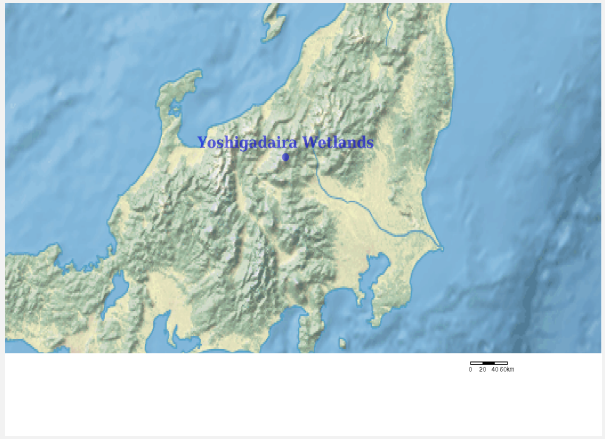
Ramsar Information Sheet

Published on 29 May 2015

Japan

Yoshigadaira Wetlands



Designation date:	28 May 2015
Ramsar ID:	2233
Coordinates:	36°38'58"N 138°34'8"E
Official area (ha):	887,00
Number of zones:	2

https://rsis.ramsar.org/ris/2233
Created by RSIS V.1.3 on Thursday 12 November 2015

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 *(This field is limited to 2500 characters)*

Yoshigadaira Wetlands are located in the center of Honshu Island of Japan and northeast of Mount Kusatsu-Shirane (2,160 m above sea level). Mt. Kusatsu-Shirane is an active volcano that has erupted 8 times in the past 30 years. Yoshigadaira Wetlands includes Yoshigadaira moor, Odaira moor, Heibee-ike pond, O-ike pond, Mizu-ike pond, Yugama-lake and Anajigoku (stream). They have been developed on low-permeable layers, depressions and/or a crater resulting from volcanic activities of Mt. Kusatsu-Shirane.

Yoshigadaira moor and Odaira moor are natural intermediate moors, and Heibee-ike pond, O-ike pond and Mizu-ike pond are natural ponds. These moors and ponds are located in temperate coniferous forest. There are many amphibians including the endemic forest green tree frogs (Rhacophorus arboreus) which use those wetlands as breeding sites.

Yugama is a crater lake near the top of Mt. Kusatsu-Shirane and there is little vegetation in the area, because the water is very acidic (pH 1.0-1.2).

Anajigoku is located at the foot of Mt. Kusatsu-Shirane (1,300 m from sea level) and the acidity of the water is also extremely high (pH 2.6-2.8). Anajigoku has very unique ecosystems where a lot of hydrogen sulfide gases are naturally generated and sulfatara plants such as Gaultheria miqueliana and Carex oxyandra Kudo are able to grow while the population of fishes and aquatic insects remain small. The water in this area includes abundant iron and sulfur, and the water temperature of streams to Motoyama River is between 23-28°C even during winter. There are large communities of aquatic moss named Jungermannia volcanicola which have adapted to the acidity. The size of this community is the largest in Japan and it might also be the largest confirmed habitat in East Asia.

At Yoshigadaira Wetlands, 442 plant species grow, and 20 mammal species, 62 bird species, 3 fish species and 14 dragonfly species inhabit.

2 - Data & location

2.1 - Formal data

2.1.1 - Name and address of the compiler of this RIS

Name: Tsutomu Asoshina

Institution/agency: Nagano Nature Conservation Office, Ministry of the Environment of Japan

Postal address *(This field is limited to 254 characters)*

Nagano No.1 Joint Government Building,1108 Asahi-machi, Nagano-city, Nagano prefecture
380-0846 JAPAN

E-mail: NCO-NAGANO@env.go.jp

Phone: +81-26-231-6570

Fax: +81-26-235-1226

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

From year: 1978

To year: 2014

2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish): Yoshigadaira Wetlands

2.2 - Site location

2.2.1 - Defining the Site boundaries

b) Digital map/image
<2 file(s) uploaded>

2.2.2 - General location

a) In which large administrative region does the site lie? Nakanojo town, Agatsuma-gun, Gunma Prefecture

b) What is the nearest town or population centre? Kusatsu-town and Tsumagoi village, Agatsuma-gun, Gunma Prefecture, and Yamanouchi-town, Shimotakai-gun, Nagano 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 ○ No ◉

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): 887

Area, in hectares (ha) as calculated from GIS boundaries: 886.93

2.2.5 - Biogeography

Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
WWF Terrestrial Ecoregions	Temperate broadleaf and mixed forests
WWF Terrestrial Ecoregions	Temperate coniferous forests

3 - Why is the Site important?

3.1 - Ramsar Criteria and their justification

☑ Criterion 1: Representative, rare or unique natural or near-natural wetland types

Other reasons *(This field is limited to 3000 characters)*

The Yoshigadaira Wetlands Ramsar Site supports a diversity of natural wetland types, i.e. moors, ponds, crater lake and streams, all of which are representative and unique in the Temperate Coniferous Forest biogeographic region.

Yoshigadaira moor and Odaira moor are natural intermediate moors. The flora at Yoshigadaira moor consists of Oxycocco-Sphagnetea community, Abies veitchii-Abies mariesii community and Sasa grassland. The flora at Odaira moor consists of Hygrophyte such as Moliniopsis japonica community, Carex curta-Juncus filiformis community, Carex limosa community, Sasa grassland and Larix leptolepis plantation. In addition, reeds distribute widely in patches within and around these moors, where nutrients are provided regularly by landslide and snow avalanche. Such a unique flora is attributed to high-acid water, high ground temperature and high water temperature due to volcanic activities, landslide resulted from volcanic geology, frequent disturbance by snow avalanche, and abundant underflow water.

Vegetation in the three ponds at the site, i.e. Heibee-ike pond, O-ike pond and Mizu-ike pond, is dominated by emergent plants such as Potamogeton fryeri and Isoetes asiatica.

Yugama is a crater lake near the top of Mt. Kusatsu-Shirane which is still active volcanically.

Anajigoku is the head stream area of Motoyama River which is highly acidic (pH2.6-2.8) with abundant iron and sulfur. This site supports the largest community of acidophilic moss, Jungermannia vulcanicola in East Asia.

☑ Criterion 4 : Support during critical life cycle stage or in adverse conditions

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

(This field is limited to 2500 characters)

Noteworthy plant species include Batrachospermum turfosum which is listed as vulnerable according to the Revised 4th Red List of Japan (Ministry of the Environment).

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

Phylum	Scientific name	Common name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
			2	4	6	9	3	5	7	8								
CHORDATA / AMPHIBIA	*Rhacophorus arboreus*		☐	☑	☐	☐	☐	☐	☐	☐				LC	☐	☐		An endemic species in Japan. Yoshigadaira Wetlands include its breeding site located at 2,150 m above sea level, which is highest in altitude among its habitats.

(This field is limited to 2500 characters)

Rhacophorus arboreus is an endemic species in Japan. The highest habitat in the world for this species (2,150 m above sea level) is included within the boundary of Yoshigadaira Wetlands. As a result of comparing the genes of those individuals within Yoshigadaira Wetlands with those in other sites in Japan, it was revealed that some individuals within Yoshigadaira Wetlands have very unique genotypes and seem to have evolved in a different way. The population within Yoshigadaira Wetlands is considered to have spread vertically to higher altitudes, while the population at the high latitude in northern part of mainland of Japan has extended its habitats horizontally. This indicates that the population within Yoshigadaira Wetlands has adapted to the surrounding environmental condition in an extremely unique way. Such a vertical distribution expansion to the higher altitudes may be attributed to avoidance from the impacts of eruption of Kusatsu Shirane volcano and geothermal heat due to the volcano. Rhacophorus arboreus population in Yoshigadaira Wetlands is a representative population which has adapted to cold areas and expanded its distribution vertically, even though Rhacophoridae originates from tropical region.

Furthermore, Yoshigadaira Wetlands are an important habitat for locally endangered aquatic insect species, such as Epitheca bimaculata sibirica, Eubasilissa regina, Nemotaulius admorsus, Phagocata vivida, Yoraperla uenoi, and Acilius japonicus.

Noteworthy animal species include Phagocata vivida and Yoraperla uenoi, Near Threatened according to Red List of Gunma Prefecture.

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

<no data available>

Name of ecological community	Community qualifies under Criterion 2?	Description	Justification
Jungermannia volcanicola	☐	Anajigoku stream has large communities of the aquatic moss Jungermannia volcanicola which have adapted to the high acidity. This community is the largest in Japan and it may also be the largest confirmed habitat in East Asia.	

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

4.1 - Ecological character

(This field is limited to 2500 characters)

Yoshigadaira Wetlands are a group of wetlands such as rivers, moors, lakes and ponds located at from 1,200 m to 2,150 m above sea level. This area has been largely impacted by volcanic activities of Mt. Kusatsu-Shirane.

Mt. Kusatsu-Shirane started volcanic activities ca.600 thousand years ago and it is a very active volcano; it has erupted 8 times in the past 30 years. The surrounding geographical features were made with piles of eruptions during activity period from 15 thousand to 3 thousand years ago. The surrounding area of Mt. Kusatsu-Shirane has a unique environment, e.g. Yugama and Anajigoku have specific features due to high temperature and acidity from volcano and volcanic gases such as hydrogen sulfide.

Yugama is a crater lake with extremely high acidity (pH 1.0-1.2) near the top of Mt. Kusatsu-Shirane and there is little vegetation in the area.

The water of Anajigoku is also extremely acidic (pH 2.6-2.8) with abundant iron and sulfur, but there is a largest community of aquatic moss Jungermannia vulcanicola in East Asia. There are also other sulfatara plants such as Gaultheria miqueliana and Carex oxyandra which have adapted to the adverse conditions, though as a whole richness in fishes and aquatic insects is very limited at Anagigoku. The temperature of water in the streams ranges from 23-28°C even during winter.

Yoshigadaira moor, Odaira moor, Heibee-ike pond, O-ike pond, and Mizu-ike pond have swamp-like properties, which have been developed on low-permeable layers and/or depressions resulting from volcanic activities of Mt. Kusatsu-Shirane. Yoshigadaira moor and Odaira moor are intermediate moors and are considered to have provided an important refuge in the surrounding volcanic area for faunal and floral species that depend on water environment. In addition, geothermal heat and water enabled wild fauna and flora winter around the Yoshigadaira Wetlands in spite of severe environmental factors such as the high altitude of 1,800 m to 2,000 m and the low temperature below -15°C in winter. One of the representative examples is Rhacophorus arboreus whose breeding site in Yoshigadaira Wetlands is at 2,150 m above sea level and is the highest in altitude in the world where it has been recorded.

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

Inland wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
M: Permanent rivers/ streams/ creeks	Anagigoku	4	2.5	Unique
Tp: Permanent freshwater marshes/ pools	Heibee-ike pond, O-ike pond and Mizu-ike pond	2	3.1	Representative
U: Permanent Non-forested peatlands	Yoshigadaira moor and Ohdaira moor	1	90	Representative
Zg: Geothermal wetlands	Yugama	2	23.1	Unique

Other non-wetland habitat

Other non-wetland habitats within the site	Area (ha) if known
Sub-alpine Coniferous forest	236.1
Vegetation in volcanic desert	222
Wind-exposed Sasa grassland	175
Decidious broad forest	116.1
Artifact (National Road, huts etc.)	6

4.3 - Biological components

4.3.1 - Plant species

Other noteworthy plant species

Scientific name	Common name	Position in range / endemism / other
Eriocaulon nanellum nosoriense		NT, National Red List
Eriophorum vaginatum		Designagated as endemic species of Joshin'etsukogen National Park
Isoetes setacea asiatica		Dominate in Heibee-ike pond, O-ike pond and Mizu-ike pond
Potamogeton fryeri		Dominate in Heibee-ike pond, O-ike pond and Mizu-ike pond

Invasive alien plant species

Scientific name	Common name	Impacts
Achillea millefolium	Yarrow	Actually (minor impacts)
Amorpha fruticosa	Desertfalseindigo	Actually (minor impacts)
Anthoxanthum odoratum	Sweetvernalgrass	Actually (minor impacts)
Barbarea vulgaris	Bittercress	Actually (major impacts)
Bidens frondosa	Devil'sbeggartrick	Actually (minor impacts)
Brassica napus	Rapeseed	Actually (major impacts)

Scientific name	Common name	Impacts
Chrysanthemum vulgare	Ox-eyedaisy	Actually (minor impacts)
Dactylis glomerata	Cock's-footglass	Actually (minor impacts)
Erigeron annuus	Easterndaisyfleabane	Actually (minor impacts)
Erigeron philadelphicus	Philadelphiafleabane	Actually (minor impacts)
Nasturtium officinale	Desertfalseindigo	Actually (minor impacts)
Oenothera biennis	Commoneveningprimrose	Actually (minor impacts)
Phleum pratense	Timothy	Actually (minor impacts)
Poa nemoralis	Redtop	Actually (minor impacts)
Rumex acetosella	Sheepsorrel	Actually (minor impacts)
Rumex conglomeratus		Actually (minor impacts)
Rumex obtusifolius	Bload-leveldock	Actually (minor impacts)
Stellaria media	Commonchickweed	Actually (minor impacts)
Taraxacum campylodes	Dandelion	Actually (minor impacts)
Trifolium dubium	Suclingclover	Actually (minor impacts)
Trifolium pratense	RedClover	Actually (minor impacts)
Trifolium repens	WhiteClover	Actually (major impacts)

4.3.2 - Animal species

Other noteworthy animal species

Phylum	Scientific name	Common name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
ARTHROPODA/INSECTA	Acilius japonicus					CR/EN, Red List of Nagano Prefecture
ARTHROPODA/INSECTA	Epitheca bimaculata sibirica					VU, Red List of Gunma Prefecture
ARTHROPODA/INSECTA	Eubasilissa regina					VU, Red List of Gunma Prefecture
ARTHROPODA/INSECTA	Nemotaulius admorsus					VU, Red List of Gunma Prefecture

Invasive alien animal species

Phylum	Scientific name	Common name	Impacts
CHORDATA/ACTINOPTERYGII	Oncorhynchus mykiss	Rainbowtrout	Actually (minor impacts)
CHORDATA/ACTINOPTERYGII	Oryzias latipes		Actually (minor impacts)

4.4 - Physical components

4.4.1 - Climate

Climatic region	Subregion
C: Moist Mid-Latitude climate with mild winters	Cwa: Humid subtropical (Mild with dry winter, hot summer)
D: Moist Mid-Latitude climate with cold winters	Dfb: Humid continental (Humid with severe winter, no dry season, warm summer)

4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres): 1200

a) Maximum elevation above sea level (in metres): 2150

Upper part of river basin ☑

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.
(This field is limited to 1000 characters)

Osawa River basin

4.4.3 - Soil

Mineral ☑

Organic ☑

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) *(This field is limited to 1000 characters)*

It is a mixture soil with minerals derived from ashes of volcano and organic matter derived from aquatic moss of montane wetland.

4.4.4 - Water regime

Water permanence

Presence?
Usually permanent water present

Source of water that maintains character of the site

Presence?	Predominant water source
Water inputs from rainfall	☑
Water inputs from surface water	☐
Water inputs from groundwater	☐

Water destination

Presence?
To downstream catchment

Stability of water regime

Presence?
Water levels largely stable

Please add any comments on the water regime and its determinants (if relevant). Use this box to explain sites with complex hydrology: *(This field is limited to 1000 characters)*

It seems that the water source of Yoshigadaira moor, Odaira moor, Heibee-ike pond and O-ike pond, Mizu-ike pond are rainfall, snowfall, surface water, and groundwater from mountain forests.

As for Anajigoku, the source is hot water from the volcanic system of Mt. Kusatsu-Shirane and groundwater from surrounding mountain forests.

The water from this area follows into the tributaries (Osawa River, Nagasasazawa River, Motoyama River) of Agatsuma River which is a tributary of Tone River.

4.4.5 - Sediment regime

Please provide further information on sediment (optional): *(This field is limited to 1000 characters)*

The geological characters originate from lava in volcanic areas. No remarkable erosion, transportation, accretion, and depositon of sediment occur, though the rock bed has being eroded increasingly.

4.4.6 - Water pH

Acid (pH<5.5) ☑

Please provide further information on pH (optional): *(This field is limited to 1000 characters)*

Yoshigadaira moor: pH 5.0-5.3,
Odaira moor: pH 4.8-4.9,
Heibee-ike pond and O-ike pond: pH 5.1,
Mizu-ike pond: pH 5.7-5.9,
Yugama: pH 1.0-1.2
Anajigoku: pH 2.6-2.8

4.4.7 - Water salinity

Fresh (<0.5 g/l) ☑

Please provide further information on salinity (optional): *(This field is limited to 1000 characters)*

There is a low level of salinity found in the site.

4.4.8 - Dissolved or suspended nutrients in water

Oligotrophic ☑

Dystrophic ☑

Please provide further information on dissolved or suspended nutrients (optional): *(This field is limited to 1000 characters)*

The water of Yoshigadaira moor and Odaira moor originate mainly from groundwater in surrounding mountain forests and therefore appears to include adequate nutrients. However, low temparaure in the area retards the decomposition of plant residue, which makes the water of those moors stained with abundant humic materials.

The water of Heibee-ike pond, O-ike pond, and Mizu-ike pond originate mainly from groundwater in surrounding mountain forests and include adequate nutrients, even though these ponds have been affected largely by volcanic activities including volcanic ashes.

Yugama is a crater lake with extremely high acidity and poor nutrients because of no vegetation.

While some plant species such as Jungermannia volcanicola grow, the water quality of the Motoyama River in Anajigoku is also oligotrophic.

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 site itself: i) broadly similar ◉ ii) significantly different ○

4.5 - Ecosystem services

4.5.1 - Ecosystem services/benefits

Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Wetland non-food products	Reeds and fibre	High
Genetic materials	Genes for tolerance to certain conditions (e.g., salinity)	High

Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Maintenance of hydrological regimes	Groundwater recharge and discharge	Medium
Climate regulation	Local climate regulation/buffering of change	Low

Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Picnics, outings, touring	Medium
Recreation and tourism	Nature observation and nature-based tourism	High
Spiritual and inspirational	Cultural heritage (historical and archaeological)	Medium
Spiritual and inspirational	Spiritual and religious values	High
Spiritual and inspirational	Aesthetic and sense of place values	High
Scientific and educational	Educational activities and opportunities	High
Scientific and educational	Long-term monitoring site	Medium

Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Biodiversity	Supports a variety of all life forms including plants, animals and microorganizms, the genes they contain, and the ecosystems of which they form a part	High
Soil formation	Sediment retention	Medium
Soil formation	Accumulation of organic matter	Medium
Nutrient cycling	Carbon storage/sequestration	Low

Other ecosystem service(s) not included above: *(This field is limited to 1000 characters)*

Inflow and outflow of groundwater are highly dependent on this site.

Corex that grows in these wetlands is important as it is used in making certain wares and artifacts (such as Konkonzori, Japanese sandal).

The site hosts a number of recreational activities such as picnic, nature observation, and eco-tourism.

There was a belief named “Kobuta Myojin” and are historic old roads. In the Edo era, people are said to have worshiped

“Kobuta Myojin”, a bowl-shaped floating island in Yoshigadaira moor, as sacred place. There is a possibility that “Kobuta Myojin” was a branch of Shirane Shrine, which assumes Mount Kusatsu-Shirane as an object of worship.

This site is part of Shiga Highland that is listed as a Biosphere Reserves of UNESCO.

Within the site: 50,000

Outside the site: 100,000

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

<no data available>

4.6 - Ecological processes

<no data available>

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	☑	☑
Local authority, municipality, (sub)district, etc.	☑	☑

Provide further information on the land tenure / ownership regime (optional): *(This field is limited to 1000 characters)*

Some 99% of Yoshigadaira Wetlands is national land (national forest) and the remaining 1% is public land owned by Nakanojo-town.

5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site: *(This field is limited to 1000 characters)*

Nagano Nature Conservation Office, Ministry of the Environment of Japan

Provide the name and title of the person or people with responsibility for the wetland: Tsutomu Asoshina, Director-General

Postal address: *(This field is limited to 254 characters)*

Nagano No.1 Joint Government Building,1108 Asahi-machi, Nagano-shi, Nagano prefecture
380-0846 JAPAN

E-mail address: NCO-NAGANO@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	In the surrounding area
Tourism and recreation areas	Low impact	Low impact	☑	☑

Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Recreational and tourism activities	Low impact	Low impact	☑	☑

Invasive and other problematic species and genes

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Invasive non-native/ alien species	Low impact	Medium impact	☑	☑
Problematic native species	Low impact	Medium impact	☑	☑

Geological events

Factors adversely affecting site	Actual threat	Potential threat	Within the site	In the surrounding area
Volcanoes	Medium impact	High impact	☑	☑
Avalanches/landslides	Low impact	Medium impact	☑	☑

5.2.2 - Legal conservation status

Global legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
UNESCO Biosphere Reserve	ShigaHighland		partly

National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
National Park	Joshin'etsukogenNationalPark	http://www.env.go.jp/en/nature/nps/park/parks/joshinetsu.html	whole

Non-statutory designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	MountsAsama,ShiraneandTanigawa	http://www.birdlife.org/datazone/sitefactsheet.php?id=15032	partly
Other non-statutory designation	WetlandsaroundKusatsu,asoneof500Impor	http://www.sizenken.biodic.go.jp/wetland/147/147.html	partly

5.2.3 - IUCN protected areas categories (2008)

II National Park: protected area managed mainly for ecosystem protection and recreation ☑

5.2.4 - Key conservation measures

Legal protection

Measures	Status
Legal protection	Implemented

Species

Measures	Status
Control of invasive alien plants	Partially implemented

Human Activities

Measures	Status
Communication, education, and participation and awareness activities	Partially implemented
Research	Partially implemented

5.2.5 - Management planning

Is there a site-specific management plan for the site? In preparation

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 ◉

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
Water regime monitoring	Implemented
Plant community	Implemented
Plant species	Implemented

(This field is limited to 2500 characters)

Gunma Prefecture government has been conducting a long-term survey since last year.

6 - Additional material

6.1 - Additional reports and documents

6.1.1 - Bibliographical references

(This field is limited to 2500 characters)

Kuni Village, 1973, Kuni Village publication

Kusatsu Town, 2013, Yoshigadaira – Working toward Ramsar site, 586th issue of town newsletter “Ideyu”

Nakanojo Town, 2014, Report of the Environment Research around Yoshigadaira Wetland in Nakanojo Town

Nakanojo Town, 2014, Report of an additional boring and water quality survey of the Environment Research around Yoshigadaira Wetland

Nakanojo Town, 2014, Report of the vegetation survey at Chatsubomigoke Park, issued March 2014

Information Source:
Description of Kusatsu-Shirane volcano was referred to the website of Volcanic Fluid Research Center, Tokyo Institute of Technology <http://www.ksvo.titech.ac.jp/jpn/kusatsu.html>

Reddish 3D map of Mount Kusatsu-Shirane was created by Tonegawa (Tone River) Erosion and Sediment Control Management Office of Kanto Regional Development Bureau, Ministry of Land, Infrastructure, Transport and Tourism

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>

6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:

Odaira moor pond (*Nakanojo Town, 21-05-2013*)

Anajigoku (Jungermannia volcanicola communities) (*Nakanojo Town, 06-07-2013*)

Yoshigadaira moor ponds (*Nakanojo Town, 13-07-2013*)

Odaira moor pond (*Nakanojo Town, 23-05-2013*)

Overview of Yoshigadaira moor (*Nakanojo Town, 16-07-2012*)

Asian skunk cabbage (Lysichiton camtschatcense) (*Nakanojo Town, 21-05-2013*)

Heibeeike pond (*Nakanojo Town, 09-05-2013*)

Oike pond (*Nakanojo Town, 09-05-2013*)

Mizu-ike pond (*Nakanojo Town, 09-05-2013*)

Yugama crator lake (*Kusatsu Town, 21-10-2009*)

Anajigoku Overview (*Nakanojo Town, 05-06-2013*)

Eriopqhorum vaginatum in Yoshigadaira (*Nakanojo Town, 06-07-2013*)

Anajigoku (Jungermannia volcanicola communities) (*Nakanojo Town, 06-07-2013*)

Mt. Kusatsu-Shirane (*Nakanojo Town, 19-09-2013*)

Solfatara plants (*Nakanojo Town, 21-05-2013*)

Forest Green Tree Frogs at Heibee pond (*Nakanojo Town, 13-06-2013*)

6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation 2015-05-28