



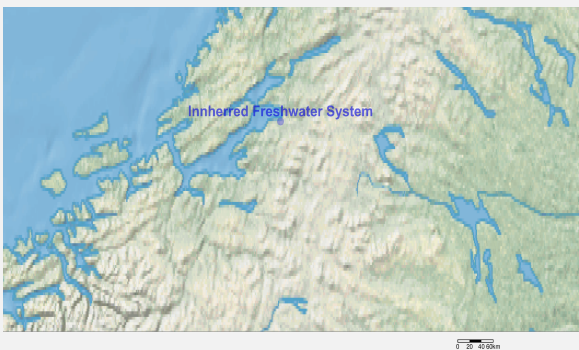
# Ramsar Information Sheet

Published on 8 May 2023

Update version, previously published on : 9 July 2018

## Norway

### Innherred Freshwater System



Designation date	27 May 2013
Site number	2159
Coordinates	63°45'52"N 11°26'16"E
Area	182,00 ha

## 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

The Site is situated in Levanger (Hammervatnet) and Verdal (Lundselvøset and Lyngås-Lyngård) municipalities in Trøndelag county. 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 consist of open water areas where some parts of the site are covered with common reed and common clubrush. However, in some places water horsetail and calamagrostis phragmitoides dominate. The outer edges of the sites are mostly covered with spruce, birch and grey alder.

The sites are important for avian species during spring and autumn migration. Several thousand individuals of pink-footed geese *Anser brachyrhynchus* use the subsite Lyngås-Lyngård, and the subsite Lundselvøset. Additionally, the locations are important breeding sites for several bird species rare in this part of the country. The lake Leksdalsvatnet is perhaps the most valuable breeding site for the horned grebe *Podiceps auritus* in Norway, with 28 breeding pairs (2016); Lyngås-Lyngård likely constitutes the most valuable breeding site, with approximately 20 breeding pairs (2010). Other characteristic breeding species is the Eurasian coot, with Hammervatnet, an important breeding location for this species this far North. The shoreline in Lyngås-Lyngård also provide an important feeding location for waterfowl.

Both lakes Hammervatnet and Leksdalsvatnet host populations of the brown trout and the Arctic char *Salvelinus alpinus*. The two lakes are also inhabited by populations of the European eel *Anguilla anguilla*.

Moreover, the complex plays an important role for flood mitigation and water supply. Within the nature reserves, human activities are controlled by detailed regulations specific for each protected area. The main activities within the site are cattle grazing, fishing and bird watching tourism. The main threat to the ecological character derives from eutrophication caused by agricultural activities.

## 2 - Data & location

### 2.1 - Formal data

#### 2.1.1 - Name and address of the compiler of this RIS

##### Responsible compiler

Institution/agency

Postal address

##### National Ramsar Administrative Authority

Postal address

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

From year

To year

#### 2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish)

Unofficial name (optional)

#### 2.1.4 - Changes to the boundaries and area of the Site since its designation or earlier update

(Update) A. Changes to Site boundary Yes  No

(Update) B. Changes to Site area No change to area

(Update) For secretariat only: This update is an extension

#### 2.1.5 - Changes to the ecological character of the Site

(Update) 6b i. Has the ecological character of the Ramsar Site (including applicable Criteria) changed since the previous RIS?

## 2.2 - Site location

### 2.2.1 - Defining the Site boundaries

b) Digital map/image  
<3 file(s) uploaded>

Former maps

##### Boundaries description

### 2.2.2 - General location

a) In which large administrative region does the site lie?

b) What is the nearest town or population centre?

### 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):

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

## 2.2.5 - Biogeography

### Biogeographic regions

Regionalisation scheme(s)	Biogeographic region
EU biogeographic regionalization	Atlantic

### Other biogeographic regionalisation scheme

### 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

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 the Northern shoveler *Spatula clypeata* and the little gull *Hydrocoloeus minutus*. In Hammervatnet we also find a few exemplars of the red water lily.

- Criterion 2 : Rare species and threatened ecological communities

Optional text box to provide further information

At the Site one can find rare/threatened species such as the moss *Calliergon megalophyllum* (NRL: VU), and the birds such, the Northern shoveler *Spatula clypeata* (NRL: VU), the garganey *Spatula querquedula* (NRL: EN), the greater scaup *Aythya marila* (NRL: EN), the black-headed gull *Chroicocephalus ridibundus* (NRL: CR), the Eurasian coot *Fulica atra* (NRL: VU), the little gull *Hydrocoloeus minutus* (NRL: VU), the Eurasian curlew *Numenius arquata* (NRL: EN), the ruff *Calidris pugnax* (NRL: VU), the horned grebe *Podiceps auritus* (NRL: VU) and the Northern lapwing *Vanellus vanellus* (NRL: CR).

- Criterion 3 : Biological diversity

Justification

The Site hosts several species of both plants and birds that are rare for this biogeographic region and important in order to maintain a high biodiversity in the area.

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

Optional text box to provide further information

The subsites are important for avian species during spring and autumn migration. Additionally, the locations are important breeding sites for several species rare to this part of the country. The shoreline in Lyngås-Lysgård also provide an important feeding location.

- Criterion 6 : >1% waterbird population

Optional text box to provide further information

The Site regularly host more than 1% of the population of pink-footed goose for this biogeographic region (Svalbard/North-west Europe). More than 1000 individuals (Maximum observation 6000 ind. ind., April 2019) use the subsite Lyngås-Lysgård annually during both spring and autumn migration, and up to 3000 ind (May 2012) uses the subsite Lundselvøset. The subsite Hammervatnet is not that important, but the species is regularly observed and the maximum numbers are 1400 ind. (April 2009).

- Criterion 8 : Fish spawning grounds, etc.

Justification

The Site hosts important locations for the European eel *Anguilla anguilla* (IUCN: CR, NRL: EN).

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

Phylum	Scientific name	Criterion 2	Criterion 3	Criterion 4	IUCN Red List	CITES Appendix I	Other status	Justification
<b>Plantae</b>								
BRYOPHYTA/ BRYOPSIDA	<i>Calliergon megalophyllum</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	National Red List: Considered as VU	Criterion 3: Important species for this region.
TRACHEOPHYTA/ LILIOPSIDA	<i>Carex elongata</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Rare for this biogeographic region
TRACHEOPHYTA/ LILIOPSIDA	<i>Goodyera repens</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>		Rare for this biogeographic region
TRACHEOPHYTA/ LILIOPSIDA	<i>Sparganium erectum</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LC	<input type="checkbox"/>		Rare for this biogeographic region, also regionally important species.

Not yet assessed by Catalogue of Life:  
 Phellinus hippophaeicola - Criterion 2 - National Red List: Considered as VU.  
 Capitalized letters shows the species' status on the National Red List 2021.

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

Phylum	Scientific name	Species qualifies under criterion			Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
		2	4	6	9	3	5	7								
<b>Others</b>																
ARTHROPODA/ INSECTA	<i>Callicorixa praeusta</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		Criterion 3 & 4: Regionally rare species. Adapted to a life in water, both still and moving water.
ARTHROPODA/ INSECTA	<i>Coenagrion armatum</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 3 & 4: Regionally rare species. Several of the sub-sites are important habitats for this species, both for breeding and feeding.
ARTHROPODA/ INSECTA	<i>Coenagrion pulchellum</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 3 & 4: Regionally rare species for this biogeographic region. Ponds and lakes With the surrounding vegetation is important habitats for this species.
ARTHROPODA/ INSECTA	<i>Erythromma najas</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		Criterion 3 & 4: Regionally rare species. Ponds and lakes With the surrounding vegetation is important habitats for this species.
ARTHROPODA/ INSECTA	<i>Lestes sponsa</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 3 & 4: Regionally rare species for this biogeographic region. Several of the sub-sites are important habitats for this species, both for breeding and feeding
ARTHROPODA/ INSECTA	<i>Limnoporus rufoscutellatus</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		Criterion 3 & 4: Regionally rare species. The ponds and lakes in the area are important habitats for this species, and it lives most of its life here.
CHORDATA/ MAMMALIA	<i>Lutra lutra</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Ann. II Berne Convention	Criterion 2: This site is important for this species.
ARTHROPODA/ INSECTA	<i>Notonecta glauca</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		Criterion 3 & 4: Regionally rare species. Adapted to a life in water, mostly shallow lakes and ponds.
<b>Fish, Mollusc and Crustacea</b>																

Phylum	Scientific name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
		2	4	6	9	3	5	7	8								
CHORDATA/ ACTINOPTERYGII	<i>Anguilla anguilla</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				CR	<input type="checkbox"/>	<input type="checkbox"/>	National red list: Considered as EN	Criterion 8: This site is important as a habitat and feeding area for this species.
<b>Birds</b>																	
CHORDATA/ AVES	<i>Actitis hypoleucos</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 4: This is a common breeding species.
CHORDATA/ AVES	<i>Anas clypeata</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	National red list: Considered as VU	Criterion 4: During the spring and autumn migration the site are important for this species. The lake Hammervatnet is a valuable breeding site.
CHORDATA/ AVES	<i>Anas crecca</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 4: This species uses the site for breeding.
CHORDATA/ AVES	<i>Anas penelope</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>		Criterion 4: Innherred Freshwater System is considered to be important for this species during a critical stage in their life cycle in early spring when the ice starts to break up.
CHORDATA/ AVES	<i>Anas platyrhynchos</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 4: Innherred Freshwater System is considered to be important for this species during a critical stage in their life cycle in early spring when the ice starts to break up.
CHORDATA/ AVES	<i>Anas querquedula</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	National red list: Considered as EN	Criterion 2: This species uses all or some of the site regularly, but not necessary every year.
CHORDATA/ AVES	<i>Anser anser</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 4: This species uses the site for breeding.
CHORDATA/ AVES	<i>Anser brachyrhynchus</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6000	2019	7	LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 6: More than 1000 individuals (Max 6000 ind 2019) use the subsite Lyngås-Lysgård annually during both spring and autumn migration, and up to 3000 ind (May 2012) uses the subsite Lundsølvoset. 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.
CHORDATA/ AVES	<i>Aythya fuligula</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 4: Innherred Freshwater System is considered to be important for this species during a critical stage in their life cycle in early spring when the ice starts to break up.
CHORDATA/ AVES	<i>Aythya marila</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	National Red List: Considered as EN	
CHORDATA/ AVES	<i>Bucephala clangula</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 4: This species uses the site for breeding and during migrations.
CHORDATA/ AVES	<i>Chroicocephalus ridibundus</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	National Red List: Considered as CR	Criterion 4: This species uses the site for breeding.
CHORDATA/ AVES	<i>Cygnus cygnus</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Ann. II Berne Convention, Emerald Network	Criterion 4: the site is considered to be important for this species during a critical stage in their life cycle in early spring when the ice starts to break up. The species uses the site during migrations. Some also overwinter at the site
CHORDATA/ AVES	<i>Fulica atra</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	National Red List: Considered as VU	Criterion 4: This species uses the site for breeding.
CHORDATA/ AVES	<i>Gallinago gallinago</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 4: This species uses the site for breeding.
CHORDATA/ AVES	<i>Gavia arctica</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 4: Regular migrating species that can also be found breeding here.

Phylum	Scientific name	Species qualifies under criterion				Species contributes under criterion				Pop. Size	Period of pop. Est.	% occurrence 1)	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
		2	4	6	9	3	5	7	8								
CHORDATA/AVES	<i>Grus grus</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 4: This species uses the site for breeding.
CHORDATA/AVES	<i>Haematopus ostralegus</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 4: This species uses the site for breeding.
CHORDATA/AVES	<i>Hirundo rustica</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 4: This species can be observed in large numbers (3 000) during autumn migrations.
CHORDATA/AVES	<i>Hydrocoloeus minutus</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	National Red List: Considered as VU	Criterion 4: This species uses the site for breeding.
CHORDATA/AVES	<i>Larus canus</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	National Red List: Considered as VU	Criterion 4: This species uses the site for breeding.
CHORDATA/AVES	<i>Mergus merganser</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 4: This species uses the site for breeding. Regular during migrations.
CHORDATA/AVES	<i>Numenius arquata</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT	<input type="checkbox"/>	<input type="checkbox"/>	National Red List: Considered as EN	Criterion 4: This is a common breeding species.
CHORDATA/AVES	<i>Philomachus pugnax</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>					<input type="checkbox"/>	<input type="checkbox"/>	National Red List: Considered as VU	Criterion 2: This site is important for this species.
CHORDATA/AVES	<i>Pluvialis apricaria</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 4: This species can be found at large numbers in spring time
CHORDATA/AVES	<i>Podiceps auritus</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	50			VU	<input type="checkbox"/>	<input type="checkbox"/>	National red list: Considered as VU	(50 pairs in 2008) Criterion 4: The site is considered to be important for this species during a critical stage in their life cycle in early spring when the ice starts to break up.
CHORDATA/AVES	<i>Sterna hirundo</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	National red list: Considered as EN, Ann. II Berne Convention	Criterion 4: This site is important for this species during breeding season.
CHORDATA/AVES	<i>Sterna paradisaea</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Ann. II Berne Convention	Criterion 4: This site is important for this species during breeding season.
CHORDATA/AVES	<i>Tringa glareola</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>	Ann. II Berne Convention	Criterion 4: This species uses the site for breeding.
CHORDATA/AVES	<i>Tringa nebularia</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 4: This species uses the site for breeding.
CHORDATA/AVES	<i>Tringa totanus</i>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				LC	<input type="checkbox"/>	<input type="checkbox"/>		Criterion 4: This species uses the site for breeding.
CHORDATA/AVES	<i>Vanellus vanellus</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				NT	<input type="checkbox"/>	<input type="checkbox"/>	National Red List: Considered as CR	Criterion 4: This species uses the site for breeding.

1) Percentage of the total biogeographic population at the site

Podiceps auritus, Slavonian Grebe, Criterion 4: Hammervatnet nature reserve is one of the most valuable breeding sites for the Slavonian Grebe Podiceps auritus in the lake. 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), reduced to 28 breeding pairs (2016). Lyngås-Lyngård is one of the most valuable breeding sites for the Slavonian Grebe in the lake with approximately 20 breeding pairs in 2010.

Anser brachyrhynchus, Pink-footed Goose, Criterion 6: Biogeographic Region: Svalbard/North-west Europe. Data based on observations from artskart.no, and population size of the species on estimates from artsdatabanken.no.

Capitalized letters shows the species' status on the National Red List 2021.

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



<no data available>

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

### 4.1 - Ecological character

The three subsites consist mostly of open water areas where some parts of the sites are covered with common reed and common clubrush. However, in some places water horsetail and calamagrostis phragmitoides dominate. The outer edges of the sites are mostly covered with spruce, birch and grey alder. The lakes have a subduing effect on the fluctuations in the water flow during flooding periods. Waterbirds are alternating between the subsites. The vegetation has experienced considerable changes since the 1970's, and threats against the biological diversity in the subsites are mainly associated with overgrowing as a consequence of increased supply of nutrients or changes in the use of the areas.

There are almost 200 vascular plant and around 200 avian species registered inside the protected areas, several of them regionally rare. All the investigated protected areas contain regionally rare species of invertebrates associated with water, partly also red-listed species, and the areas represent beyond doubt very valuable habitats for this group of organisms. In the Hammervatnet, 34 invertebrate species have been registered, 9 heteroptera ("true bugs"), 8 odonata (dragonflies), 16 coleoptera (beetles) and 1 amphibian (*Rana temporaria*). Additionally, a total of 6 species are regionally rare, 3 heteroptera (*Callicorixa praeusta*, *Notonecta glauca* and *Limnoporus rufoscutellatus*), 2 odonata (*Coenagrion armatum* and *Erythromma najas*) and 1 coleoptera (*Halipilus lineolatus*).

### 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
Fresh water > Flowing water >> L: Permanent inland deltas		2		
Fresh water > Lakes and pools >> O: Permanent freshwater lakes		1		Representative

### 4.3 - Biological components

#### 4.3.1 - Plant species

##### Other noteworthy plant species

Phylum	Scientific name	Position in range / endemism / other
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Alnus incana</i>	
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Betula pubescens</i>	
TRACHEOPHYTA/LILIOPSIDA	<i>Calamagrostis purpurea</i>	
TRACHEOPHYTA/EQUISETOPSIDA	<i>Equisetum fluviatile</i>	
TRACHEOPHYTA/LILIOPSIDA	<i>Phragmites australis</i>	
TRACHEOPHYTA/PINOPSIDA	<i>Picea abies</i>	
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Salix triandra</i>	National Red List: Considered as NT
TRACHEOPHYTA/LILIOPSIDA	<i>Schoenoplectus lacustris</i>	

##### Invasive alien plant species

Phylum	Scientific name	Impacts	Changes at RIS update
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Epilobium ciliatum</i>	Potential	No change
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Hesperis matronalis</i>	Potential	No change
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Impatiens glandulifera</i>	Actual (minor impacts)	No change
TRACHEOPHYTA/MAGNOLIOPSIDA	<i>Sambucus racemosa</i>	Actual (minor impacts)	No change

#### 4.3.2 - Animal species

##### Invasive alien animal species

Phylum	Scientific name	Impacts	Changes at RIS update
CHORDATA/AVES	<i>Branta canadensis</i>	Actual (minor impacts)	No change
CHORDATA/MAMMALIA	<i>Nyctereutes procyonoides</i>	Potential	No change

### 4.4 - Physical components

#### 4.4.1 - Climate

Climatic region	Subregion
D: Moist Mid-Latitude climate with cold winters	Dfc: Subarctic (Severe winter, no dry season, cool summer)

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.

#### 4.4.2 - Geomorphic setting

a) Minimum elevation above sea level (in metres)

a) Maximum elevation above sea level (in metres)

- Entire river basin
- Upper part of river basin
- Middle part of river basin
- Lower part of river basin
- More than one river basin
- Not in river basin
- Coastal

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.

Hammervatnet is the lower part of several waters that belong to the Hopla watercourse in Levanger municipality.

#### 4.4.3 - Soil

Mineral

(Update) Changes at RIS update No change  Increase  Decrease  Unknown

No available information

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)

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-Lyngård: The ground consists of metagrit with slate covered with soil. The metagrit is visible a few places.

#### 4.4.4 - Water regime

Water permanence

Presence?	Changes at RIS update
Usually permanent water present	

Source of water that maintains character of the site

Presence?	Predominant water source	Changes at RIS update
Water inputs from surface water	<input type="checkbox"/>	No change

Stability of water regime

Presence?	Changes at RIS update
Water levels largely stable	No change

Please add any comments on the water regime and its determinants (if relevant). Use this box to explain sites with complex hydrology:

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 occur.

#### 4.4.5 - Sediment regime

Sediment regime unknown

#### 4.4.6 - Water pH

Unknown

#### 4.4.7 - Water salinity

Fresh (<0.5 g/l)

(Update) Changes at RIS update No change  Increase  Decrease  Unknown

Unknown

#### 4.4.8 - Dissolved or suspended nutrients in water

Eutrophic

(Update) Changes at RIS update No change  Increase  Decrease  Unknown

Oligotrophic

(Update) Changes at RIS update No change  Increase  Decrease  Unknown

Unknown

Please provide further information on dissolved or suspended nutrients (optional):

The lakes are eutrophic with nutrient added by run-off from agricultural activities. Several bedrocks easily erode, providing nutrient-rich run-off.

#### 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 i) broadly similar  ii) significantly different  site itself:

Surrounding area has greater urbanisation or development

Surrounding area has higher human population density

Surrounding area has more intensive agricultural use

Surrounding area has significantly different land cover or habitat types

### 4.5 - Ecosystem services

#### 4.5.1 - Ecosystem services/benefits

##### Provisioning Services

Ecosystem service	Examples	Importance/Extent/Significance
Fresh water	Drinking water for humans and/or livestock	Medium
Wetland non-food products	Livestock fodder	Medium

##### Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Hazard reduction	Flood control, flood storage	Medium

##### Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Recreational hunting and fishing	Medium
Recreation and tourism	Nature observation and nature-based tourism	Medium

Other ecosystem service(s) not included above:

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

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

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

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

i) the site provides 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) the site has exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland

iii) the ecological character of the wetland depends on its interaction   
with local communities or indigenous peoples

iv) 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

<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

##### Private ownership

Category	Within the Ramsar Site	In the surrounding area
Other types of private/individual owner(s)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

#### 5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:

County Governor of Trøndelag

Postal address:

Statsforvalteren i Trøndelag  
Pb.2600  
N-7734 STEINKJER

E-mail address:

sftlpost@statsforvalteren.no

## 5.2 - Ecological character threats and responses (Management)

### 5.2.1 - Factors (actual or likely) adversely affecting the Site's ecological character

#### Agriculture and aquaculture

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Livestock farming and ranching	Medium impact	Medium impact	<input checked="" type="checkbox"/>	No change	<input type="checkbox"/>	No change
Non specified	unknown impact	Medium impact	<input checked="" type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change

#### Invasive and other problematic species and genes

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Invasive non-native/ alien species	Medium impact	High impact	<input checked="" type="checkbox"/>	No change	<input checked="" type="checkbox"/>	No change

#### Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Unspecified			<input checked="" type="checkbox"/>		<input type="checkbox"/>	

Please describe any other threats (optional):

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.

The occurrences of black-listed species in and around the protected areas are not particularly worrying at this point, but the situation must be followed-up closely. Particularly regarding the raccoon dog, which recently has turned up in several places in Central Norway. Also, the development of the local breeding population of the Canada goose in and around the protected areas should be monitored. The black-listed plant species the policeman's helmet and the red elderberry should be removed from the protected areas and adjacent surroundings.

#### 5.2.2 - Legal conservation status

##### National legal designations

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Hammervatnet Nature Reserve	Hammervatnet		whole
Lundselvose Nature Reserve	Lundselvset		whole
Lyngas Lysgard Bird Protection Area	Lyngås-Lyngård		whole

#### 5.2.3 - IUCN protected areas categories (2008)

1a Strict Nature Reserve

- Ib Wilderness Area: protected area managed mainly for wilderness protection
- II National Park: protected area managed mainly for ecosystem protection and recreation
- III Natural Monument: protected area managed mainly for conservation of specific natural features
- IV Habitat/Species Management Area: protected area managed mainly for conservation through management intervention
- V Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation
- VI Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems

#### 5.2.4 - Key conservation measures

##### Legal protection

Measures	Status
Legal protection	Implemented

##### Habitat

Measures	Status
Habitat manipulation/enhancement	Partially implemented

##### Species

Measures	Status
Control of invasive alien plants	Partially implemented
Control of invasive alien animals	Partially implemented

##### Other:

Management plan in preparation.

#### 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? Yes, there is a plan

#### 5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Birds	Proposed

In relation to the restoration of Hammervatnet there will be performed a mapping of the bird life in 2018, 2020 and 2022. This mapping is to be performed using the same methods as a survey performed in 2015 (before the restoration began).

## 6 - Additional material

### 6.1 - Additional reports and documents

#### 6.1.1 - Bibliographical references

Øien, D.-I., Thingstad, P.G. & Kjærstad, G. 2010. Status for biological values within the protected areas Lyngås-Lysgård, Lundselvøset, Figgaoaset, Klingsundet og Øie in Nord-Trøndelag. – NTNU Vitensk.mus. Rapp. bot. Ser. 2010–2: 1–56.

Husby, M. 2015. Vannfuglenes bestandsutvikling og bruk av Hammervatnet naturreservat, Levanger kommune. HiNT Utredning 168. 56 sider.

Hoplavassdraget - et svært viktig område, Faktaark nr.5, Levanger kommune, enhet landbruk.

Artsdatabanken (2021, 24. november). Norsk rødliste for arter 2021. <https://www.artsdatabanken.no/lister/rodlisteforarter/2021>

Øien, D.-I., Thingstad, P.G. & Kjærstad, G. 2012. Conservation targets and plan for management and monitoring in the protected areas Lyngås-Lysgård, Lundselvøset, Figgaoaset, Klingsundet and Øie in Nord-Trøndelag county. – NTNU Vitensk.mus. Rapp. bot. Ser. 2012-4: 1-20.

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. & Kjærstad G. 2010. Biologisk statusundersøkelser: Hammervatnet naturreservat 2009. Vitenskapsmuseet Rapp. Zool. Ser. 2010-2: 1-39.

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

#### 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

<9 file(s) uploaded>

#### 6.1.3 - Photograph(s) of the Site

Please provide at least one photograph of the site:



View from the bird tower in Hammervatnet. ( Hilde Ely-Aastrup, 11-04-2011 )



Hammervatnet prior to restoration. ( Hilde Ely-Aastrup, 27-07-2016 )



Hammervatnet prior to restoration. ( Hilde Ely-Aastrup, 24-06-2011 )

#### 6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation