

# Information Sheet on Ramsar Wetlands (RIS)

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

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**Note: It is important that you read the accompanying Explanatory Note and Guidelines document before completing this form.**

**1. Date this sheet was completed/updated:**

July 18<sup>th</sup>, 2002

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**2. Country:**

NORWAY

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**3. Name of wetland:**

JÆREN WETLAND SYSTEM

- **18 new separate areas (units) in addition to 4 existing areas (units) (established as part of the Ramsar site in 1985)**
- **Extention of unit - Grudavatn**

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**4. Geographical coordinates:**

1. Alvevatn: 58° 33'N - 5° 40'E
2. Bjårvatn: 58° 33'N - 5° 46'E
3. Harvalandsvatn: 58° 50'N - 5° 4'E
4. Lonavatn: 58° 47'N - 5° 42'E
5. Orrevatn: 58° 45'N - 5° 32'E (central and most important site)
6. Smokkevatn: 58° 43'N - 5° 39'E
7. Søylandsvatn: 58° 42'N - 5° 36'E
8. Øksnevadtjønn: 58° 47'N - 5° 41'E
9. Oгна - Brusand: 58° 42'N - 5° 32'E
10. Børaunen: 59° 01'N - 5° 40'E
11. Grannesbukta: 58° 56'N - 5° 42'E

12. Hagavågen: 58° 56'N - 5° 37'E
13. Kvasseheim: 58° 33'N - 5° 41'E
14. Nærlandstangen-Obrestad: 58° 40'N - 5° 35'E
15. Strandnesvågen: 58° 54'N - 5° 37'E
16. Linemyr: 58° 43'N - 5° 38'E
17. Storamyr: 58° 57'N - 5° 36'E
18. Vigremyr: 58° 39'N - 5° 37'E

Extension of Grudavatn unit:

1. Grudavatn: 58° 47'N - 5° 37'E

Other existing areas (units):

2. Kolnes: 58° 49'N – 5° 33'E
3. Orre-Reve: 58° 45'N – 5° 30'E
4. Skeie: 58° 43'N – 5° 32'E

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**5. Elevation:** (average and/or maximum and minimum)

0-5 m.a.s.l. sea side localities

20 m.a.s.l. inland localities

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**6. Area:** (in hectares)

18 new units: 3048,8 (ca. 305 km<sup>2</sup>)

4 existing units: 206,9

Total: **3255,7 ha**

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**7. Overview:** (general summary, in two or three sentences, of the wetland's principal characteristics)

The region of Jæren and the Wetlands system lies on the SW-part of Norway in a agricultural dominated area with former extensive wetlands. Coastal sites are for a large part intact, while freshwater sites have been drained on a large scale. Marine areas are dominated by sand, mud, pebble or stone shores, with large areas of dune-systems. Freshwater sites are characterised by shallow water and extensive stands of *Phragmites communis*. Three smaller mire-systems have also been included.

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8. **Wetland Type:** (please circle the applicable codes for wetland types as listed in Annex I of the Explanatory Note and Guidelines document)

**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)**

**Please now rank these wetland types by listing them from the most to the least dominant:**

Marine: E, G, B, A

Freshwater: O, U

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9. **Ramsar Criteria:** (please circle the applicable criteria; see point 12 below)

**1**                    **2**                    **3**                    **4**                    **5**                    6                    7                    8

**Please specify the most significant criterion applicable to this site: 5**

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10. **Map of site included? YES**

(Please refer to the *Explanatory Note and Guidelines* document for information regarding desirable map traits.)

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11. **Name and address of the compiler of this form:**

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***Please provide additional information on each of the following categories by attaching extra pages (please limit extra pages to no more than 10):***

12. **Justification of the criteria selected under point 9, on previous page.** (Please refer to Annex II in the *Explanatory Note and Guidelines* document).

- 1 The Jæren Wetlands System is beyond comparison the single most important area for wetland related birds in Norway. This applies especially as a staging and wintering area. Large areas of kelp beds are important for seabirds, and kelp washed ashore supports huge numbers of migrating waders etc. along the coastline (the entire coastline have been protected - ca. 70 km). The freshwater areas are important in Norway for breeding birds.

2. For some species the site are especially important, eg. *Mergus albellus*(staging and wintering) and *Crex crex* (breeding). Nationally endangered birdspecies like Southern Dunlin *Calidris alpina* ssp. *schinzii*, Yellow Wagtail *Motacilla flava* ssp *flavissima* and *Motacilla flava* ssp *flava* have important breeding sites in the area. The areas are nationally the most important for Corncrake *Crex crex*.
3. The wetlands at the southwestern corner of Norway is without comparison the single most important site for wetland birds in Norway. This particularly applies for staging and wintering species, but also as a breeding area of endangered species.
4. Both freshwater sites and marine shallow bays are internationally important in relation to staging and wintering birds, since large numbers of particularly swans, geese and ducks use the area.
5. Highest counts of waders and waterfowl regularly exceed by good margins 20.000.

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13. **General location:** (include the nearest large town and its administrative region)

Rogaland county, sites in 7 different municipalities, nearest town being Stavanger (ca. 200.000 inhab) to the north (1-20km).

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14. **Physical features:** (e.g. geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth water permanence; fluctuations in water level; tidal variations; catchment area; downstream area; climate)

Especially glacial deposits have formed the flat landscape and the shores in the region. A number of moraine deposits are both nationally and internationally interesting. The extensive dune-systems are the largest in Norway. All The freshwater lakes are mostly shallow (0-10m), often with lush aquatic vegetation. The climate is typically Atlantic, with typically West-European mild winters and relatively warm summers with much annual precipitation (>1500mm).

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15. **Hydrological values:** (groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.)

Since the area of Jæren is heavily influenced by agriculture, a drainage system controls the freshwater flow in the area. The importance of the remaining wetlands in the lowland is high in relation to their function as sediment traps, in water purification (high level of eg nitrogen pollution in the area). Flooding is not regarded as a significant problem in this area. The importance of the sites as shoreline stabilizers have become more accepted in the recent years and restrictions have been put on activities in the adjacent areas, and the entire coast line have been put under nature protection.

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16. **Ecological features:** (main habitats and vegetation types)

Situated in the boreonemoral zone, and characterized by:

- Mud, silt or gravel shores with tidal zones, partly covered with kelp beds.

- Extensive moraine deposited shores consisting of shingle and larger stones.
- Large intact dune-systems, with front dunes and dune slacks and wet meadows. Characteristic dune species is i.a. *Ammophila arenaria*.
- Freshwater lakes in varying degree covered with lush vegetation, in particular *Phragmites communis*.
- Both nutrient poor precipitation mires and minerogenic mires.

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17. **Noteworthy flora:** (indicating, e.g., which species/communities are unique, rare, endangered or biogeographically important, etc.)

Especially the dune-systems with dune slacks and wet meadows are important for the flora, with nationally rare species like *Dactylorhiza purpurella*, *Epipactis palustris*, *Eryngium maritimum*, *Equisetum rothmaleri*, *Elatine hexandra*, *Gentiana pneumonanthe*, *Gentiana amarella* ssp. *septentrionalis*, *Chara vulgaris*, *Haplomitrium hookeri* and *Cladonia glauca*.

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18. **Noteworthy fauna:** (indicating, e.g., which species are unique, rare, endangered, abundant or biogeographically important; include count data, etc.)

Birds: Studies have been initiated to make an overview of the birdlife in the wetlands system, at the moment only a number of different reports and studies exist for the individual localities. E.g staging, wintering or moulting waterfowl at Orrevatn in 1997 or 1998 (max counts): *Cygnus cygnus* (176), *Cygnus olor* (284), *Anser albifrons* (992), *Anas penelope* (9684), *Aythya fuligula* (3622), *Aythya marila* (718), *Bucephala clangula* (1016) and *Mergus albellus* (29). On the shores in the entire area huge numbers of waders occur in the migratory periods, and can at times count tens of thousands. In particular involving species like *Calidris alpina*, *Calidris minuta*, *Calidris canutus*, *Pluvialis apricaria*, *Pluvialis squatarola* and *Vanellus vanellus* as the most common species. Also huge numbers of passerines occur in the area during migration. Birds of prey can be a notable feature during migratory periods or during winter, in particular involving species like *Falco rusticolus*, *Falco peregrinus*, *Circus cyaneus* and *Circus aeruginosus*.

The total area is famed for its occurrence of national rarities, involving breeding of *Larus minutus*, *Crex crex* (densest population in Norway with 10-30 singing males), *Motacilla flava* ssp. *flava*, *Motacilla flava* ssp. *flavissima* and *Calidris alpina* ssp. *schinzii*.

Some freshwater bodies holds populations of the nationally red listed *Triturus vulgaris*.

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19. **Social and cultural values:** (e.g., fisheries production, forestry, religious importance, archaeological site, etc.)

The shallow bays and kelp beds are recognized as important for fish production. Along the shorelines one can find the densest collection of archeological sites in Norway, such as grave-mounds etc. dating 1000 AC or older.

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20. **Land tenure/ownership of:** (a) site Private (b) surrounding area Private

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21. **Current land use:** (a) site The beaches in the area are most popular with local residents for sunbathing etc. and leisure activities, the freshwater lakes are good fishing grounds

(b) surroundings/catchment High degree of agriculture activity, and some industry including an airport, several adjacent villages.

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22. **Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land use and development projects:** (a) at the site: Today runoff from agricultural areas may locally be a problem, but has been subject to action plans to eliminate or reduce the problem and today this poses a lesser threat. Intensive agricultural activities close to the sites have raised the issue of establishing buffer-zones, also to prevent hunting taking place close to the sites. Heavy traffic from tourists etc. have at places caused erosion of the dune-systems. Lowering of ground water have caused problems for mire sites, since drier conditions means a possibility for bushes and trees to grow. Kelp harvesting have been much debated as a possible threat concerning shore erosion and reduction of dead kelp on the shores.

(b) around the site: Intensively used for agriculture, at some places roads skirts the periphery of the protected sites and generally dumping of stones etc. from the agriculture may pose a problem inside or outside of the sites.

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23. **Conservation measures taken:** (national category and legal status of protected areas - including any boundary changes which have been made: management practices; whether an officially approved management plan exists and whether it has been implemented): All units protected according to the Nature Conservation Act, but with different categories:

1. Alvevatn: Nature reserve with 12,8 ha (ca 0,3 km<sup>2</sup>) established December 20<sup>th</sup> 1996.

2. Bjårvatn: Nature reserve with 107,7 ha (ca 1 km<sup>2</sup>) established December 20<sup>th</sup> 1996.

3. Harvalandsvatn: Nature reserve with 33 ha (ca. 0,3 km<sup>2</sup>) established December 20<sup>th</sup> 1996.

4. Lonavatn: Nature reserve with 32 ha (ca 0,3 km<sup>2</sup>) established December 20<sup>th</sup> 1996.

5. Orrevatn: Nature reserve with 958 ha (9,58 km<sup>2</sup>) established December 20<sup>th</sup> 1996.

6. Smokkevatn: Nature reserve with 24 ha (ca 0,25 km<sup>2</sup>) established December 20<sup>th</sup> 1996.

7. Søylandsvatn: Nature reserve with 70 ha (ca 0,7 km<sup>2</sup>) established December 20<sup>th</sup> 1996.

8. Øksnevadtjønn: Nature reserve with 12 ha (ca 0,12 km<sup>2</sup>) established December 20<sup>th</sup> 1996.

9. Brusand: Plant protection area with 1610 ha (ca 16 km<sup>2</sup>) established September 2<sup>nd</sup> 1977.
10. Børaunen: Bird protection area (ha: see no. 9) established September 2<sup>nd</sup> 1977.
11. Grannesbukta: Nature reserve with 6 ha (ca 0,06 km<sup>2</sup>) established December 20<sup>th</sup> 1996.
12. Hagavågen: Nature reserve with 36 ha (ca 0,36 km<sup>2</sup>) established December 20<sup>th</sup> 1996.
13. Kvasheim: Bird protection area (ha: see no 9) established September 2<sup>nd</sup> 1977.
14. Nærlandstangen-Obrestad: Bird protection area (ha: see no 9) established September 2<sup>nd</sup> 1977.
15. Strandnesvågen: Nature reserve with 13 ha (ca. 0,13 km<sup>2</sup>) established December 20<sup>th</sup> 1996.
16. Linemyr: Nature reserve with 6,7 ha (ca 0,06 km<sup>2</sup>) established December 20<sup>th</sup> 1996.
17. Storamyrr: Nature reserve with 14,5 ha (0,14 km<sup>2</sup>), established December 12<sup>th</sup> 1986.
18. Vigremyr: Nature reserve with 2,2 ha (ca 0,02 km<sup>2</sup>), established December 12<sup>th</sup> 1986.

Existing units:

1. Grudavatn: Bird protection area with 110 ha (1,1 km<sup>2</sup>), established July 27<sup>th</sup> 1974
2. Kolnes: Landscape protection area with 17,5 ha (0,17 km<sup>2</sup>), established September 2<sup>nd</sup> 1977
3. Orre-Reve: Landscape protection area with 108,9 ha (ca. 1,09 km<sup>2</sup>), established September 2<sup>nd</sup> 1977
4. Skeie landscape protection area with 6,5 ha (ca. 0,065 km<sup>2</sup>), established September 2<sup>nd</sup> 1977

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**24. Conservation measures proposed but not yet implemented:** (e.g, management plan in preparation; officially proposed as a protected area, etc.)

- Draft management plans exist for some sites, but are still under process for most of the sites.
- Most of the shoreline outside the existing nature protection sites will be included in a proposed landscape protection area (expected 2002) - called

Jæren landscape protection area. The new protection area will extend into the sea down to 5m depth and will include all islets along the coast.

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**25. Current scientific research and facilities:** (e.g., details of current projects; existence of field station, etc.)

- Most sites are part of the national seabird monitoring programme (winter counts).
  - Different research initiatives have been conducted and reports have been finalised, ia on kelp harvesting and consequences for marine life and shore erosion protection, and study on erosion problems on dunes caused by tourist traffic.
  - The sites are continuously monitored by local bird watchers and annual bird report published. A ringing station have existed from the 1950ies and is today run by the Stavanger Museum and is situated on Reve close to Orrevatn and Orre-Reve.
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**26. Current conservation education:** (e.g., visitors centre, hides, information booklet, facilities for school visits, etc.)

A number of different leaflets exists, as does posters on the sites. Two birdwatching towers have been erected at Øksnevadstjønn and Grudavatn, while one is planned at Søylandsvatn. A nature-information centre have been erected near Orrevatn.

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**27. Current recreation and tourism:** (state if wetland is used for recreation/tourism; indicate type and frequency/intensity)

The area is heavily used by tourists (walking, sunbathing etc) and for birdwatching, numbering tens of thousands peoples in a year.

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**28. Jurisdiction:** (territorial, e.g., state/region and functional, e.g., Dept. of Agriculture/Dept. of Environment etc.)

The Ministry of the Environment.

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**29. Management authority:** (name and address of local body directly responsible for managing the wetland)

The site is managed by the County Governor of Rogaland, which are subsidiary bodies of the Ministry of the Environment. Adresses: County Governor of Rogaland, P.O. Box 59, N-4001 Stavanger.

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**30. Bibliographical references:** (scientific/technical only)

General natural history:



Berg, B.S. 1995. Revidert verneplan for Jærstrendene landskapsvernområde. Miljø-rapport nr. 4:1-173 + app./map. Fylksmannen i Rogaland. (in Norwegian - review of natural history of the proposed Jæren landscape protection area, incl. literature list).

#### Geology:

- Anundsen, K. & Sollie, I.H. 1987. Forslag til vern av kvartærgeologiske områder og forekomster i Rogaland. Rapport T-678:1-129. Miljøverndepartementet. (in Norwegian - proposal for protection scheme for quaternary deposits in Rogaland).

#### Flora:

- Steinnes, A. 1986. Myrvern i Rogaland. Stavanger Museums årbok 1986:37-59. (in Norwegian, with English summary on protection of mires in Rogaland).

#### Birds:

Many local reports exists from the area, cf. annual bird report by the local bird club and national annual bird reports published in Vår Fuglefauna. The Directorate for Nature Management have commissioned a report on the birds in the established Ramsar sites (23), which will include some of the sites at Jæren (to be published 2001/2002).