasian Wigeon), *Cygnus columbianus bewickii* (Tundra Swan), *Cygnus cygnus* (Whooper Swan) all fly into Hyo-ko. *Cygnus columbianus bewickii* (Tundra Swan) is especially visiting with over three thousand birds every year.

The Site is designated as the "Suibara's swan landing zone," a national natural monument. Swans use this site for foraging, as a resting area, or to roost. Part of the wetland is maintained as a park. While walking in the park, from the beginning of October to the middle of March, we can observe swans frequently take off and return to the ponds. In this period, this Site is crowded with tourists and photographers.

The number of Tundra Swan visiting comes up to 4239. This is approximately 10 percent of its populations in the whole country and over one percent of its regional population in East Asia (1000), according to Report 2019/2020, Monitoring Site 1000 Anatidae Survey, (2020) Ministry of the Environment.

Fish typically live in the ponds of the alluvial plain. In addition to *Gnathopogon elongatus* (Tamoroko), *Cyprinus carpio* (Common Carp) and *Carassius cuvieri* (Japanese Crucian Carp), rare species such as *Tanakia lanceolata* (Yari-tanago) and *Lethenteron reissneri* (Far Eastern Brook Lamprey) are also observed.

The vegetation includes *Trapa natans* var. *japonica* (Water Caltrop), Lotus, and *Euryale ferox* (Prickly Water Lily), which cover the water surface. *Euryale ferox* (Prickly Water Lily), referred to as "Hyo-ko's Gorgon Plant," is designated as a natural monument by Niigata Prefecture. This is thought that has extinct in Tohoku district. The nearby Fukushima-gata lagoon is its northern limit.

Furthermore, "Ukishima" floating island also plays an important role as a habitat for wetland plants.

Insects depend on these aquatic plants. *Zygotera* (Damselfly) and *Deielia phaon* are frequently observed. Among these insects, there are rare species including *Paracercion plagiosum* which likes emergent plants and is designated as Endangered on the National Red List.

There is dense growth of aquatic plants, such as reeds and *Zizania latifolia* (Manchurian Wild Rice), at the margins of the ponds. Among these plants, swans commonly eat *Zizania latifolia* (Manchurian Wild Rice). The surrounding land is grassland, predominantly *Miscanthus sinensis* (Japanese Silver Grass). A beautiful landscape is created by plantings of Cherry Blossom, *Iris sanguinea* (Siberian Iris), *Monochoria korsakowii* (Heartleaf False Pickerelweed), and *Lysichiton camtschaticensis* Schott (Asian Skunk Cabbage).

4.2 - What wetland type(s) are in the site?

Human-made wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type
6: Water storage areas/Reservoirs	Hyo-ko	1	24

(ECD) Habitat connectivity

The Site is designated as a National Wildlife Protection Area together with the surrounding agricultural fields where swans forage. The surrounding agricultural fields were under development pressure but the local government bought and conserved the area.

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Phylum	Scientific name	Position in range / endemism / other
TRACHEOPHYTAMAGNOLIOPSIDA	<i>Nelumbo nucifera</i>	Usage as cut flowers
TRACHEOPHYTAMAGNOLIOPSIDA	<i>Trapa natans</i>	Traditional Use for food

Invasive alien plant species

Phylum	Scientific name	Impacts	Changes at RIS update
TRACHEOPHYTAMAGNOLIOPSIDA	<i>Solidago altissima</i>	Actual (minor impacts)	No change

4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
CHORDATA/AVES	<i>Anas crecca crecca</i>	2300	2017		IUCN Red List; LC
CHORDATA/AVES	<i>Anas penelope</i>	38	2017		Major species of migratory birds
CHORDATA/AVES	<i>Anas platyrhynchos</i>	1000	2017		IUCN Red List; LC
CHORDATA/AVES	<i>Aythya fuligula</i>	46	2017		Major species of migratory birds
CHORDATA/AVES	<i>Cygnus cygnus</i>	170	2017		Major species of migratory birds
ARTHROPODA/INSECTA	<i>Deilelia phaon</i>				Typical species of pond in plain
CHORDATA/CEPHALASPIDOMORPHI	<i>Lethenteron reissneri</i>				Rare species
ARTHROPODA/INSECTA	<i>Paracercion plagiosum</i>				IUCN Red List; NT
CHORDATA/ACTINOPTERYGII	<i>Tanakia lanceolata</i>				National Red List : NT, Typical species of pond in plain

Optional text box to provide further information

Lethenteron reissneri was found to include two species (the northern and southern species). Lethenteron sp. 1 (the northern species) which is fluvial is distributed in Hokkaido and central and northern Honshu. Lethenteron sp. 2 (the southern species) is fluvial and distributed in central and southern Honshu, Shikoku and eastern Kyushu, and the Korean Peninsula. (Red Data Book 2014)

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
C: Moist Mid-Latitude climate with mild winters	Cfc: Marine west coast (Mild with no dry season, cool summer)

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres)

a) Maximum elevation above sea level (in metres)

- Entire river basin
- Upper part of river basin
- Middle part of river basin
- Lower part of river basin
- More than one river basin
- Not in river basin
- Coastal

Please name the river basin or basins. If the site lies in a sub-basin, please also name the larger river basin. For a coastal/marine site, please name the sea or ocean.

Agano River

4.4.3 - Soil

Mineral

(Update) Changes at RIS update No change Increase Decrease Unknown

No available information

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes No

Please provide further information on the soil (optional)

The bottom of the pond is mineral soil because the site is located in an alluvial plain. However, the overgrowth of aquatic plants, like Lotus, causes accumulation of humus and reduces the water depth. The droppings of waterfowl also affect the site conditions.

4.4.4 - Water regime

Water permanence

Presence?	Changes at RIS update
Usually permanent water present	

Source of water that maintains character of the site

Presence?	Predominant water source	Changes at RIS update
Water inputs from precipitation	<input checked="" type="checkbox"/>	No change

Water destination

Presence?	Changes at RIS update
To downstream catchment	No change

Stability of water regime

Presence?	Changes at RIS update
Water levels largely stable	No change

Please add any comments on the water regime and its determinants (if relevant). Use this box to explain sites with complex hydrology.

Lake Hyo-ko has no main river, although it is connected to an agricultural irrigation canal. It was originally an irrigation reservoir. The water intake is properly managed and major fluctuations of water level are not observed.

(ECD) Connectivity of surface waters and of groundwater	Groundwater does not influence the pond because of the irrigation management.
(ECD) Stratification and mixing regime	Water depth is shallow. Stratification is not observed.

4.4.5 - Sediment regime

Sediment regime is highly variable, either seasonally or inter-annually

(Update) Changes at RIS update No change Increase Decrease Unknown

Sediment regime unknown

Please provide further information on sediment (optional):

Turbidity is not observed because the water of this lake is supplied by agricultural irrigation canal.

(ECD) Water turbidity and colour	Clear
(ECD) Light - reaching wetland	Enough
(ECD) Water temperature	Spring (March) 20 degrees, Summer (July) 26 degrees

4.4.6 - Water pH

Circumneutral (pH: 5.5-7.4)

(Update) Changes at RIS update No change Increase Decrease Unknown

Unknown

Please provide further information on pH (optional):

pH 6.7~7.6
pH tends to reduce in the summer because air temperatures rise. pH is also influenced by inflow from the irrigational canal (year of the survey: 2017).

4.4.7 - Water salinity

Fresh (<0.5 g/l)

(Update) Changes at RIS update No change Increase Decrease Unknown

Unknown

4.4.8 - Dissolved or suspended nutrients in water

Eutrophic

(Update) Changes at RIS update No change Increase Decrease Unknown

Unknown

Please provide further information on dissolved or suspended nutrients (optional):

Both BOD and COD retain low levels. This might be because the major river is an irrigation canal.

(ECD) Dissolved organic carbon	BOD: average annual rate 2.9~7.3, maximum 6.0, COD: average annual rate 5.6~7.4, maximum 11.5
(ECD) Redox potential of water and sediments	Unknown
(ECD) Water conductivity	Unknown

4.4.9 - Features of the surrounding area which may affect the Site

Please describe whether, and if so how, the landscape and ecological characteristics in the area surrounding the Ramsar Site differ from the i) broadly similar ii) significantly different site itself:

- Surrounding area has greater urbanisation or development
- Surrounding area has higher human population density
- Surrounding area has more intensive agricultural use
- Surrounding area has significantly different land cover or habitat types

Please describe other ways in which the surrounding area is different:

The surrounding area is mostly rice paddies, a quite distinct environment from the registered Site. Part of the surrounding area is used for housing.

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	Medium
Fresh water	Water for irrigated agriculture	High
Genetic materials	Ornamental species (live and dead)	Medium

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	High

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Recreational hunting and fishing	Medium
Recreation and tourism	Nature observation and nature-based tourism	High

Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganisms, the genes they contain, and the ecosystems of which they form a part	High

Within the site: 326,000 (visitors)

Outside the site: 42,897 (population)

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site? Yes No Unknown

4.5.2 - Social and cultural values

- i) the site provides a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland

Description if applicable

The Site, well known as a natural habitat of *Brasenia schreberi* (Water Shield), offered produce to the imperial household in the Meiji and Taisyo eras (1868-1926). Currently, *Trapa natans* var. *japonica* (Water Caltrop) is used for food, while Lotus is used as cut flowers for the Japanese Lantern Festival.

The local residents use swans as part of environmental studies. School children go on swan patrols and enjoy bird-watching.

- ii) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland
- iii) the ecological character of the wetland depends on its interaction with local communities or indigenous peoples
- iv) relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland

4.6 - Ecological processes

(ECD) Primary production	Productivity is relatively high because the site is located on the plain.
(ECD) Nutrient cycling	Unknown
(ECD) Carbon cycling	Plant residues accumulated at the bottom of the pond as there is no natural outflow from the irrigation pond.
(ECD) Animal reproductive productivity	Not noticeable

(ECD) Vegetational productivity, pollination, regeneration processes, succession, role of fire, etc.	It is thought that aquatic plants are carried by waterfowl. Fukushimagata, used by waterfowl as a resting place, is located near this site. Genetic exchange between aquatic plants may occur.
(ECD) Notable species interactions, including grazing, predation, competition, diseases and pathogens	Nothing in particular
(ECD) Notable aspects concerning animal and plant dispersal	Nothing in particular
(ECD) Notable aspects concerning migration	In the winter season, many swans and ducks arrive.
(ECD) Pressures and trends concerning any of the above, and/or concerning ecosystem integrity	Nothing in particular

5 - How is the Site managed? (Conservation and management)

5.1 - Land tenure and responsibilities (Managers)

5.1.1 - Land tenure/ownership

Public ownership

Category	Within the Ramsar Site	In the surrounding area
National/Federal government	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Local authority, municipality, (sub)district, etc.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Private ownership

Category	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner(s)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Provide further information on the land tenure / ownership regime (optional):

Agano City owns the main Site. The Agency for Cultural Affairs also owns some of the land. In addition, the Aganogawa Land Improvement District manages a small part of the surrounding agricultural area. The Ramsar Site is managed as a park and registered as public space.

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:

Kanto Regional Environment Office, Ministry of the Environment of Japan

Provide the name and/or title of the person or people with responsibility for the wetland:

Toshiro Segawa, Director of Kanto Regional Environment Office

Postal address:

6F, Saitama-shintoshin Joint Government Building No.1
1-1, Shintoshin, Chuo Ward, Saitama City, Saitama Prefecture 330-9720
Japan

E-mail address:

reo-kanto@env.go.jp

5.2 - Ecological character threats and responses (Management)

5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

Human settlements (non agricultural)

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Unspecified development	Low impact	Low impact	<input type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change

Water regulation

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Drainage	Low impact	Low impact	<input checked="" type="checkbox"/>	No change	<input type="checkbox"/>	No change
Water abstraction	Low impact	Low impact	<input checked="" type="checkbox"/>	No change	<input type="checkbox"/>	No change
Dredging	Medium impact	Medium impact	<input checked="" type="checkbox"/>	No change	<input type="checkbox"/>	No change

Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Annual and perennial non-timber crops	Low impact	Low impact	<input checked="" type="checkbox"/>	No change	<input type="checkbox"/>	No change
Marine and freshwater aquaculture	Low impact	Low impact	<input checked="" type="checkbox"/>	No change	<input type="checkbox"/>	No change

Transportation and service corridors

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Unspecified	Low impact	Low impact	<input checked="" type="checkbox"/>	No change	<input type="checkbox"/>	No change

Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Unspecified	Low impact	Low impact	<input checked="" type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change

Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Recreational and tourism activities	Low impact	Low impact	<input checked="" type="checkbox"/>	No change	<input type="checkbox"/>	No change

Invasive and other problematic species and genes

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Invasive non-native/ alien species	Medium impact	Medium impact	<input checked="" type="checkbox"/>	No change	<input type="checkbox"/>	No change

Geological events

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Unspecified	Low impact	Low impact	<input type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change

5.2.2 - Legal conservation status

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Natural monument	Suibara's swan landing zone		whole
Wildlife refuge	Hyo-ko Special Protection Area of the Hyo-ko National Wildlife Protection Area,		whole

5.2.3 - IUCN protected areas categories (2008)

- Ia Strict Nature Reserve
- Ib Wilderness Area: protected area managed mainly for wilderness protection
- II National Park: protected area managed mainly for ecosystem protection and recreation
- III Natural Monument: protected area managed mainly for conservation of specific natural features
- IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention
- V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation
- VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems

5.2.4 - Key conservation measures

Legal protection

Measures	Status
Legal protection	Implemented

Species

Measures	Status
Threatened/rare species management programmes	Implemented

Human Activities

Measures	Status
Harvest controls/poaching enforcement	Implemented
Research	Implemented
Communication, education, and participation and awareness activities	Implemented

5.2.5 - Management planning

Is there a site-specific management plan for the site? Yes

Has a management effectiveness assessment been undertaken for the site? Yes No

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning processes with another Contracting Party? Yes No

Please indicate if a Ramsar centre, other educational or visitor facility, or an educational or visitor programme is associated with the site:

A garden office, the Swan's village for visitors and swan shelter were established and are maintained by Agano City.

URL of site-related webpage (if relevant):

www.city.agano.niigata.jp/kanko_bunka_sports/shizen_koen_seibutsu/koen/3696.html
www.city.agano.niigata.jp/kanko_bunka_sports/shizen_koen_seibutsu/3593.html
www.city.agano.niigata.jp/kanko_bunka_sports/shizen_koen_seibutsu/3594.html

5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No need identified

5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Birds	Implemented
Plant community	Implemented
Water quality	Implemented
Plant species	Implemented
Soil quality	Implemented
Water regime monitoring	Implemented

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

- Report 2019. Monitoring Site 1000 Anatidae Survey . Monitoring site 1000. (2019) Biodiversity Center of Japan, Nature Conservation Bureau, Ministry of the Environment.
- Report of the survey for accumulation of sludge in Hyo-ko. (2018) The group of conservation for swan in Hyo-ko.
- Report of the survey for water quality in Hyo-ko. (2017) Agano city.
- Report of the research, Environmental Research Center Niigata city. Fish community of lakes in Niigata plain. (2015) Lagoon Environmental Research Center.
- Report of the survey of the bottom sediment in Hyo-ko, government-designated wildlife protection area in 2010. (2011) Agano city
- Ramsar site Hyo-ko.(pamphlet) Department of Environment and Agano city.(2009.1)
- Vegetation on the Ukishima, Hyo-ko. (2008) The group of conservation for swan in Hyo-ko.
- Report I of the survey for conservation of environment of Hyo-ko. (1979) Suibara town.
- Report II of the survey for conservation of environment of Hyo-ko. (Material) (1979) Suibara town.
- Report of general study of Fukushima-gata and Hyo-ko (jointed volume of the second and third) (1973 · 1974) Niigata central High School of Niigata Prefecture. Tomie Ozaki eds. Toyosaka city and Suibara town.
- MOE HP (Japanese) : <https://www.env.go.jp/nature/kisho/domestic/list.html>
- Japanese Law Translation : <https://www.japaneselawtranslation.go.jp/en/laws/view/4237>
[Order for Enforcement of the Act of Conservation of Endangered Species of Wild Fauna and Flora. Appended Table 1, 2: Nationally Rare Species of Wild Fauna and Flora]

6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)

<no file available>

ii. a detailed Ecological Character Description (ECD) (in a national format)

<no file available>

iii. a description of the site in a national or regional wetland inventory

<no file available>

iv. relevant Article 3.2 reports

<no file available>

v. site management plan

<no file available>

vi. other published literature

<no file available>

<no data available>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:



Flying for commuting (Iwao SATO, 16-10-2014)



Hyo-ko in a fine clear day (Iwao SATO, 02-02-2014)



Swans in Hyo-ko, cherry blossoms, and Gozu mountain range with remaining snow (Iwao SATO, 09-04-2015)



Hyo-ko at sunrise (Iwao SATO, 28-10-2011)

6.1.4 - Designation letter and related data

Designation letter

<no file available>

Date of Designation