

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:

Egil Roll, Norwegian Directorate for Nature Management,
Tungasletta 2, 7485 Trondheim

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

May 2013

3. Country:

Norway

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.

Innherred Freshwater System

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.

The boundaries are the same as for the existing nature reserves Hammervatnet and Lundselvoset, and the existing bird protection area Lyngås-Lysgård.

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.

The site consists of three subsites:

Hammervatnet: 63°37'N 11°03'E

Lundselvoset: 63°50'N 11°37'E

Lyngås-Lysgård: 63°49'N 11°37'E

The entire site: 63°49'N 11°37'E

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 Ramsar site is situated in Levanger (Hammervatnet) and Verdal (Lundselvoset and Lyngås-Lyngård) municipalities in Nord-Trøndelag county – the nearest towns being Levanger (18.000 inhabitants), which is situated approx. 18 km northwest of Hammervatnet, and Verdal (14.500 inhabitants), which is situated approx. 8 km southwest of Lundselvoset and Lyngås-Lyngård.

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

25-70 m.a.s.l.

11. Area: (in hectares)

Hammervatnet: 47.0 ha

Lundselvoset: 35 ha

Lyngås-Lyngård: 100 ha

Total: 182 ha

12. General overview of the site:

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

The site comprises three rich and productive subsites with shallow freshwater areas and inland deltas, situated in eutrophic lakes with nutrients added from agricultural activities. The sites are important for water-birds during spring and autumn migration.

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
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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 1:

The three subsites of Innherred Freshwater System comprise features representative for lakes in this biogeographic region. They hold a typical list of species for this region, but also some species less common in this part of the biogeographic region. Among the more unordinary species for the region we find Northern Shoveler *Anas chrypeata* and Little Gull *Hydrocoloeus minutus*. In Hammervatnet we also find a few exemplars of red Water Lily.

Criterion 2:

The sites are important for several red-listed species. The following species use all or some of the three subsites annually: Ruff *Philomachus pugnax* (VU), Common tern *Sterna hirundo* (VU), Otter *Lutra lutra* (VU) and European Eel *Anguilla Anguilla* (CR). The following species uses all or some of the regularly, but not necessary every year: Garganey *Anas querquedula* (EN) and Eurasian Skylark *Alauda arvensis* (VU).

Red-list status is given according to the Norwegian red-list (2010). European Eel is also considered to CR in IUCN red-list. See also point 22.

Criterion 4:

Innherred Freshwater System is considered to be important for water-birds during a critical stage in their life cycle in early spring. When the ice starts to break up, several species of water birds uses the subsites. At this time of year one can find high numbers of individuals of Whooper Swan *Cygnus cygnus* (266 individuals April 1992), Mallard *Anas platybhynchos*, Eurasian Wigeon *Anas Penelope* (85 individuals in September 2004 and 40 in May 2009), Tufted Duck *Aythya fuligula* and also Slavonian Grebe (20 individuals in April 2002).

Whooper Swan and some other birds use the site during both spring and autumn migration. All individual numbers are from www.artsobservasjoner.no.

Innherred Freshwater System also comprises important breeding sites for Slavonian Grebe *Podiceps auritus*, ducks and waders, se point 22.

Criterion 6:

More than 1000 individuals (Max 3000 ind April 2010) of Pink-footed Geese *Anser brachyrhynchus* use the subsite Lyngås-Lysgård annually during both spring and autumn migration, and up to 3000 ind (May 2012) uses the subsite Lundselvoset. The subsite Hammervatnet is not that important for Pink-footed Goose, but the species is seen regularly and the maximum numbers are 1400 ind. in April 2009. (All data are delivered from Artskart.no)

Criterion 8:

The site is important for European Eel *Anguilla Anguilla* (CR).

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:

1. Atlantic.

b) biogeographic regionalisation scheme (include reference citation):

1. EU Habitat directive 92/43/EEC.

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	Hammervatnet: The ground consists of grey-green loamy slate and grit. This is a hard kind of rock which gives oligotrophic soil. Lundselvoset and Lyngås-Lysgård: The ground consists of metagrit with slate covered with soil. The metagrit is visible a few places.
Water depth/ fluctuations	The lakes water depth is at the most 20 meters and the fluctuations are relatively small. However, during the snow melting period in spring some fluctuations occurs.
Climate	Innherred Freshwater System lies in an area of relatively cool and humid summers (approx. 800-1000 mm annual precipitation), and relatively mild winters. The area receives precipitation 190-200 days in a year.

17. Physical features of the catchment area:

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

The catchment area of the lake Hammervatnet consists mainly of grey-green loamy slate and grit, while the catchment area of the lake Leksdalsvatnet (Lundselvoset and Lyngås-Lysgård) consists of metagrit with slate covered with soil. The catchment areas mostly consist of cultivated land in agricultural landscapes with woodland inbetween. The catchment areas are situated in the southern boreal vegetation zone and slightly oceanic section (01). The lakes are eutrophic with nutrient added by run-off from agricultural activities. The waterways are going to the Trondheimsfjord and further to the Atlantic Sea.

18. Hydrological values:

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

The lakes have a flood subduing effect during flooding periods. The lake Leksdalsvatnet with the sites Lundselvoset og Lyngås-Lysgård is also used in water supply.

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 • Q • 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.

1. O
2. L

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.

The three subsites consist mostly of open water areas where some parts of the sites are covered with Common Reed *Phragmites australis* and Common Clubrush *Schoenoplectus lacustris*.

The lakes have a subduing effect on the fluctuations on the water flow during flooding periods. Waterbirds are alternating between the subsites.

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.*

Flora.

The sites consist of open water areas where some parts of the site are covered with Common Reed

Phragmites australis and Common Clubrush *Schoenoplectus lacustris*. However, in some places Water Horsetail *Equisetum fluviatile* and *Calamagrostis phragmitoides* dominate. The outer edges of the sites are mostly covered with Spruce *Picea abies*, Birch *Betula pubescens* and Grey Alder *Alnus incana* (Thingstad et al. 2010).

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.*

Mammals

The sites are randomly visited by mammals like Otter *Lutra lutra*, Red Fox *Vulpes vulpes*, European Badger *Meles meles* and Roe-deer *Capreolus capreolus*. Moose *Alces alces* uses the edges of the site frequently.

Birds

Hammervatnet:

During the spring and autumn migration the site are important for species as Black-throated Diver, Whooper Swan *Cygnus Cygnus* (Maks 266 ind), Mallard *Anas platybhynchos* (maks 319 ind), Eurasian Wigeon *Anas penelope*, Northern Shoveler *Anas chyeata*, Common Goldeneye *Bucephala clangula*, Eurasian Teal *Anas crecca*, Tufted Duck *Aythya fuligula* and Canada Goose *Branta canadaensis*. There are also annually registrations of the Marsh Harrier, but no indications of breeding Marsh Harrier. The lake Hammervatnet is a valuable breeding site for Slavonian Grebe *Podiceps auritus* with approximately 10-15 breeding couples (Øien et. al 2008) and for Northern Shoveler *Anas chyeata*. Hammervatnet nature reserve is one of the most valuable breeding sites for the Slavonian Grebe *Podiceps auritus* in the lake. Other breeding birds are: Eurasian Wigeon *Anas Penelope*, Eurasian Teal *Anas crecca*, Mallard *Anas platybhynchos*, Common Goldeneye *Bucephala clangula*, Tufted Duck *Aythya fuligula*, Greylag Goose *Anser anser*, Eurasian Coot *Fulica atra*, Common Crane *Grus grus*, Common Snipe *Gallinago gallinago*, Redshank *Tringa totanus*, Common Sandpiper *Actitis hypoleucos* and Northern Lapwing *Vanellus vanellus*.

Lundselvoset:

During spring migration the site is important for species like Mallard *Anas platybhynchos*, Eurasian Wigeon *Anas penelope*, Common Goldeneye *Bucephala clangula*, Eurasian Teal *Anas crecca* and Whooper Swan (NI) (253 ind 2007). There are also annual registrations of Little Gull *Hydrocoloeus minutus*, and from one year to another Little Gull *Larus minutus* has bred in the site. The location is an important breeding site for birds like Slavonian Grebe *Podiceps auritus*, Redshank *Tringa totanus*, Greenshank *Tringa nebularia*, Common Sandpiper *Actitis hypoleucos*, Northern Lapwing *Vanellus vanellus*, Oystercatcher *Haematopus ostralegus* and Common Gull *Larus canus*.

Lyngås-Lysgård:

During spring and autumn migration the site is important for species like Pink-footed Geese, Whooper Swan, Mallard, Eurasian Wigeon, Common Goldeneye *Bucephala clangula*, Eurasian Teal *Anas crecca* and Canada Goose *Branta canadaensis*. There are also have annual registrations of Little Gull *Hydrocoloeus minutus*, and from one year to another the Little Gull has breed at the site. The lake Leksdalsvatnet is perhaps the most valuable breeding site for Slavonian Grebe (*Podiceps auritus*) in Norway with approximately 50 breeding pairs (Øien et. al 2008). Lyngås-Lysgård is one of the most valuable breeding sites for the Slavonian Grebe in the lake with approximately 20 breeding pairs in 2010. The Slavonian Grebe has status as endangered (EN) according to the Norwegian red list (Artsdatabanken 2006).

Fish

The lakes (Hammervatnet and Leksdalsvatnet) have populations of trout *Salmo trutta* and arctic char *Salvelinus alpinus* populations and is used for leisure fishing activities.

The lakes also have populations of European Eel *Anguilla Anguilla*.

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:

Eel fishery has been carried out in Leksdalsvatnet lake, but has now more or less ended.

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?

No.

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:

24. Land tenure/ownership:

a) within the Ramsar site:

Private

b) in the surrounding area:

Private

25. Current land (including water) use:

a) within the Ramsar site:

Hammervatnet and Lyngås-Lyngård: The subsites are locally used for net fishing activities.
Lundselvoset: The subsite is locally used as grazing-land for cattle.

b) in the surroundings/catchment:

The surrounding area is basically used for agricultural purposes, but also some net fishing within the lakes.

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:

Lundselvoset:

| It is a question if the grazing pressure is too high and the grazing period is too long.
Other activities seem not to affect the site's ecological character in a negative way.

Eutrophication of freshwater lakes caused by agricultural activities.

b) in the surrounding area:

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.

Hammervatnet was designated as nature reserve (IUCN category I) December 14th, 1984 (according to the Nature Conservation Act).

Lundselvoset was designated as nature reserve (IUCN category I) December 14th, 1984 (according to the nature conservation act).

Lyngås-Lysgård was designated as bird protection area (IUCN category IV) December 14th, 1984 (according to the Nature Conservation Act).

The status as nature reserves and bird protection area was given by a Royal Decree. All human activities in the protected areas are regulated by detailed regulations specific for each protected area. The aim of the protected areas is to conserve the rich birdlife within its environment.

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

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

No.

d) Describe any other current management practices:

None.

28. Conservation measures proposed but not yet implemented:

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

Management plan in preparation.

29. Current scientific research and facilities:

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

None.

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.

None.

31. Current recreation and tourism:

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

The area is to some extent used by tourists and residents, mainly for bird watching. The area is frequently visited by birdwatchers.

32. Jurisdiction:

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

Norwegian Directorate for Nature Management (DN), Tungasletta 2, 7485 Trondheim
Ph +47 73580500
Fax +47 73580501
Email: postmottak@dirnat.no

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.

The site is managed by the County Governor of Nord-Trøndelag, which is under the instruction of the Norwegian Directorate for Nature Management. Address: County Governor of Nord-Trøndelag, Statens Hus, 7734 Steinkjer (phone: +47 74 16 80 00). E-mail: Postmottak@fmnt.no

34. Bibliographical references:

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

Moen, A. 1998. *Nasjonalatlas for Norge*, vegetasjon. Statens Kartverk, Hønefoss

Øien, I.J., Aarvak, T. & Reinsborg, T. 2008. Horndykkeren i Norge – truet art på frammarsj? *Vår Fuglefauna* 31: 20-27.

Thingstad, P.G., Øien, D.-I. & Kjørstad G. 2010. Biologisk statusundersøkelser: Hammervatnet naturreservat 2009. Vitenskapsmuseet Rapp. Zool. Ser. 2010-2: 1-39.

Øien, D.-I., Thingstad, P.G. & Kjørstad G. 2010. Status for biologiske verdier innen verneområdene Lyngås-Lysgård, Lundselvøset, Figgaøset, Klingsundet og Øie i Nord-Trøndelag. – NTNU Vitensk.mus. Rapp. Bot. Ser. 2010-2: 1-56.

Artsdatabanken. 2006. Rødlistebasen, Artsinformasjon, horndykker. Downloaded from www.artsdatabanken.no

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