

Information Sheet on Ramsar Wetlands (RIS) – 2009-2012 version

Available for download from http://www.ramsar.org/ris/key_ris_index.htm.

Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX.22 of the 9th Conference of the Contracting Parties (2005).

Notes 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. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework and guidelines for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 14, 3rd edition). A 4th edition of the Handbook is in preparation and will be available in 2009.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

1. Name and address of the compiler of this form: Mr.

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JAPAN

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Designation date

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Site Reference Number

TEL : 086-223-1586

FAX : 086-224-2081

2. Date this sheet was completed/updated:

June 22, 2012

3. Country:

JAPAN

4. Name of the Ramsar site:

The precise name of the designated site in one of the three official languages (English, French or Spanish) of the Convention. Alternative names, including in local language(s), should be given in parentheses after the precise name.

Miyajima

5. Designation of new Ramsar site or update of existing site:

This RIS is for (tick one box only):

a) Designation of a new Ramsar site; or

b) Updated information on an existing Ramsar site

6. **For RIS updates only**, changes to the site since its designation or earlier update:

a) Site boundary and area

The Ramsar site boundary and site area are unchanged:

or

If the site boundary has changed:

i) the boundary has been delineated more accurately ; or

ii) the boundary has been extended ; or

iii) the boundary has been restricted**

and/or

If the site area has changed:

i) the area has been measured more accurately ; or

ii) the area has been extended ; or

iii) the area has been reduced**

** **Important note:** If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:

7. **Map of site:**

Refer to Annex III of the *Explanatory Note and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

a) A map of the site, with clearly delineated boundaries, is included as:

i) a hard copy (required for inclusion of site in the Ramsar List): ;

ii) an electronic format (e.g. a JPEG or ArcView image) ;

iii) a GIS file providing geo-referenced site boundary vectors and attribute tables .

b) Describe briefly the type of boundary delineation applied:

e.g. the boundary is the same as an existing protected area (nature reserve, national park, etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

Land areas are marked with the boundary delineation based on the Seto Island Sea National Park Class 1 Special Zone area facing from the north western coastal zone to the south western coastal zone. Coastal areas are marked with the boundary delineation based on the coastal areas of the Seto Island Sea National Park Class 1 Special Zone in front of the mentioned land areas.

8. **Geographical coordinates** (latitude/longitude, in degrees and minutes):

Provide the coordinates of the approximate centre of the site and/or the limits of the site. If the site is composed of more than one separate area, provide coordinates for each of these areas.

Centre of the southern area: 132°16'09"E, 34°14'34"N

9. General location:

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

The site lies in Hiroshima Prefecture in the Chugoku District of Honshu Island (main island) of Japan.

The site is situated in the southern part of Hatsukaichi City (population: about 0.11million, surface area: 489 square km) which is about 20km east of Hiroshima City, prefectural capital of Hiroshima Prefecture

10. Elevation: (in metres: average and/or maximum & minimum)

T.P.(Average tidal level of Tokyo Bay)

Minimum 0m: maximum 2m

11. Area: (in hectares)

142ha

12. General overview of the site:

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

Miyajima is an island situated at the coast of Seto Inland Sea, in the north western part of Hiroshima Bay. The whole area is designated as the Seto Inland Sea National Park, having received distinction as a place of scenic beauty and a historic site. Moreover, a part of the island area is designated as a UNESCO World Heritage site and the Ramsar Site falls within the buffer zone of the World Heritage site.

Especially, the southern coast where the said wetland is located, is a well conserved natural coast area which have mostly been lost in other islands of the Seto Inland Sea Region with the mountain forests at the back. The spring water from the mountains and the inflow of seawater at the time of spring tide are mixed to form a tidal marsh, providing the environment to enable the inhabitation of the vulnerable dragonfly *Orthetrum poecilops miyajimaensis* which has only been recorded at Miyajima and at one site in southern China.

13. Ramsar Criteria:

Tick the box under 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). All Criteria which apply should be ticked.

1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9

14. Justification for the application of each Criterion listed in 13 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 2: The vulnerable dragonfly, *Orthetrum poecilops miyajimaensis* (IUCN Red list VU, MOE Red list CR+EN, designated animal by National Parks Law) is the endemic subspecies of living only in Miyajima. Even the same species live in only 2 sites in the world, Miyajima and southern China.

Criterion 9: Miyajima is the only habitat of *Orthetrum poecilops miyajimaensis* and supporting the 100% population of *Orthetrum poecilops miyajimaensis*.

15. 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:

Palaearctic region-Japanese Evergreen Forest

b) biogeographic regionalisation scheme (include reference citation):

Udvardy, M. D. F. (1975). *A classification of the biogeographical provinces of the world.*

16. 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:

Whole island consists of biotite granite of the late Mesozoic Cretaceous.

Geomorphology:

Tidal marsh (35ha) forests at the back, and coast areas.

Origins:

Natural

Hydrology:

At the tidal marsh, freshwater from the spring water of the hinterland and seawater flowing in at high tide are mixed to form brackish water

Soil type:

Clay, fine sand, coarse sand make clear layers with the grain size pattern at the wetland mainly composed of silty sand. But at the mountain ridge, layers of decomposed granite have fallen down from the soil of the surrounding mountains, forming sedimentary layers of 30-70cm

Water quality:

Salinity within the wetland changing in accordance with the ebb and flow of the tide is about 0-3%

pH is 8-5.

EC is 0-4 S/m

Water depth:

Water depth within the wetland changes between 0-1m in accordance with the tidal level.

Fluctuations in water level:

The tidal level changes up to about 3m at maximum according to the ebb and flow of the tide.

General climate:

It has a temperate climate throughout the year with the small amount of rainfall except rainy season. From the summer to autumn seasons, there are occasions of the influence of typhoons. Data from Hatsukaichi City HP shows that the fluctuation range of monthly average temperature is 5.0-29.3 degrees Celsius, with an average temperature of 16.1 degrees Celsius. The average rainfall is 1511mm.

17. Physical features of the catchment area:

Describe the surface area, general geology and geomorphological features, general soil types, and climate (including climate type).

Besides spring water supplied from the forests in the hinterland of the wetland, seawater flows in at high tide.

18. Hydrological values:

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

Existence of the wetland and surrounding vegetation of *Cladium chinense* Nees plant community help to maintain the balance of the amount of sand flowing in and out of the coast by the drift sand of the tide and to keep the coastline stable as the natural coast.

But most of the natural coast has been lost owing to the bank protection work at the islands in the Seto Inland Sea and there are few tidal marshes such as the said wetland left.

19. 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.

E, H

20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

In the Coastal area where this site is located, *Vitex rotundifolia* L.f. (Beach vitex) and *Cladium chinense* (Nees) plant communities are seen to develop.

Mammals such as *Cervus nippon* (Sika deer) within the island and in the said wetland are seen as their habitat. Recently, *Sus scrofa* (Wild Boar) is recognized as well.

As for the birds, non migratory birds such as *Parus varius* (Varied Tit), *Parus minor* (Japanese Tit), *Pandion haliaetus* (Osprey), and *Falco peregrinus* (Peregrine Falcon) are seen as their habitats, and migratory birds such as *Anas penelope* (Wigeon), *Charadrins dubius* (Little Ringed Plover), and *Tringa hypoleucos* (Common Sandpiper) etc. come flying.

As for the insects, besides *Orthetrum poecilops*, rare species such as *Cicindela lewisi* (Tiger Beetle) and *Halobates matsumurai* are recognized as their habitats.

21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 14, 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.*

The following plant species on the Red List of the Ministry of the Environment, Japan have been recorded at the site:

Potentilla riparia Murata var. *miyajimensis* Narubashi (Tormentil sp.) (CR)

Triglochin maritimum L. (Seaside Arrowgrass) (NT)

Andruris japonica (Triuridaceae sp.) (VU)

Psilotum nudum (Whisk Fern) (NT)

22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 14, 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.*

The following animal species on the Red List of the Ministry of the Environment, Japan have been recorded at the site:

Falco peregrinus japonensis (Peregrine Falcon) (VU) (IUCN: LC)

Butastur indicus (Grey-faced Buzzard) (VU) (IUCN: LC)

Pandion haliaetus haliaetus (Osprey) (NT) (IUCN: LC)

Orthetrum poecilops ssp. *Miyajimaense* (Mangrove Skimmer) (CR+EN) (IUCN: VU)

Cicindela lewisi (Tiger Beetle sp.) (VU)

Halobates matsumurai (Tiger Beetle) (VU)

Uca lactea lactea (fiddler crab) (VU)

23. Social and cultural values:

a) Describe if the site has any general social and/or 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:

Miyajima is designated as the National Park as well as being the Historical Site and the Place of Scenic Beauty and thus not only the development activities are legally regulated but also it is considered as the holy place of worship from old times, where rich natural environment remains more in comparison with other islands of the Seto Inland Sea.

This island wholly is a subject of nature worship from old times. Moreover, in the sea regions surrounding the said wetland, oyster cultures are seen as well.

b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning?

If Yes, tick the box and describe this importance under one or more of the following categories:

- i) sites which provide 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:

- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where 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:

Miyajima itself in all, from old times, regarded as a subject of worship, having conserved the natural coast areas which have been lost in other regions and forests in the hinterland, maintains the wetland environment which enables inhabitation of *Orthetrum poecilops*.

24. Land tenure/ownership:

- a) within the Ramsar site:
National forests: (107ha), public waters: (35ha)
- b) in the surrounding area:
National land, public waters

25. Current land (including water) use:

- a) within the Ramsar site:
None
- b) in the surroundings/catchment:
Oyster cultures

26. 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:
Past: Part of the wetland was developed as swimming beach (at present not in use) but no negative impact on the ecological character on this site.
Present: None
Future: None
- b) in the surrounding area:
None

27. Conservation measures taken:

- a) List national and/or international category and legal status of protected areas, including boundary relationships with the Ramsar site:
In particular, if the site is partly or wholly a World Heritage Site and/or a UNESCO Biosphere Reserve, please give the names of the site under these designations.
 - National Park Class 1 Special Zone : 107ha (Natural Parks Law, May 18, 1950)
Such activities as erecting structures, felling trees, mining minerals, and reclamation require permission from the prefectural governor.
 - Special Historical Sites, Special Places of Scenic Beauty : 107ha (Cultural Properties Protection Law, Nov. 22, 1952)

Such activities as erecting structures, felling trees, mining minerals, and reclamation require permission from the prefectural governor or director-general of the Agency for Cultural Affairs.

b) If appropriate, list the IUCN (1994) protected areas category/ies which apply to the site (tick the box or boxes as appropriate):

Ia ; Ib ; II ; III ; IV ; V ; VI

National Park : V、 Cultural Properties: III

c) Does an officially approved management plan exist; and is it being implemented?:

- Regional Management Plan for the Seto Inland Sea National Park of Hiroshima Prefecture Conservation (1989)
- Management Plan for Itsukushima of the Special Historical Sites and Special Places of Scenic Beauty (2007)

d) Describe any other current management practices:

- Wetland conservation activities by Coordinating Committee for Protection and Management of *Orthetrum poecilops* composed of concerned government organizations and researchers
- Cleaning activities by NGO of the articles which have been washed ashore
- At the tidal marsh where inhabit *Orthetrum poecilops*, concerned government organizations and researchers, NPOs are engaged in conservation activities.

28. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.

None

29. Current scientific research and facilities:

e.g., details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

- Field research station : None
- Current research project
- Inhabitation research of *Orthetrum poecilops* :
(Conducted by Chugoku-Shikoku Regional Environment Office of Ministry of the Environment of Japan annually since 2008 in succession): Conducting the monitoring about the number of *Orthetrum poecilops* inhabitation and environment of the wetland, which is their habitat
- Implementation of Environmental Improvement Plan for the inhabitation of *Orthetrum poecilops* :
(conducted by Chugoku-Shikoku Regional Environment Office of Ministry of the Environment of Japan annually since 2011 in succession) : Conducting the research, intended to create new habitat for *Orthetrum poecilops* and to improve environment of the wetland which is their existing habitat.

30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:

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

Pamphlets and posters developed by Coordinating Committee for Protection and Management of *Orchetrum poecilops*

Establishment of signboard by Chugoku-Shikoku Regional Environment Office, Ministry of Environment, Japan. Observation hides and facilities for visitors are not provided.

31. Current recreation and tourism:

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

Few visitors come to this site.

32. Jurisdiction:

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

Territorial

Hatsukaichi City, Hiroshima Prefecture

Functional

Ministry of the Environment (National Park)

Agency for Cultural Affairs, Hiroshima Prefecture (Special Historical Sites, Special Places of Scenic Beauty)

Agency for Cultural Affairs (World Cultural Heritage)

Hiroshima Prefecture (Public waters, coastal areas)

Forestry Agency (National forest)

33. 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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34. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

Hatsukaichi City, *Hiroshima* Prefecture, “Nihon Sankei -Miyajima “ (the three most scenic spots of Japan-Miyajima)

Hiroshima Prefecture, “The 23rd *Takara* Harmonist Fund, Research Aid Report 2008 ,
Recovery of the habitat of *Orchetrum poecilops*”

Chugoku-Shikoku Regional Environment Office, Ministry of the Environment, “ Field research report on the habitat of *Orchetrum poecilops*, *Hiroshima* Prefecture area of the Seto Inland Sea National Park 2007, 2008, 2009, 2010.”

Miyajima Tourist Association official site, “Miyajima, an island where people and gods live together”

Masahiro Kaibori, Graduate School of Integrated Arts and Sciences, *Hiroshima* University,
“World Heritage-Itsukushima, land disaster and erosion control of gardens”

Landscape Design Committee of Japan Society of Civil Engineers, “Model cases of landscape designs”

Miyajima Natural Botanical Garden Digital Museum, Graduate School of Science, Hiroshima University, “Plants and flora in Miyajima”

Miyajima Natural Botanical Garden Digital Museum, Graduate School of Science, Hiroshima University, “Wild birds in Miyajima”