

# **Ramsar Information Sheet**

Published on 23 June 2023 Update version, previously published on : 9 July 2018

# Norway Nordenskiöldkysten



Designation date Site number

12 November 2010 1968 Coordinates 77°50'15"N 13°56'E Area 42 992,00 ha

https://rsis.ramsar.org/ris/1968 Created by RSIS V.1.6 on - 23 June 2023

## 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 a coastal plain extending 40 km from Isfjorden in the north to Bellsund in the south on the western shoreline of Spitsbergen. Nordenkiöldkysten is a large, flat area with many freshwater pools and some richly vegetated areas. The area is composed of flat tundra stretches (up to 15 km wide) delineated by steep mountains and glaciers. Ingeborgfjellet, a mountain with steep cliffs harbouring seabird breeding colonies, is situated in the south-eastern part of the Site. Large fjords intersect the area, and islands are scattered along the coast, with many of these areas hosting breeding colonies of barnacle geese, common eiders, and galucous gulls. Further, bird nesting aggregations occur on tundra flats (pink footed geese), shore cliffs and mountains. Due to the relative ease of access, this area is one of the most explored areas of the archipelago.

The high primary production is of great importance for bird- and mammal life, but also for plants and invertebrates. Large parts of the area are important year-round living territory for the Svalbard reindeer. Foraging geese are mainly found in the moss meadows encircling the lakes scattered along the entire coastline. Most of these lakes are fringed by vegetation composed of mosses, grasses and sedges. Together with the vast inland marshes, they provide an important feeding habitat for geese during the moult and brood-rearing period. Vårsolbukta bay is also a pre-breeding staging site for geese due to high input of marine nutrients to the terrestrial system by seabirds and an early snowmelt.

Arctic foxes are a major predator of the geese and their eggs and are present throughout the area. In the recent years, however, predation of eggs by polar bears have been an increasing problem, with up to 90% of all eggs being predated. This is mainly a problem for ground-nesting species such as common eiders, barnacle geese and glaucous gulls.

# 2 - Data & location

## 2.1 - Formal data

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

## Responsible compiler

Institution/agency Norwegian Environment Agency

Postal address Post box 5672 Torgarden, N-7485 Trondheim, Norway

## National Ramsar Administrative Authority

Postal address Postboks 5672 Sluppen Trondheim Norway

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

From year	1989
To year	2021

### 2.1.3 - Name of the Ramsar Site

Official name (in English, French or Spanish) Nordenskiöldkysten

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

<sup>(Update)</sup> A. Changes to Site boundary Yes O No ●	
<sup>(Update)</sup> B. Changes to Site area has increased	
<sup>(Update)</sup> The Site area has been calculated more accurately 🗹	
<sup>(Update)</sup> The Site has been delineated more accurately	
<sup>(Update)</sup> The Site area has increased because of a boundary extension	
<sup>(Update)</sup> The Site area has decreased because of a boundary restriction	
<sup>(Update)</sup> For secretariat only. This update is an extension	

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

ng Not evaluated	<sup>(Update)</sup> 6b i. Has the ecological character of the Ramsar Site (including
S?	applicable Criteria) changed since the previous RIS?

## 2.2 - Site location

#### 2.2.1 - Defining the Site boundaries

#### b) Digital map/image

<1 file(s) uploaded>

Former maps 0

## Boundaries description

The Ramsar site consists of the western parts of Nordenskiold land national park.

## 2.2.2 - General location

a) In which large administrative region does the site lie?	Svalbard
b) What is the nearest town or population	Longyearbyen, Bratentsburg

## 2.2.3 - For wetlands on national boundaries only

a) Does the wetland extend onto the territory of one or more other countries? Yes O No (

# b) Is the site adjacent to another designated Ramsar Site on the territory of another Contracting Party?

## 2.2.4 - Area of the Site

Official area, in hectares (ha): 42992

Area, in hectares (ha) as calculated from GIS boundaries 42992.827

## 2.2.5 - Biogeography

Biogeographic regions	
Regionalisation scheme(s)	Biogeographic region
Other scheme (provide name below)	1. Northern arctic tundra zone (Elvebakk 1989)
EU biogeographic regionalization	2. Arctic

#### Other biogeographic regionalisation scheme

1. Zonal division based on the distribution of thermophilius vascular plant species. Vascular plants, which areabundant on Svalbard, are divided into five groups based on their temperature requirements. The distributions of these various groups of species has been surveyed in 163 areas (Elvebakk, A. (1997): Tundra diversity and ecological characteristics of Svalbard. In: Wiegolaski, F.E. (ed.): Polar and alpine tundra. Ecosystems of the world 3: 347-359. Elsevier.

2. Biogeographical Regions, European Environment Agency, 2005

# 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

	Nordenkiöldkysten is a typical flat coastal plain, located between the sea and a steeply sloping mountain.
0#	From the mountain several creeks run to the sea. Among these creeks we find small ponds and lakes with
Other reasons	a rich vegetation and associated birdlife. There is also a bird cliff at Ingeborgfjellet, which is a breeding
	site for several species. The landscape is representative for this region.

## ☑ Criterion 2 : Rare species and threatened ecological communities

Optional text box to provide further information The Site supports several rare species, such as the red knot (Calidris canutus, Svalbard Red List: VU) and the sanderling (Calidris alba, Svalbard Red List: VU). The Site supports more than 13% (4 000 individuals) of the Svalbard population of the barnacle geese (Branta leucopsis, Annex II Bern Convention). The Site is also important for mammals such as the Arctic fox (Vulpes lagopus) and is visited by polar bears (Ursus maritimus) and walrus (both considered as VU on Svalbard Red List).
---

## Criterion 3 : Biological diversity

	The bird cliffs in this region are important for maintaining the biological diversity of seabirds in the western parts of Svalbard. The cliffs are covered by large colonies of little auks (55 000 individuals, 1991
	estimate), brünnich's guillemots (12 000, 2009 estimate for Ingeborgfjellet) and kittiwakes (6000, 2009
	estimate for Ingeborgfjellet). The multiple lakes along the coastline are fringed by vegetation composed of
	mosses, grasses and sedges, and together with the vast inland marshes, these create important staging-,
Justification	moulting-, feeding- and resting areas during the migration seasons. Species listed on the Svalbard Red
	List include the red knot (Svalbard Red List: VU) and the sanderling (Svalbard Red List: VU). The site
	supports more than 13% (4 000 individuals, estimate from 2000-2007) of the Svalbard population of
	barnacle geese. The site is also important for mammals like Svalbard reindeer and Arctic fox and is
	visited by polar bears, harbour seals and walrus. Noteworthy flora includes lime-demanding species such
	as the purplish braya

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

	During the breeding season approximately 55 000 (individuals) of little auk, 12 000 (ind.) brunnich's
Optional text box to provide further	guillemot and 6000 (ind.) pairs of kittiwakes nest at Nordenskiöldkysten (Ingeborgfjellet). The site is also
information	an important staging, moulting, feeding and resting area during the migration seasons for species such
	as waders, ducks and geese which aggregate in this area in large numbers.

#### ☑ Criterion 5 : >20,000 waterbirds

Overall waterbird numbers	77500 (mean)
Start year	2000
Start year	2009
End year	2009
Course of data	BirdLife International
Source of data.	
	Source: http://datazone.birdlife.org/site/factsheet/ingeborgfjellet-iba-svalbard-and-jan-mayen-islands-(to-n
information	orway)/details

## Criterion 6 : >1% waterbird population

Optional text box to provide further information pink-footed goose and more than 2% (1 400 individuals) of the Svalbard/South-west Scotland population of barnacle geese.

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

Species listed under biological components which are not yet included in the Catalogue of Life: Ross' Sandwort, Minuartia rossii, Svalbard red list: VU

Capitalized letters shows the species' status on the Svalbard Red List 2021

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

Phylum	Scientific name	Species qualifies under criterion 2 4 6 9	under criteric	on Size	Period of pop. Est.		IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
Others											
CHORDATA / MAMMALIA	Odobenus rosmarus						VU			Svalbard Red List: Considered as VU, Ann. Il Berne Convention	
CHORDATA / MAMMALIA	Ursus maritimus						VU			Svalbard Red List: Considered as VU	
Birds											
CHORDATA / AVES	Alle alle			55000	1991		LC				Criterion 4: approximately 55,000 Little Auk breeding at the site (Estimates from 1991)
CHORDATA / AVES	Anser brachyrhynchus			1400	2015	1.6	LC				An estimated 1400 ind. during summer 2015. Criterion 4: The site supports this species during the breeding period and in spring this species occurs in the region.
CHORDATA / AVES	Branta bernicla			800			LC				up to 800 individuals Criterion 4: The site supports this species during the breeding period and in spring this species occurs in the region.
CHORDATA / AVES	Branta leucopsis	VVV	ØOOC	4000	2000-2007	10.5	LC			Ann. Il Berne Convention, Emerald Network	4000 mature ind./700 breeding pairs, Criterion 3: The flat area between the mountains and the sea is a traditional breeding site for this species. Criterion 4: The site supports this species during the breeding period and in spring this species occurs.
CHORDATA / AVES	Calidris alba						LC			Svalbard Red List: Considered as VU, Ann. Il Berne Convention	
CHORDATA / AVES	Calidris canutus						NT			Svalbard Red List: Considered as VU	Criterion 4: This species breed within the site.
CHORDATA / AVES	Clangula hyemalis		ØOOC				VU				Criterion 4: During moulting period the coast is important for this species.
CHORDATA / AVES	Fulmarus glacialis						LC				Criterion 4: The site supports this species during the breeding period and in spring this species occurs in the region.
CHORDATA / AVES	Larus hyperboreus						LC				Criterion 4: The site supports this species during the breeding period and in spring this species occurs in the region.

Phylum	Scientific name	Speci qualifies criteri 2 4	unde ion	r con under	pecies itributes r criterior 5 7 8		Period of pop. Est.	IUCN Red List	CITES Appendix I	CMS Appendix I	Other Status	Justification
CHORDATA / AVES	Phalaropus fulicarius					]		LC				Criterion 4: The site supports this species during the breeding period and in spring this species occurs in the region. One of the most important breeding sites for this species.
CHORDATA / AVES	Rissa tridactyla	22(				6000		VU				Criterion 4: During the breeding season approximately 6000 individuals nest at Ingeborgfjellet (2009 estimate)
CHORDATA / AVES	Somateria mollissima			] 🛛 🛛		1		NT				Criterion 4: During moulting period the coast is important for this species.
CHORDATA / AVES	Somateria spectabilis	ØØ		Ø		ו		LC			Ann. Il Berne Convention	Criterion 4: During moulting period the coast is important for this species.
CHORDATA / AVES	Uria Iomvia	ZZ				12000		LC			Svalbard Red List: Considered as VU	Criterion 4: During the breeding season approximately 12 000 individuals occur at Ingeborgfjellet (2009 estimates)

1) Percentage of the total biogeographic population at the site

Capitalized letters shows the species' status on the Svalbard 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

Situated in the Arctic and characterised by:

- None or only sparse vegetation around ponds and some other places.

- Drift ice occurs in winter and spring.

- An important staging area for marine adapted bird species, geese and waders. Used as breeding, moulting, feeding and resting area.

- Important year round for mammals like Svalbard reindeer and Arctic fox and the area is also visited by polar bears, harbour seals and walrus in small numbers.

## 4.2 - What wetland type(s) are in the site?

#### Marine or coastal wetlands

Wetland types (code and name)	Local name	Ranking of extent (1: greatest - 4: least)	Area (ha) of wetland type	Justification of Criterion 1
D: Rocky marine shores		2		
J: Coastal brackish / saline lagoons		4		Representative

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 >> N: Seasonal/ intermittent/ irregular rivers/ streams/ creeks		3		
Fresh water > Marshes on inorganic or peat soils >> Vt: Tundra wetlands		1		Representative

## 4.3 - Biological components

## 4.3.1 - Plant species

<no data available>

#### 4.3.2 - Animal species

#### Other noteworthy animal species

Phylum	Scientific name	Pop. size	Period of pop. est.	% occurrence	Position in range /endemism/other
CHORDATA/MAMMALIA	Rangifer tarandus platyrhynchus				

## 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)

The climate is characterised by low temperatures and low precipitation. The temperature in summer is rather stable and usually between 0-10°C (July mean at Isfjorden 4.7°C). Most precipitation in summer is in the form of drizzle but snow can fall in any month. Heavy overcast is the prevalent weather type, and away from the direct influence of the fjord entrances winds in summer are generally light. Sea ice often packs along the sea coast and in some summers persists well into August, impeeding small boat traffic. Snow cover on the tundra falls to 50% by mid-June in early years and snowmelt is delayed until early July in late seasons. The average temperature in July is 4,8°C. The annual average temperature is -5,1°C. The annual precipitation is 480mm.

4.4.2 - Geomorphic setting	
a) Minimum elevation above sea level (in	
a) Maximum elevation above sea level (in metres) 714	
Entire river l	basin 🗖
Upper part of river l	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.

Norwegian Sea

4.4.3 - Soil

## Mineral 🗹

<sup>(Update)</sup> Changes at RIS update No change Increase O Decrease O Unknown O

No available information

Are soil types subject to change as a result of changing hydrological conditions (e.g., increased salinity or acidification)? Yes O No ()

#### Please provide further information on the soil (optional)

The area is covered with a varying, but mostly very thin, layer of marine deposits with beach terraces and beach ridges. Patches of bare rock at the surface and form plateaus in the country and capes and low mountain cliffs along the coast (Reiniusøyane, Cape Martin, Lågneset to Diabaspynten). The central coastal cliff sections consist of marine beach ridges composed of sand, gravel and small stones.

#### 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	
Marine water		No change	

Presence?	Changes at RIS update
Marine	No change

Stability of water regime		
	Presence?	Changes at RIS update
	Water levels fluctuating (including tidal)	No change

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

During spring and early summer the soil is nearly saturated with water as permafrost impedes drainage, preventing the water from percolating downwards. The lakes are small and shallow. The rivers are short-lived summer phenomena. At the coasts the thickness of permafrost is 10-40 m. The variation between high and low tides measured at Ny-Ålesund (north along the coast) is 137 cm on average.

With the exception of a few mounds generally less than 20 m in elevation, the terrain is broken only by old beach ridges, which form gentle arcs in the landscape and have important effects on drainage.

4.4.5 - Sediment regime	
Sedime	ent regime unknown 🗹
4.4.6 - Water pH	
	Unknown 🗷
4.4.7 - Water salinity	
	Unknown 🗹
4.4.8 - Dissolved or suspended nutrients in	nwater
	Unknown 🗹
4.4.9 - Features of the surrounding area w	hich 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 O 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
Food for humans	Sustenance for humans (e.g., fish, molluscs, grains)	Low
Wetland non-food products	Other	Medium

#### Regulating Services

Ecosystem service	Examples	Importance/Extent/Significance
Climate regulation	Local climate regulation/buffering of change	Medium

#### Cultural Services

Ecosystem service	Examples	Importance/Extent/Significance
Recreation and tourism	Water sports and activities	Medium
Recreation and tourism	Recreational hunting and Medium	
Spiritual and inspirational	Cultural heritage (historical and archaeological)	Medium
Scientific and educational	Long-term monitoring site	Medium

#### Supporting Services

Ecosystem service	Examples	Importance/Extent/Significance
Nutrient cycling	Carbon storage/sequestration	High

#### Other ecosystem service(s) not included above:

The site plays an important role by storing carbon and methane.

Due to the relative ease of access, this area is one of the most explored areas of the archipelago. Bellsund was thus one of the classic localities in the early days of whaling in the early 1600s. During the following centuries, Pomor hunters had several settlements in the area. More recently, fur trapping was an important activity along the coast, but with the closure of the polar bear hunt between 1970 and 1973 this activity has virtually ceased and the string of huts has since fallen into disrepair. Only one trapper has wintered regularly in the vicinity (Axeløya, southeast of the site), in recent years extending his range towards the offshore islands to collect eider down. The trapping activities include harvesting of eider down, reindeer hunting and trapping of the Arctic fox. There is also a satellite station on Kapp Schollin, east of the site.

There was a flurry of geological exploration and tentative mining at the foot of Ingeborgfjellet and on one of the Reiniusøyane at the southern margin of the area between 1908 and 1926, and several cabins have survived from that era. Up to 1977 sealers in their small vessels occasionally visited the area to collect eggs, but since then there has been little human activity aside from small field parties engaged in geological or biological work.

The radio station on Kapp Linné at the entrance of Isfjorden was automated around 2002 thus ending many decades of year-round human presence.

Cultural value: There are remains of several huts, hut sites, mines, hunting traps, graves and crosses in the area. All of these are protected cultural heritage sites.

There have been several research projects on the site, largely focused on goose populations. Monitoring of seabirds were done in Ingeborgfjellet until 2002.

#### See additional material for further information.

Have studies or assessments been made of the economic valuation of ecosystem services provided by this Ramsar Site?

#### 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

## RIS for Site no. 1968, Nordenskiöldkysten, Norway

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

(ECD) Primary production	The rich production of the sea is of great importance for much of the diversity of vegetation and animal life found in this area
(ECD) Nutrient cycling	High input of marine nutrients to the terrestrial system by cliff-breading seabirds
(ECD) Carbon cycling	Due to the permafrost levels (10-40m), the site play an important role in the carbon cycle by storing carbon
grazing, predation, competition, diseases	In recent years polar bears have predated up to 90% of eggs laid by geese at the site, if this persist it can result in population declines. This is particularly important for ground-nesting species such as common eiders, barnacle geese and glaucous gulls

# 5 - How is the Site managed? (Conservation and management)

## 5.1 - Land tenure and responsibilities (Managers)

#### 5.1.1 - Land tenure/ownership

Public ownership					
Category	Within the Ramsar Site	In the surrounding area			
National/Federal government	×	×			

Provide further information on the land tenure / ownership regime (optional):

Within the Ramsar site: State owned

In the surrounding area: State owned

#### 5.1.2 - Management authority

Please list the local office / offices of any agency or organization responsible for managing the site:	
Postal address:	Sysselmesteren på Svalbard Pb. 633 N-9171 LONGYEARBYEN
E-mail address:	firmapost@svsselmesteren.no

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

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

## Human settlements (non agricultural)

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Commercial and industrial areas					V	
Unspecified development					V	

#### Biological resource use

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Unspecified	Medium impact	Medium impact		No change	×	No change
Hunting and collecting terrestrial animals	Medium impact	Medium impact	×	No change	×	No change

#### Human intrusions and disturbance

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Recreational and tourism activities	Medium impact	Medium impact		No change	×.	No change

#### Pollution

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Unspecified	Medium impact	Medium impact		No change	×	No change
Industrial and military effluents	Medium impact	Medium impact		No change	×.	No change

#### Climate change and severe weather

Factors adversely affecting site	Actual threat	Potential threat	Within the site	Changes	In the surrounding area	Changes
Unspecified	High impact	High impact	×	No change	×	No change

#### Please describe any other threats (optional):

#### Within the Ramsar site:

Climate change and its effects in the Arctic may be the most serious environmental issue threatening the Arctic environment.

## In the surrounding area:

Climate changes, increasing tourism, oil spill from ships and oil/gas development projects in this part of the Arctic is a possible threat.

## 5.2.2 - Legal conservation status

## National legal designations

RIS for Site no. 1968, Nordenskiöldkysten, Norway

Designation type	Name of area	Online information url	Overlap with Ramsar Site
National Park	Nordenskiöld		whole

Designation type	Name of area	Online information url	Overlap with Ramsar Site
Important Bird Area	Ingeborgfjellet		whole
Important Bird Area	Nordenskiöldkysten		whole

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

la Strict Nature Reserve

- Ib Wilderness Area: protected area managed mainly for wilderness protection
  - Il 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

#### Other:

The proposed site is identified by the management authority as an area where it is necessary to get a management plan.

#### 5.2.5 - Management planning

Is there a site-specific management plan for the site? No

Has a management effectiveness assessment been undertaken for the site? Yes O No ()

If the site is a formal transboundary site as indicated in section Data and location > Site location, are there shared management planning Yes O No processes with another Contracting Party?

Please indicate if a Ramsar centre, other educational or visitor facility, or an educational or visitor programme is associated with the site.

No such activities have been conducted, mainly because of the remoteness of the area and difficult access.

#### 5.2.6 - Planning for restoration

Is there a site-specific restoration plan? No need identified

#### 5.2.7 - Monitoring implemented or proposed

Monitoring	Status
Birds	Implemented

There have been several research projects on the site, largely focussed on goose populations. Monitoring of seabirds were done in Ingeborgfjellet until 2002.

# 6 - Additional material

## 6.1 - Additional reports and documents

#### 6.1.1 - Bibliographical references

Bergstrøm R., 1998, Goose monitoring – vårsolbukt, Spitsbergen mai30 – June 6. 1998

Birdlife International, Birdlife IBA Factsheet, SJ009 Ingeborgfjellet. Birdlife International 2009. http://www.birdlife.eu/datazone/species/index.html?action=SitHTMDetails.asp&sid=3197&m=0 Braaten et.al. 2000, Sjøfugleregistreringer Spitsbergen vest, mars 2000.

Elvebakk, A. 1989: Biogeographical zones of Svalbard and Jan Mayen based on the distribution patterns of thermophilous vascular plants. Upubl. manuskript, Universitetet i Tromsø.

Henriksen, J. & Dallmann, W. 2007. Isfjordens geologi og landskap. Norsk Polarinstitutt Cruisehåndbok for Svalbard. http://cruisehandbook.npolar.no/no/index.html

Hübner C.E. 2006. The importance of pre-breeding areas for the arctic Barnacle Goose Branta leucopsis. Ardea 94(3): 701–713.

Jouke P., Drent R.H., 2003 Goose census of Nordenkiöldkysten, West – Spitsbergen, Svalbard, summer 2003.

Jouke P., de Fouw. J., 2004. Goose cencus of Nordenkiöldkysten, West-Spitsbergen, Svalbard, summer 2004

Kålås, J.A., Viken, Å. og Bakken, T. (red.) 2006. Norsk Rødliste 2006 – 2006 Norwegian Red List. Artsdatabanken, Norway.

Norsk Polarinstitutt 2000, Notat, Landskapsbeskrivelse for området Bellsund – Braganzavågen. Notat Norsk polarinstitutt.

H. Drent, Rudolf & Prop, Jouke. (2008). Barnacle goose Branta leucopsis survey on Nordenskiöldkysten, west Spitsbergen 1975–2007: breeding in relation to carrying capacity and predator impact. Circumpolar Stud. 4.

Moe, B., Prop, J., Aars, J., Bårdsen, B. J., Hanssen, S. A., Bech, C., ... & Noreen, E. (2015). Isbjørnens effekt på fugl i et arktisk klima i endring-Sluttrapport for Svalbards miljøvernfond.

Mitra Shariati-Najafabadi, Roshanak Darvishzadeh, Andrew K. Skidmore, Andrea Kölzsch, Klaus-Michael Exo, Bart A. Nolet, Larry Griffin, Julia Stahl, Paul J.M. Havinga, Nirvana Meratnia, Albertus G. Toxopeus, Environmental parameters linked to the last migratory stage of barnacle geese en route to their breeding sites, In Animal Behaviour, Volume 118, 2016, Pages 81-95, ISSN 0003-3472, https://doi.org/10.1016/j.anbehav.2016.05.018.

Prop, J., Oudman, T., van Spanje, T. M., & Wolters, E. H. (2013). Patterns of predation of Pink-footed Goose nests by polar bear. Ornis Norvegica, 36, 38-46.

Hubner, C. E. (2006). The importance of pre-breeding areas for the arctic barnacle goose Branta leucopsis. ARDEA-WAGENINGEN-, 94(3), 701.

Jakt på svalbardrein - kunnskapsstatus og evaluering av aktuelle forvaltningsmodeller. Sluttrapport til Svalbards Miljøvernfond

Heggøy, O., Øien, I. J., Aarvak, T. (2015) Important Bird and Biodiversity Areas (IBAer) i Norge. Norsk ornitologisk forening, rapport 5-2015.

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

#### 6.1.2 - Additional reports and documents

i. taxonomic lists of plant and animal species occurring in the site (see section 4.3)

ii. a detailed Ecological Character Description (ECD) (in a national format)

iii. a description of the site in a national or regional wetland inventory <no file available>

iv. relevant Article 3.2 reports

v. site management plan

<no file available>

vi. other published literature

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

Please provide at least one photograph of the site:





Vårsolbukta (Andrine Kylling/Sysselmannen, 0 09-2015 )



Grav sjøen (Ståle Nylund/Sysselmannen, 0 09-2017)



Kapp Martin ( Margrete Keyser/Sysselmannen, 05-09-2015 ) RIS for Site no. 1968, Nordenskiöldkysten, Norway



## 6.1.4 - Designation letter and related data

Designation letter

<1 file(s) uploaded>

Date of Designation 2010-11-12