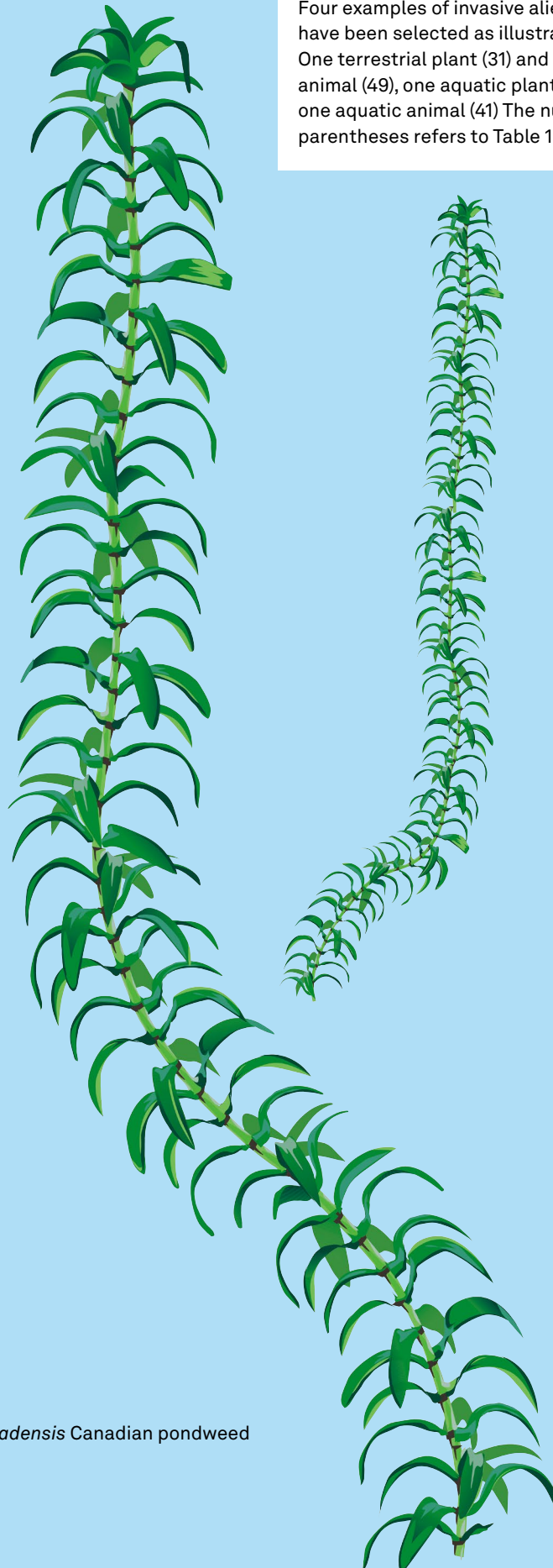


Invasive Alien Species in the Barents region – the worst 50

41 *Paralithodes camtschaticus* Red king crab



Four examples of invasive alien species have been selected as illustrations. One terrestrial plant (31) and one terrestrial animal (49), one aquatic plant (9) and one aquatic animal (41) The number in parentheses refers to Table 1.



9 *Elodea canadensis* Canadian pondweed

Invasive Alien Species in the Barents region – the worst 50

Authors: Ulf Bjelke, Olga Hilmo, Liudmila Khylop, Kari Lahti, Olga V. Morozova

Invasive Alien Species

Definition in the Convention on Biological Diversity:

Invasive alien species are plants, animals, pathogens and other organisms that are non-native to an ecosystem, and which may cause economic or environmental harm or adversely affect human health. In particular, they impact adversely upon biodiversity, including decline or elimination of native species - through competition, predation, or transmission of pathogens - and the disruption of local ecosystems and ecosystem functions.



Source: Arctic Centre, University of Lapland

The “Barents region” consists of the northernmost parts of Finland, Sweden, Norway and the north-west parts of Russia. The Barents Euro-Arctic Cooperation is built upon the Kirkenes Declaration of 1993.

The work was initiated after the conference Habitat Contact Forum X in Murmansk 2019 and has been held together by the Swedish Environmental Protection Agency and the Swedish University of Agricultural Sciences.

Introduction

Due to a harsh climate, the Barents region has suffered less from invasive alien species (IAS) than southern areas of the Nordic countries and Russia. Still, there are a number of species causing negative effects today, and a warmer climate will most likely lead to increasing problems.

If invasive alien species are detected early in their establishment, it is often possible to eradicate them or strongly reduce the problem. As soon as IAS have a strong foothold such measures are often very difficult or even impossible to carry out. Thus, knowledge of what species are most likely to cause problems is very important. It is also important to share knowledge, experiences, and efforts with neighboring countries. Such knowledge is significant for learning how to handle problematic species, getting information on invasiveness of most harmful species as well as immediate reports on newly arrived species.

Presently there are large amounts of data to be found on these issues, but a substantial part of it is in native languages and thus may be hard to access.

This data is to be found in online databases and on webpages from government authorities in the Barents countries. The present report aims to synthesize the collected knowledge on IAS in the Barents countries.

The aim is to provide interested parties in the Barents region a source of information on what species are presently problematic and what species are likely to become invasive in a warmer climate.



FOTO: TORBJÖRN LILJA

49 *Nyctereutes procyonoides* Raccoon dog

The national approaches regarding invasive alien species in the countries of the Barents region

Invasive alien species are an increasing problem due to increased travel, trade and a warmer climate. Invasive species may damage both natural ecosystems and areas used for food production. The four countries in the Barents region have national approaches toward this issue.

In the Nordic countries, the EU members Sweden and Finland are subject to EU regulation on Invasive Alien Species implemented in 2015. Currently (December 2021) 66 species are listed as threats of union concern, six of these are present in the Barents region. The member states of the EU must take measures to stop their spread, implement monitoring and preferably eradicate these species. The EU regulation also proposes the member states to put forward national lists. This has been done in Finland and is currently underway in Sweden.

Beside the EU, the Nordic countries also make separate risk assessments of alien species in order to determine which are presently problematic or will possibly become so in the future. Sweden and Norway are using the same risk assessment protocol, Generic Ecological Impact Assessment of Alien Species (GEIAA). The species are classified as SE = Severe risk, HI = High risk, PH = Potentially High risk, LO = Low risk, NK = No Known risk. Their estimated number of species in the SE and HI categories in the Barents area are 68 (Sweden) and 88 (Norway).

To manage IAS risks, Finland has a national legislation, the [Government Decree on Managing the Risk Caused by Alien Species](#). In addition, to be able to adjust for the ever-changing situation, Finland has established The Finnish Advisory Board for Invasive Alien Species (see more in [Finnish](#) and in [Swedish](#)), appointed by the Council of State. It is Finland's national expert body in matters concerning IAS. Its key tasks include following the implementation of the invasive alien species legislation and awareness raising of the impacts and management measures concerning IAS. In addition Finland, has a [Management plan I](#) and a [Management plan II](#) to prevent invasive alien species, in which the risks are thoroughly evaluated and the measures for prevention described.

In Russia, the main scientific work on IAS is carried out by research institutes attached to the Russian Academy of Sciences. Within the frame of the Global Register of Introduced and Invasive Species, hosted by IUCN, and in order to reach the Aichi Biodiversity Target 9, a checklist of more than 1 000 invasive species in Russia was [presented](#) in 2020. The most harmful IAS were analyzed in 2018, and the worst 100 species presented in a book (Dgebuadze, Y. Y., Petrosyan, V. G., & Khlyap, L. A. (2018), The most dangerous invasive species of Russia (TOP-100). Among these 100 species, 35 are present in the Russian part of Barents. A meta-analysis of invasive alien plants in the Russian Arctic was published in 2021. Russia has also launched the Russian Alien Species web Portal. The Russian republic of Karelia has a [website](#) presenting the 42 worst IAS in the region. Nationally, IAS trade restrictions follow certain international agreements and a Russian law concerning quarantine of a number of invasive pest species.



31 *Solidago canadensis* Canadian goldenrod

The 50 worst IAS of the Barents region

Here we present the 50 worst IAS of the Barents area (Table 1). The species list was generated from analyzing the risk assessments in Finland, Norway, Russia and Sweden. Species put forward as highly invasive in any of the countries and also likely to be harmful in the Barents area of that country are included in the list. Norway and Sweden use the same assessment system, where species are divided into risk categories (see above). The Finnish species are categorized as invasive in a national risk list. The Russian species are generated from the national list of the 100 worst species in Russia.

The list consists of five main categories; **1.** Garden or pond/aquarium plant species that manage to colonize natural habitats (20 species). **2.** Mammals brought to the region for fur farming or hunting (5). **3.** Fish and crayfish species from other parts of the world brought to Northern Europe for aquaculture or fisheries (5). **4.** Species brought to Northern Europe in ballast water from ships and then spreading further (4). **5.** Species or pathogens brought to the region as passengers when importing the first three categories, for example the Spanish slug, *Arion vulgaris*, with garden plants and the Crayfish plague, *Aphanomyces astaci*, with North American crayfish species (4).

About 20 of the 50 species are considered harmful in all four countries. Some examples of exceptions to this are species harmful in the Barents Sea. They are obviously only on the Norwegian and Russian lists. Some species are considered native in one country since they have been present for a very long time. An example of this is the plant Turkish warty-cabbage, *Bunias orientalis*, introduced to and established in Sweden before 1800, thus for technical reasons not assessed as alien in Sweden. However, it is considered invasive in neighboring countries and is problematic in Sweden too.

Species not yet observed in the Barents area, but which pose a risk of being harmful in the future are not included in the list. Some examples of door knocking species presently harmful south of Barents are; the fish Round goby, *Neogobius melanostomus* and the plant Buttonweed, *Cotula coronopifolia*. In addition, certain species have not been officially assessed as being harmful but have recently been identified to be problematic, thus are likely to be placed in a higher future risk category. One example is Weyrich's knotweed, *Aconogonon weyrichii*, in northern Sweden. This is an indication of rapid changes both in nature, as well as in our knowledge. Regarding IAS, surprises are not uncommon, and species presently not being considered may very well be problematic in the future.

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The text and tables were completed in December 2021. The documents are tentatively planned to be updated in 3-5 years. Minor updates will take place on an ongoing basis, e.g. updating links as needed.

The Swedish Environmental Protection Agency has financed this work.

The Authors are responsible for the content and conclusions.



FOTO: CORNELIUS POPPE/TT NYHETSBYRÅN

41 *Paralithodes camtschaticus* Red king crab

Table 1. The 50 worst Invasive Alien Species in the Barents region																	
	Scientific Name	English name	Swedish name	Norwegian name	Finnish name	Russian name	Cyrillic	Group	Swedish Risk Assessment 2018. (SE = Severe risk)	Swedish Risk Assessment 2018. Criteria	Norwegian Risk Assessment 2018. (SE = Severe risk)	Norwegian Risk Assessment 2018. Criteria	Finland Listed as Nationally Invasive	EU 66 IAS of union concern EU Regulation 1143/2014 on Invasive Alien Species	Russia worst 100. Khyap, L., Dgebuadze, Y., & Petrosoyan, V. (Eds.). (2018). The most dangerous invasive species of Russia (TOP-100). Litres. Book	Presently problematic in Barents	Present/observed in Barents and possibly problematic in future
1	<i>Bonnemaisonia hamifera</i>	Bonnemaisonia's hook weed	japantofs	krokbærer		bonne mezoniya kryuchkonosnaya	боннемезония крючконосная	Algae	SE	4C,4F	SE	4AB,4F					X
2	<i>Codium fragile</i>	Dead man's fingers	klykalg	pollpryd	liekoplyysilevä	lomkiy kodium	ломкий кодиум	Algae	SE	3C,4D	SE	4AB,4F					
3	<i>Amelanchier spicata</i>	Dwarf Serviceberry	häggmispel	blåhegg	isotuomi-pihlaja	irga kolosistaya	ирга колосистая	Vascular plant	SE	4AB,4D	SE	4A	2012		X	X	
4	<i>Bromopsis inermis</i>	Smooth brome grass	foderlost	bladfaks	idänkattara	kostrets bezostyi	кострец безостый	Vascular plant	SE	4AB,3DEF	SE	4A,4D				X	
5	<i>Bunias orientalis</i>	Turkish warty-cabbage	ryssgubbe	russekål	idänukonpalko	sverbiga vostochnaya	свербига восточная	Vascular plant	B1800		SE	4A,4D	B1800				
6	<i>Campanula rapunculoides</i>	Creeping bellflower	knölklocka	ugrasklokke	vuohenkello	kolokolchik rapuntselevidnyi	колокольчик рапунцелевидный	Vascular plant	SE	4AB,4D	PH	4A,1				X	
7	<i>Cornus/Swida sericea</i>	Red osier dogwood	videkornell	alaskakornell	lännenkanukka	Svidina shelkovistaya	свидина шелковистая	Vascular plant	SE	4A,3DF	SE	4A	2012			X	
8	<i>Cotoneaster lucidus</i>	Hedge cotoneaster	häckoxbär	blankmispel	kiiltotuhkaspensas	kizilnik blestyashchii	кизилник блестящий	Vascular plant	SE	4A,4D	SE	4A,4DF	New			X	
9	<i>Elodea canadensis</i>	Canadian pondweed	vattenpest	vasspest	kanadanvesirutto	elodeya kanadskaya	элодея канадская	Vascular plant	SE	4AB,4DF	SE	4A,4D	2012		X	X	
10	<i>Elodea nuttallii</i>	Nuttall's waterweed	smal vattenpest	smal vasspest	kiehkuravesirutto	elodeya Nuttallya	элодея Натталля	Vascular plant	SE	4A,4D	SE	3AB,4DF	2012	X		X	
11	<i>Epilobium adenocaulon</i>	Northern willowherb	amerikansk dunört	alaskamjølke	rusoamerikanhorsma	kiprei zhelezist-ostebe'l'nyi	кипрей железистостебельный	Vascular plant	HI	4AB,2H	SE	4A,3D	2012		X	X	
12	<i>Erigeron (Conyza) canadensis</i>	Canadian fleabane	kanadabinka	hestehamp	kanadankoiransilmä	melkolepestnik kanadskii	мелколепестник канадский	Vascular plant	B1800		PH	4A,1	2012		X	X	
13	<i>Heracleum mantegazzianum</i>	Giant hogweed	jätteloka	kjempebjørnekjeks	kaukasian-jättiputki	borshchevik Mantegatsi	борщевик Мантегацци	Vascular plant	SE	4AB,3F	SE	4AB,3DH	2015	X		X	
14	<i>Heracleum persicum</i>	Persian hogweed	tromsölöka	tromsøpalme	persianjättiputki	borshchevik persidskii	борщевик персидский	Vascular plant	HI	4A,2H	SE	4AB,3DFH	2012			X	
15	<i>Heracleum sosnowskyi</i>	Sosnowsky's hogweed	bredloka		armenian-jättiputki	borshchevik Sosnovskogo	борщевик Сосновского	Vascular plant	LO	3B,1	LO	3B,2E	2012		X	X	
16	<i>Impatiens glandulifera</i>	Himalayan balsam	jättebalsamin	kjempespringfrø	jättipalsami	nedotroga zhelezkonosnaya	недотрога железконосная	Vascular plant	SE	4AB,4D	SE	4AB,3D	2012	X	X	X	
17	<i>Impatiens parviflora</i>	Small balsam	blekbalsamin	mongolspringfrø	rikkapalsami	nedotroga melkotsvetkovaya	недотрога мелкоцветковая	Vascular plant	SE	4AB,3F	SE	4A,3D	2012		X	X	
18	<i>Laburnum anagyroides</i>	Laburnum	sydgullregn	gullregn	etelänkultasade	bobovnik anagirolistnyi, zolotoi dozhd'	бобовник анагиристный, золотой дождь	Vascular plant	SE	4A,3D	SE	4A,4D					X
19	<i>Lupinus nootkatensis</i>	Nootka lupine	sandlupin	sandlupin	alaskanlupiini	lyupin Nutka	люпин Нутка	Vascular plant	HI	3A,3F	SE	4A,4D	2012				X

Table 1. The 50 worst Invasive Alien Species in the Barents region																	
	Scientific Name	English name	Swedish name	Norwegian name	Finnish name	Russian name	Cyrillic	Group	Swedish Risk Assessment 2018. (SE = Severe risk)	Swedish Risk Assessment 2018. Criteria	Norwegian Risk Assessment 2018. (SE = Severe risk)	Norwegian Risk Assessment 2018. Criteria	Finland Listed as Nationally Invasive	EU 66 IAS of union concern EU Regulation 1143/2014 on Invasive Alien Species	Russia worst 100. Khlyap, L., Dgebuadze, Y., & Petrosyan, V. (Eds.). (2018). The most dangerous invasive species of Russia (TOP-100). Litres. Book	Presently problematic in Barents	Present/observed in Barents and possibly problematic in future
20	<i>Lupinus polyphyllus</i>	Garden lupin	blomsterlupin	hagelupin	komealupiini	lyupin mnogo-listnyi	люпин многолистный	Vascular plant	SE	4AB,4E	SE	4AB,4DE	2012		X	X	
21	<i>Phedimus hybridus</i>	Hybrid stonecrop	sibiriskt fetblad	sibirbergknapp	mongolianmaksaruoho	ochitok gibridnyi	очиток гибридный	Vascular plant	SE	4A,4F	SE	4A,4D				X	
22	<i>Phedimus spurius</i>	Caucasian-Stonecrop	kaukasiskt fetblad	gravbergknapp	kaukasianmaksaruoho	ochitok neyasnyi	очиток неясный	Vascular plant	SE	4AB,4F	SE	4A,4D					X
23	<i>Picea x lutzii</i>	Hybrid spruce	hybridgran	lutzgran	lutzinkuusi	el' Lutsa	ель Лутца	Vascular plant			SE	4AB,4F					X
24	<i>Pinus mugo</i>	Mountain pine	bergtall	alpefuru	vuorimänty	sosna gornaya	сосна горная	Vascular plant	B1800		SE	4AB,4DF					X
25	<i>Pinus uncinata</i>	Mountain pine	fransk bergtall	bergfuru	alppimänty	sosna kryuchkovataya	сосна крючковатая	Vascular plant			SE	4AB,4DF					X
26	<i>Reynoutria x bohemica</i>	Bohemian knotweed	hybridslide	hybridslirekne	tarhatatar	reinutriya bogemskaya	рейнутрия богемская	Vascular plant	HI	2AB,3E	SE	4AB,4D	2012		X		X
27	<i>Reynoutria japonica</i>	Japanese knotweed	parkslide	parkslirekne	japanintatar	reinutriya yaponskaya	рейнутрия японская	Vascular plant	SE	4A,3E	SE	4A,4D	2012			X	
28	<i>Reynoutria sachalinensis</i>	Giant knotweed	jätteslide	kjempe-slirekne	sahalinintatar	reinutriya sakalinskaya	рейнутрия сахалинская	Vascular plant	SE	4A,3E	SE	4AB,4DE	2012			X	
29	<i>Rosa rugosa</i>	Rosa rugosa	vresros	rynkerose	kurtturuusu	shipovnik morshchinisty	шиповник морщинистый	Vascular plant	SE	4AB,4EF	SE	4AB,4DEF	2012		X	X	
30	<i>Sambucus racemosa</i>	Red-berried elder	druvfläder	rødhyll	tertuselja	buzina krasnaya, buzina kistevidnaya	бузина красная, бузина кистевидная	Vascular plant	SE	4AB,3DF	SE	4AB,3FG	2012				X
31	<i>Solidago canadensis</i>	Canadian goldenrod	kanadensiskt gullris	kanadagullris	kanadanpiisku	zolatarnik kanadskii	золотарник канадский	Vascular plant	SE	4AB,3F	SE	4AB,4D	2012		X	X	
32	<i>Symphoricarpos albus</i>	Common snowberry	snöbär	Snøbær		snezhnoyagodnik belyy	снежноягодник белый	Vascular plant	SE	4AB,3F	HI	4A,2E				X	
33	<i>Tsuga heterophylla</i>	Western hemlock	jättehemplock	vestamerikansk hemlock	lännenhemlockki	tsuga zapadnaya	тсуга западная	Vascular plant	LO	2B,1	SE	4AB,4D					X
34	<i>Vinca minor</i>	Common periwinkle	vintergröna	gravmyrt	pikkutalvio	barvinok malyi	барвинок малый	Vascular plant	SE	4AB,3D	SE	4AB,4D					X
35	<i>Aphanomyces astaci</i>	Crayfish plague	kräftpest		rapurutto	has no Russian name	русского названия нет	Oomycete	SE	4AB,4D	SE	4AB,4D	2012		X	X	
36	<i>Gyrodactylus salaris</i>	Salmon fluke	laxdjävul			has no Russian name	русского названия нет	Flatworm	Native		SE	3A,4D	2012			X	
37	<i>Arion vulgaris</i>	Spanish slug	mördarsnigel	brunskogsnegl	espanjansiruetana	ispanskiy slizen'	испанский слизень	Mollusk	SE	4AB,3E	SE	4AB,3E	2012				X
38	<i>Dreissena polymorpha</i>	Zebra mussel	vandarmussla	sebramusling	vaeltajasimpukka	rechnaya dreissen	речная дрейссена	Mollusk	SE		SE	3A,4DE	2012		X		
39	<i>Eriocheir sinensis</i>	Chinese mitten crab	kinesisk ullhandskrabba	kinaullhandskrabbe	villasaksirapu	Kitayskiy mokhnatoruki	китайский мохнаторукий краб	Crustacean	HI	3C,3D	SE	4AB,4D	2012	X	X	X	
40	<i>Pacifastacus leniusculus</i>	Signal crayfish	signalkräfta	signalkrebs	täplärapu	amerikanskiy signal'nyy rak	американский сигнальный рак	Crustacean	SE	4AB,4DI	SE	4AB,4DEI	2012			X	

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	Scientific Name	English name	Swedish name	Norwegian name	Finnish name	Russian name	Cyrillic	Group	Swedish Risk Assessment 2018. (SE = Severe risk)	Swedish Risk Assessment 2018. Criteria	Norwegian Risk Assessment 2018. (SE = Severe risk)	Norwegian Risk Assessment 2018. Criteria	Finland Listed as Nationally Invasive	EU 66 IAS of union concern EU Regulation 1143/2014 on Invasive Alien Species	Russia worst 100. Khlyap, L., Dgebuadze, Y., & Petrosyan, V. (Eds.). (2018). The most dangerous invasive species of Russia (TOP-100). Litres. Book	Presently problematic in Barents	Present/observed in Barents and possibly problematic in future
41	<i>Paralithodes camtschaticus</i>	Red king crab	kungskrabba	kongekrabbe		kamtschatskiy krab	камчатский краб	Crustacean	Not found		SE	4AB,4D			X	X	
42	<i>Harmonia axyridis</i>	Harlequin ladybird	harlekinpiga	harlekinmarihøne	harlekiini-pirkko	kharmoniya izmenchivaya	гармония изменчивая	Beetle	LO	3B,2E	SE	4A,4E	2012		X		X
43	<i>Oncorhynchus gorbuscha</i>	Pink Salmon	puckellax	pukkellaks	kyttyrälohi	gorbuscha	горбуша	Fish	SE	4B,3I	HI	4AB,2E	2012			X	
44	<i>Salvelinus fontinalis</i>	Brook trout	bäckröding	bekkerøye	puronieriä	amerikanskaya paliya	американская палия	Fish	SE	4A,4D	LO	2A,1	2012			X	
45	<i>Branta canadensis</i>	Canada goose	kanadagås	kanadagås	kanadanhanhi	kanadskaya kazarka	канадская казарка	Bird	SE	4AB,4G	SE	4C,4DE	2012		X	X	
46	<i>Castor canadensis</i>	North American beaver	nordamerikansk bäver	amerikansk bever	amerikamajava	kanadskiy bobr	канадский бобр	Mammal	SE	3B,4D	SE	3B,4D	2012		X	X	
47	<i>Lepus europaeus</i>	European hare	fälthare	sørhare	rusakko	zayats-rusak	заяц-русак	Mammal	SE	4ABC,4E	SE	4AB,4E					X
48	<i>Neovison vison</i>	American Mink	mink	mink	minkki	amerikanskaya norka	американская норка	Mammal	SE	4ABC,4DG	SE	4ABC,4D	2012		X	X	
49	<i>Nyctereutes procyonoides</i>	Raccoon dog	mårdhund	mårdhund	supikoira	enotovidnaya sobaka	енотовидная собака	Mammal	SE	4ABC,4D	SE	4AB,4I	2012	X	X	X	
50	<i>Ondatra zibethicus</i>	Muskrat	bisam	bisam	piisami	ondatra	ондатра	Mammal	SE	4BC,3DG	PH	4AB,1	2012	X	X	X	

Table 2. Data sources for Invasive Alien Species and non-IAS species.							
Type	Name/Organization	Coverage/language	Total number of species/habitats/ observations	Number of species/habitats/ observations in the Barents region	Overview	Updated	Media
IAS	Black Book of Flora in Siberia	Central Siberia/Russian	146 alien and 58 IAS plant species covered	Not presented	Black Book of Flora in Siberia, 2016.	2016	Book
IAS	Centre for Agriculture and Bioscience International (CABI)	Global/English	7 000 Basic summaries and 1 500 datasheets	Not presented	The Invasive Species Compendium (ISC) is an encyclopedic resource that brings together a wide range of different types of science-based information to support decision-making in invasive species management worldwide.	Continuously	https://www.cabi.org/isc
IAS	Interactive Agricultural Ecological Atlas of Russia and Neighboring Countries. Economic Plants and their Diseases, Pests and Weeds	Russia/Russian/English	640	Not presented	The Russian-English Agricultural Atlas is the most comprehensive source of information on the geographic distribution of plant-based agriculture in Russia and neighboring countries. The Atlas contains 1500 maps that illustrate the distribution of 100 crops, 560 wild crop relatives, 640 diseases, pests and weeds. Additionally, the Atlas also provides fact sheets with ecological and environmental data.	Continuously	http://www.agroatlas.ru/
IAS	Norway's assessment of IAS 2018	Norway/Norwegian Some information in English	1 532 alien species assessed, 242 with High or Severe impact	279 alien species assessed, 88 with High or Severe impact	Online database with results and analyses from the national risk assessment of alien species	2018	https://artsdatabanken.no/fremmedarts-lista2018 https://www.biodiversity.no/alien-species-2018 (in English)
IAS	Russian Alien Species web Portal	Russia/Russian		Not presented	The alien species web portal on the territory of Russia was developed and is supported by the Cabinet of Bioinformatics and Modeling of Biological Processes of the IPEE RAS within the framework of grant No. 15-29-02550 of the Russian Foundation for Basic Research	Continuously	http://www.sevin.ru/invasive/
IAS	Sweden's assessment of IAS 2018	Sweden/Swedish	1 033 species assessed, 258	257 Species assessed, 68 with High or Severe impact	Online database with results and analyses from the national risk assessment of alien species	2018	" https://www.artdatabanken.se/arter-och-natur/biologisk-mangfald/frammande-arter/artdatabankens-arbete-med-frammande-arter/ http://www.artfakta.se "
IAS	Swedish Agency for Marine and Water Management	Sweden/Swedish, some information in English	280	Not presented	Overview of Sweden's work with invasive species in aquatic environments. Analyses and fact sheets	Continuously	https://www.havochvatten.se/hav/fiske-fritid/arter/frammande-arter/frammande-arter.html
IAS	Swedish Environmental Protection Agency	Sweden/Swedish, some information in English	100+ species	13	Overview of Sweden's work with invasive species. Analyses and fact sheets	Continuously	https://www.naturvardsverket.se/Amnen/Invasiva-frammande-arter/
IAS	The European Network on Invasive Alien Species (NOBANIS)	Norra och centrala Europa/ engelska	7 600 species	Not presented	NOBANIS is a gateway to information on alien and invasive species in North and Central Europe. Nobanis was initiated by the Nordic Council but now covers also continental parts of Northern Europe. It contains species data sheets for a large number of Invasive Alien species.	Continuously	https://www.nobanis.org/
IAS	The Finnish Invasive Alien Species Portal: https://www.vieraslajit.fi/fi/content/invasive-alien-species-finland (new site will be in production in FEB 2020)	Finland/Finnish/Swedish/ English	236 species/151 565 observations	104 species / 16 044 observations	Overview of Finland's work with invasive species. Analyses and fact sheets. Legislation. Occurrences.	Continuously	https://www.vieraslajit.fi/
IAS	The Global Invasive Species Database (GISD)	Global/English	869 species	Not presented	The Global Invasive Species Database is an online database on alien and invasive species that negatively impact biodiversity. The Global Invasive Species Database (GISD) is managed by the Invasive Species Specialist Group (ISSG) of the IUCN Species Survival Commission. It contains information on assessed IAS.	Continuously	http://www.iucngisd.org/gisd/
IAS	Invasive alien species in the Russian Republic of Karelia	Karelia/Russian	42 species	42 species	International project DIAS (with Finland, 2018-2021, N° KA5046). Overview of invasive species in Republic of Karelia with species fact sheets. Occurrences from GBIF and vieraslajit.fi	2021	https://dias.krc.karelia.ru/
IAS	Web portal Topp-100 worst IAS of Russia	Russia/Russian	100 species	100 species	Overview and species fact sheets of the 100 worst IAS in Russia	2018	http://www.sevin.ru/top100worst/index.html
General	Analysportalen - The Analysis portal for biodiversity data. Swedish Species information Centre, SLU	Sweden/Swedish/English	101 million observations/50 000 species	Approx 6 million observations/16 000 species	Swedish LifeWatch is a national e-infrastructure for integration and analysis of biodiversity data (native and alien species). The infrastructure enables access to major Swedish data providers from biodiversity, observatories and natural history collections.	Continuously	https://www.analysisportal.se/
General	Artfakta.se, Swedish Species information Centre, SLU	Sweden/Swedish	7 000 species with fact sheets, some info on 60 000 species	Not presented	The Swedish online database with fact sheets, pictures and distribution maps for Sweden's Red listed, non redlisted, and Alien species. Some information on every species inhabiting Sweden but full fact sheets for 4 200 red listed species, 3 000 non redlisted species. IAS risk assessments for 1 000 species can be obtained	Continuously	www.artfakta.se
General	Artportalen - The Swedish Species Information System. Swedish Species information Centre, SLU	Sweden/Swedish, some information in English	70 million observations/41 300 species	Approx 5 million observations/20 300 species	A website for observations of Swedens plants, animals and fungi. Anybody can report the species they have seen and search from over 90 million observations. Private individuals as well as professionals such as conservation officers and researchers have contributed.	Continuously	https://www.artportalen.se/
General	The Finnish Biodiversity Information Facility (FinBIF)	Finland + Global/Finnish/ Swedish/English	33 015 338 Occurrences / 35 173 Species	5 901 127 Occurrences / 16 387 Species	Finnish Biodiversity Information Facility (FinBIF) compiles Finnish biodiversity information to one single service for open access sharing. Laji.fi-portal invites you to browse wide range of information on species, their occurrences, distribution and scientific collections and to record and share your own observations.	Continuously	https://laji.fi/en
General	The Norwegian Biodiversity Information Centre (NBIC)	Norway/Norwegian/English		Not presented	Information and fact sheets on Norway's Red Listed, Non redlisted and Invasive species	Continuously	Artsdatabanken.no



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See also the fact sheet Invasive Alien Species – examples of "door-knockers" and early-phase species in the northern parts of Finland, Norway and Sweden ISBN 978-91-620-8907-8.