

# Information Sheet on Ramsar Wetlands (RIS)

*Categories approved by Recommendation 4.7, as amended by Resolution VIII.13 of the Conference of the Contracting Parties.*

Note for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.

2. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Bureau. Compilers are strongly urged to provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of maps.

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FOR OFFICE USE ONLY.

DD MM YY

Designation date Site Reference Number

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

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## 2. Date this sheet was completed/updated:

January 2005

## 3. Country:

Finland

## 4. Name of the Ramsar site:

Quark Archipelago

## 5. Map of site included:

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

**a) hard copy** (required for inclusion of site in the Ramsar List): Yes.

**b) digital (electronic) format** (optional): Yes.

## 6. Geographical coordinates (latitude/longitude):

63°26' N / 21°25' E

## 7. General location:

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

The nearly unbroken area is situated in the province of Western Finland, in the Quark between the Gulf of Bothnia and the Bothnian Bay, in the municipalities of Uusikaarlepyy city, Maksamaa and Mustasaari, 22 km southwest of Uusikaarlepyy city centre and 22 km north of Mustasaari village and Vaasa city centre. The municipalities (1 698 sq.km of land) have ca. 25 200 residents. Vaasa city (183 sq.km of land) has ca. 56 700 residents.

## 8. Elevation: (average and/or max. & min.)

20–0 m

## 9. Area: (in hectares)

63 699 ha

## 10. Overview:

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

Situated in the narrowest and shallowest area of the Gulf of Bothnia, the Quark, strong salt gradient causes the area being the northern limit for many marine species, such as Eider (*Somateria mollissima*) and Blue Mussel (*Mytilus edulis*). The determining features of the archipelago are polymorphous and small-featured set of living organisms and geomorphology. The archipelago bird fauna is exceptionally rich. An unbroken series of archipelago development is represented, from sea zone and underwater rocks to large forested islands. Rapid landupheaval and succession makes the area very important from the point of nature conservation.

## 11. Ramsar Criteria:

Circle or underline each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11).

1, 2, 4, 7 & 8

<u>1</u>	<u>2</u>	3	<u>4</u>	5	6	<u>7</u>	<u>8</u>
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## 12. Justification for the application of each Criterion listed in 11. above:

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

1) A unique example of a near-natural wetland type (archipelago in shallow marine waters) in the EU Boreal region, including 2 priority natural wetland habitat types (coastal lagoons, boreal Baltic coastal meadows).

2) The site supports 5 nationally threatened bird species. (see section 20) About 10 species of the EU Birds Directive Annex I breed in the area, including a significant population of Arctic Tern (*Sterna paradisaea*) with more than 1 700 pairs and Common Tern (*S. hirundo*) with more than 150 pairs. It is the habitat for the Grey Seal (*Halichoerus grypus*), one threatened mammal species of the EU Habitats Directive Annex II.

4) Finland's responsibility species also include e.g. Black Guillemot (*Cepphus g. grylle*) with 7 600 adults in breeding season, Razorbill (*Alca torda*) with 1 500 adults and hundreds of pairs of Tufted Ducks (*Aythya fuligula*), Velvet Scoters (*Melanitta fusca*), Red-breasted Mergansers (*Mergus serrator*) and Goosanders (*M. merganser*). Shallow waters are important staging areas for waterfowl during migration and molting periods.

7 The site builds habitat i.e. for the Whitefish (*Coregonus lavaretus*) and near-threatened sea-spawning Grayling (*Thymallus thymallus*)

8 It's an important spawning area for many species beneath the Whitefish (*Coregonus lavaretus*) and the Grayling (*Thymallus thymallus*).

**13. Biogeography** (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

**a) biogeographic region:**

Southern boreal forest vegetation zone.

**b) biogeographic regionalisation scheme** (include reference citation):

Etelä-Suomen ja Pohjanmaan metsien suojelun tarve-työryhmä. Puheenjohtaja: Ruuhijärvi, R., Sihteerit: Kuusinen, M., Raunio, A. and Eisto, K. 2000. Metsien suojelun tarve Etelä-Suomessa ja Pohjanmaalla. Etelä-Suomen ja Pohjanmaan metsien suojelun tarve-työryhmän mietintö. Suomen ympäristö 437. Ympäristöministeriö. Helsinki.

Working group on the need for forest protection in southern Finland and Ostrobothnia. Chairman Ruuhijärvi, R., Secretaries Kuusinen, M., Raunio, A. And Eisto, K. 2000. Forest protection in southern Finland and Ostrobothnia. The Finnish Environment 437. 284; Ministry of the Environment.

**14. Physical features of the site:**

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

**Geology and geomorphology:** Geochemically located on border of Volcanic sedimentary zone of SW Finland and Svecokarelian schist belt. Bedrock is composed of mica gneisses and mica schists with granodiorite, tonalite and quartz diorite.

Geomorphology characterized by east–west orientated, winding morainic ridges of Rogen-type.

**Origins:** Natural.

**Hydrology:** Water-flow and stratification strong compared to the Gulf of Bothnia in general.

**Soil type:** Mainly glacial hummocky and ground moraines and bedrock terrain.

**Water quality:** General quality excellent in western part and good in eastern part. Affected by humic waters of River Kyrönjoki. Eutrophication more intense in southeastern parts. Salinity ca. 3–6 ‰.

**Depth of water:** Mostly 1–10 m, maximum ca. 29 m. Fluctuation of water-level relatively strong. Water-level usually low in spring and high in autumn and winter.

**Climate:** Duration of growing season ca. 155 days, mean annual temperature ca. +3 °C, mean

annual rainfall ca. 550 mm. Waters ice-covered normally from early January to late April. Southern boreal forest vegetation zone.

### 15. Physical features of the catchment area:

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

The climate and general geological features are much the same in the catchment areas as in the Ramsar sites. Look partly chapter 14.

### 16. Hydrological values:

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

None significant.

### 17. Wetland Types

#### a) presence:

Circle or underline the applicable codes for the wetland types of the Ramsar "Classification System for Wetland Type" present in the Ramsar site. Descriptions of each wetland type code are provided in Annex I of the *Explanatory Notes & Guidelines*.

**Marine/coastal:** Marine: A, D & H

<u>A</u>	B	C	<u>D</u>	E	F	G	<u>H</u>	I	J	K	Zk(a)
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**Inland:** U

L	M	N	O	P	Q	R	Sp	Ss	Tp	Ts	<u>U</u>	Va	Vt	W	Xf	Xp	Y	Zg	Zk(b)
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**Human-made:**

1	2	3	4	5	6	7	8	9	Zk(c)
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**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.

A – Permanent shallow marine waters

D – Rocky marine shores and offshore islands

H – Brackish meadows

U – Non-forested peatlands

**18. General ecological features:**

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site.

The outer archipelago is composed of several groups of islands divided by shallow open sea areas. Valassaaret Islands is characterized by Storskär Island surrounded by ca. 80 small, nearly treeless and stony islands and islets. Because of strong landupheaval (9 mm per year) virgin shores, such as coastal meadows and natural forests in primary succession stages, are relatively quickly born. A whole development series of wetlands from wrinkling and overgrowing flads to closed glo-lakes is represented. Treeless islets are abundant and morainic ridges are high, steep and broad. The shores are mainly low and stony. Larger islands are covered with forests dominated by Downy Birch (*Betula pubescens*) or Spruce (*Picea abies*). Forested areas include dry heaths, rich wooded meadows and small patches of mires.

**19. Noteworthy flora:**

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc. ***Do not include here taxonomic lists of species present - these may be supplied as supplementary information to the RIS.***

Data not available.

**20. Noteworthy fauna:**

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. ***Do not include here taxonomic lists of species present - these may be supplied as supplementary information to the RIS.***

Threatened birds (VU in Finnish Red List) include Scaup (*Aythya marila*), White-tailed Eagle (*Haliaeetus albicilla*), Black-headed Gull (*Larus ridibundus*) with >400 pairs, Lesser Black-backed Gull (*Larus f. fuscus*) with 450 pairs and Caspian Tern (*Sterna caspia*) with 50 pairs. Ca. 10 species of the EU Birds Directive Annex I breed in the area, including a significant population of Arctic Tern (*Sterna paradisaea*) with >1 700 pairs and Common Tern (*S. hirundo*) with >150 pairs.

Finland's responsibility species also include e.g. Black Guillemot (*Cephus g. grylle*) with 7 600 adults in breeding season, Razorbill (*Alca torda*) with 1 500 adults and hundreds of pairs of Tufted Ducks (*Aythya fuligula*), Velvet Scoters (*Melanitta fusca*), Red-breasted Mergansers (*Mergus serrator*) and Goosanders (*M. merganser*).

Shallow waters are important staging areas for waterfowl during migration and molting periods.

Mammals of the EU Habitats Directive Annex II include Grey Seal (*Halichoerus grypus*) (EN in Northern Europe) and Ringed Seal (*Phoca hispida botnica*). Waters are very valuable as spawning areas for e.g. Whitefish (*Coregonus lavaretus*) and near-threatened sea-spawning Grayling (*Thymallus thymallus*).

**21. Social and cultural values:**

e.g., fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values.

Significant values include scientific research and fishing.

**22. Land tenure/ownership:**

(a) within the Ramsar site:

Private-owned for the major part.

(b) in the surrounding area:

Private-owned for the major part.

**23. Current land (including water) use:**

(a) within the Ramsar site:

Fishing is an important livelihood in the area. Hunting of waterfowl in autumn occurs in some areas. Relatively few holiday cottages.

(b) in the surroundings/catchment:

Recreation.

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

Oil pollution damage is the main threat. A severe oil spill took place in 1984, after which the population of Black Guillemot decreased by 30 %, but recovered by the early 1990s. American Mink (*Mustela vison*) has caused notable damage in some of the colonies of Arctic Terns and Black Guillemots in the 1990s. Increased boating during the breeding season and landing on islands disturb the breeding of birds. Hunting of waterfowl in autumn and cutting of forests on larger islands affects negatively on the site.

**25. Conservation measures taken:**

List national category and legal status of protected areas, including boundary relationships with the

Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

The site included in the Natura 2000 Network as a part of the Quark Archipelago (128 162 ha), designated both as SPA and SCI. It is also included in the Helsinki Commission (Helcom) network of Baltic Sea Protected Areas as a part of the Outer Bothnian Treshold Archipelago (The Quark). Eastern part of the area is included in the Shore Conservation Programme. Valassaaret–Björkögrunden was protected as a bird sanctuary in 1948, being unofficially protected already since the 1920s. Access is permitted in the breeding season only at two of the islands, and at the main islands it is permitted to use only marked trails. A decision of principle to protect Mikkelsaaret Archipelago was made in 1989 by the Council of Ministers and an area of 460 ha has been established as a private protected area. Larger private protected areas include Valassaaret–Björkögrunden (15 011 ha) and Mikkelsaaret Archipelago (7 895 ha). Several smaller private protected areas are also included in the site.

#### **26. Conservation measures proposed but not yet implemented:**

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

Conservation of the Natura 2000 site outside the already protected areas will be carried out under the Nature Conservation Act, Water Act and Land Use and Building Act.

#### **27. Current scientific research and facilities:**

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

The breeding bird fauna was first surveyed in the early 1930s and intensively since the late 1980s. Several ecological studies on bird fauna have been carried out, e.g. on the breeding biology and ecology of waterfowl. Research institutes and researchers of several universities carry out scientific research at Mikkelsaaret Archipelago, including Finnish Game and Fisheries Research Institute and Marine Research Institute. The flad of Östra Finnhamnen is a research site for an international Perch (*Perca fluviatilis*) fishery project. Valassaaret Biological Station is located on Ebbskär Island, and has been functioning also as a bird station since the late 1960s.

#### **28. Current conservation education:**

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

Valassaaret Biological Station functions as an education site.

#### **29. Current recreation and tourism:**

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

Only few tourist groups visit the main islands of Valassaaret in summer. Boating is intense in some areas.

### **30. Jurisdiction:**

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

**a)** West Finland Regional Environment Centre, **b)** Ministry of the Environment.

### **31. Management authority:**

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

West Finland Regional Environment Centre, PO Box 262, FIN-65101 Vaasa, Finland.

### **32. Bibliographical references:**

scientific/technical references only. If biogeographic regionalisation scheme applied (see 13 above), list full reference citation for the scheme.

Hildén, O. & Hario, M. 1993. Muuttuva saaristolinnusto. Forssan kirjapaino Oy.

Hildén, O., Ulfvens, J., Pahtamaa, T. & Hästbacka, H. 1995. Changes in the archipelago bird populations of the Finnish Quark, Gulf of Bothnia, from 1957–60 to 1990–91. *Ornis Fennica* 72.

Hägg, J., Hilditch, K. & Pesola, A. 2000. Valassaarten pesimälinnusto 2000. Manuscript. Ostrobothnia Australis.

Leivo, M. 2000. Suomen kansainvälisesti tärkeät lintualueet. Linnut-vuosikirja 1999. (English summary: Important Bird Areas in Finland).

Leivo, M., Asanti, T., Koskimies, P., Lammi, E., Lampolahti, J., Mikkola-Roos, M. & Virolainen, E. 2002. Suomen tärkeät lintualueet FINIBA. BirdLife Suomen julkaisuja 4, Suomen graafiset palvelut, Kuopio.

Nyman, C. & Lax, H-G. 1998. M/S Eiran öljyvahingon pitkäaikaisvaikutukset Merenkurkussa; Osa I: M/S Eiran öljypäästön pitkäaikaisvaikutukset Merenkurkun rannoilla, sedimenteissä ja pohjaeläimistössä. Suomen ympäristö 65, Länsi-Suomen ympäristökeskus.

Pahtamaa, T. 1999. Pohjoisen Merenkurkun saaristolinnusto. Metsähallituksen luonnonsuojelujulkaisuja A 97.

Pahtamaa, T., Rajander, J., Hägg, J., Hildén, O., Missonen, T. & Koivusaari, J. 1998. M/S Eiran öljyvahingon pitkäaikaisvaikutukset Merenkurkussa; Osa III: Öljyonnettomuuden pitkäaikaisvaikutukset Merenkurkun linnustoon. Suomen ympäristö 65, Länsi-Suomen ympäristökeskus.

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