



Marine non-indigenous species in Europe's seas for MSFD D2 - tabular data, Sep. 2024

This metadata refer to the dataset containing the list of all-know and verified records of non-indigenous species (NIS) in Europe's seas, last updated in October 2022, and used to produce the EEA marine indicator on "Marine non-indigenous species in Europe's seas" (<https://www.eea.europa.eu/ims/marine-non-indigenous-species-in>). MSFD D2: "Marine Strategy Framework Directive Descriptor 2". The data is updated with a cycle on six years.

Simple

Identification info

Date (Creation)	2024-09-01																	
Date (Publication)	2024-09-27																	
Edition	01.00																	
Citation identifier	eea_t_marine-non-indigenous-species-msfd_p_1200-2021_v01_r00																	
Point of contact	<table border="1"> <thead> <tr> <th>Organisation</th> <th>Individual</th> <th>Electronic mail address</th> <th>Website</th> <th>Role</th> </tr> </thead> <tbody> <tr> <td>European Environment Agency</td> <td></td> <td>sdi@eea.europa.eu</td> <td>http://www.eea.europa.eu</td> <td>Point of contact</td> </tr> <tr> <td>European Environment Agency</td> <td></td> <td>sdi@eea.europa.eu</td> <td></td> <td>Custodian</td> </tr> </tbody> </table>	Organisation	Individual	Electronic mail address	Website	Role	European Environment Agency		sdi@eea.europa.eu	http://www.eea.europa.eu	Point of contact	European Environment Agency		sdi@eea.europa.eu		Custodian		
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Topic category	<ul style="list-style-type: none"> Environment 																	

Extent

Temporal extent

Time period	1200-01-01 2021-12-31
Continents, countries, sea regions of the world.	<ul style="list-style-type: none"> Adriatic Sea Black Sea Baltic Sea Bay of Biscay Celtic Seas Mediterranean Sea Mediterranean Sea, Eastern Basin Ionian Sea and the Central Mediterranean Sea Western Mediterranean Sea North Sea North Atlantic Ocean
Reporting obligations	<ul style="list-style-type: none"> MSFD - Articles 8, 9 and 10 - Data
EEA Management Plan	<ul style="list-style-type: none"> 2024 1.1.16
EEA topics	<ul style="list-style-type: none"> Seas and coasts

Resource constraints

Use constraints	Other restrictions
Other constraints	License CC-BY 4.0 (https://creativecommons.org/licenses/by/4.0/). Copyright holder: European Environment Agency (EEA).
Language	English
Additional Information	<p>The MSFD requires that 'The number of non-indigenous species which are newly introduced via human activity into the wild, per assessment period (6 years), is minimised and where possible reduced to zero' (Descriptor 2). Records range from 1200 to 2020. Species are reported by MSFD region and sub-region by the year first detected/identified; and grouped by main taxonomic group (Vertebrate – VER; Invertebrate – INV; Primary producer (plants and algae) – PP). The main mode(s) or pathway(s) of introduction of each species is reported. Where more than one mode is suspected or documented, these are weighted so that the total number of pathways equal to 1. The 'Status comment' includes any additional information on the of non-indigenous status of the species.</p> <p>'Period' refers to the detection year grouped by 6-year assessment cycles, as per the MSFD D2.</p>

Distribution Information

Distribution format	<ul style="list-style-type: none"> Microsoft Excel (.xls, .xlsx)
OnLine resource	https://sdi.eea.europa.eu/webdav/datastore/public/eea_t_marine-non-indigenous-species-msfd_p_1200-2021_v01_r00/
OnLine resource	Direct download

Resource lineage

Statement	<p>National inventories of NIS were collated, revised and updated with published data from biodiversity and hot-spot campaigns, academic surveys, and citizen science observed until December 2020 (reported until June 2022). AquaNIS (http://www.corpi.ku.lt/databases/index.php/aquanis/) and EASIN (http://www.corpi.ku.lt/databases/index.php/aquanis/) databases were also consulted. The revised list was validated with the contribution of national experts. For each regional sea, marine and estuarine species are grouped by selected taxonomic group: primary producers (plants and algae), invertebrates and vertebrates. Species sorting follows recommendations from Tsiamis et al. (2021a). Microalgae and parasite/pathogen species are identified but excluded from the MSFD D2 assessments. Cryptogenic, questionable and range-expanding species are identified and also excluded from the MSFD D2 assessments. Native, partly native species are identified and excluded for the EU level MSFD D2 assessments but included in regional and sub-regional assessments for (sub)regions where they have not been identifies as native. Each species, the pathway(s) assigned to each species follows the EASIN method (also reported in Pergl et al. 2020).</p> <p>Abbreviation Comment</p> <p>REL: Release in nature</p> <p>TC: Transport-contaminant</p> <p>EC: Escape from confinement</p> <p>TS: Transport-stowaway</p> <p>TS-ballasts: Transport-stowaway, ship/boat ballast water</p> <p>TS-hull: Transport-stowaway, ship/boat hull fouling</p> <p>TS-other: Transport-stowaway, other means of transport</p> <p>COR: Corridor</p> <p>UNA: Unaided</p> <p>UNK: Unknown</p>
Hierarchy level	Dataset

Metadata

Metadata identifier	ad505375-15fe-4c1d-ac24-9737bf08f887
Language	English
Character encoding	UTF8
Contact	Electronic

Organisation	Individual	mail address	Website Role
European Environment Agency		sdi@eea.europa.eu	Point of contact

Type of resource

Resource type	Non geographic dataset
Name	Tabular dataset
Metadata linkage	https://sdi.eea.europa.eu/catalogue/srv/api/records/ad505375-15fe-4c1d-ac24-9737bf08f887
Date info (Creation)	2024-09-23T14:49:35.357569Z
Date info (Revision)	2025-10-09T11:08:33.769047Z

Metadata standard

Title	ISO 19115/19139
Edition	1.0

Overviews

Species_name_original	Species_name_accepted	ScientificName_accepted	Subregion	Region	Status comment	STATUS	Group	VER-IV	Year	Period	REL	EC	TC	Other	'S-ball	hull	COR	UNIA	UNK	otal	Pathwa	Comment	Source			
Ablennes hians (Valenciennes, 1846)	Ablennes hians (Valenciennes, 1846)	Ablennes hians	Ionian Sea and the	Mediterranean Sea		non-indigenous	Vertebrate	VER	2018	2018-2021									1		1					
Abudeufuf sp.	Abudeufuf Forsskål, 1775	Abudeufuf	Adriatic Sea	Mediterranean	genus level	questionable	Vertebrate	VER	2018	2018-2021										1		1	P_MED			
Abudeufuf sp.	Abudeufuf Forsskål, 1775	Abudeufuf	Western Mediterran	Mediterranean	genus level	questionable	Vertebrate	VER	2009	2009-2011	0.3		0.33	0.33									1	P_LOW		
Abudeufuf hoefleri (Steindachner, 1846)	Abudeufuf hoefleri (Steindachner, 1846)	Abudeufuf hoefleri	Ionian Sea and the	Mediterranean Sea		non-indigenous	Vertebrate	VER	2014	2012-2017	1												1			
Abudeufuf hoefleri (Steindachner, 1846)	Abudeufuf hoefleri (Steindachner, 1846)	Abudeufuf hoefleri	Macaronesia	North-East Atlantic		non-indigenous	Vertebrate	VER	2014	2012-2017			1										1	P_HIGH		
Abudeufuf saxatilis (Linnaeus, 1758)	Abudeufuf saxatilis (Linnaeus, 1758)	Abudeufuf saxatilis	Macaronesia	North-East Atlantic		non-indigenous	Vertebrate	VER	1989	1989-1993			0.5	0.5									1	P_MED		
Abudeufuf sexfasciatus (Lacepède, 1801)	Abudeufuf sexfasciatus (Lacepède, 1801)	Abudeufuf sexfasciatus	Aegean-Levantine Si	Mediterranean Sea		non-indigenous	Vertebrate	VER	2017	2012-2017	1												1	P_HIGH		
Abudeufuf sordidus (Forsskål, 1775)	Abudeufuf sordidus (Forsskål, 1775)	Abudeufuf sordidus	Macaronesia	North-East Atlantic		non-indigenous	Vertebrate	VER	2015	2012-2017			1										1	P_MED		
Abudeufuf taurus (Müller & Troschel, 1844)	Abudeufuf taurus (Müller & Troschel, 1844)	Abudeufuf taurus	Macaronesia	North-East Atlantic		non-indigenous	Vertebrate	VER	2015	2012-2017													1	NA		
Abudeufuf vaigiensis (Quoy & Gaimard, 1825)	Abudeufuf vaigiensis (Quoy & Gaimard, 1825)	Abudeufuf vaigiensis	Ionian Sea and the	Mediterranean Sea		non-indigenous	Vertebrate	VER	2013	2012-2017										1			1			
Abudeufuf vaigiensis (Quoy & Gaimard, 1825)	Abudeufuf vaigiensis (Quoy & Gaimard, 1825)	Abudeufuf vaigiensis	Western Mediterran	Mediterranean Sea		non-indigenous	Vertebrate	VER	2005	2000-2005												1		1	P_LOW	
Acanthaster planci (Linnaeus, 1758)	Acanthaster planci (Linnaeus, 1758)	Acanthaster planci	Western Mediterran	Mediterranean Sea		non-indigenous	Invertebrate	INV	2006	2006-2011			0.5	0.5									1	NA		
Acanthopagrus bifasciatus (Forsskål, 1775)	Acanthopagrus bifasciatus (Forsskål, 1775)	Acanthopagrus bifasciatus	Western Mediterran	Mediterranean Sea		non-indigenous	Vertebrate	VER	2010	2006-2011										1			1	NA	Ben Souissi et al.	
Sepia pharaonis Ehrenberg, 1831	Acanthosepion pharaonis (Ehrenberg, 1831)	Acanthosepion pharaonis	Western Mediterran	Mediterranean Sea	2018-2023	non-indigenous	Invertebrate	INV	2021	2018-2021										1			1		Maggio et al.	
Acanthosiphonia echinata (Harvey, 1847)	Acanthosiphonia echinata (Harvey, 1847)	Acanthosiphonia echinata	Adriatic Sea	Mediterranean Sea		non-indigenous	Primary produ	PP	2018	2018-2021			1										1	P_LOW		
Acanthurus bahianus Castelnau, 1859	Acanthurus bahianus Castelnau, 1859	Acanthurus bahianus	Aegean-Levantine Si	Mediterranean Sea		non-indigenous	Vertebrate	VER	2019	2018-2021	1												1		Karachle et al.	
Acanthurus bahianus Castelnau, 1859	Acanthurus bahianus Castelnau, 1859	Acanthurus bahianus	Macaronesia	North-East Atlantic		non-indigenous	Vertebrate	VER	2013	2012-2017			1										1		P_HIGH	
Acanthurus chirurgus (Bloch, 1787)	Acanthurus chirurgus (Bloch, 1787)	Acanthurus chirurgus	Ionian Sea and the	Mediterranean Sea		non-indigenous	Vertebrate	VER	2016	2012-2017	0.5		0.5										1			
Acanthurus chirurgus (Bloch, 1787)	Acanthurus chirurgus (Bloch, 1787)	Acanthurus chirurgus	Macaronesia	North-East Atlantic		non-indigenous	Vertebrate	VER	2013	2012-2017			1										1		P_HIGH	
Acanthurus chirurgus (Bloch, 1787)	Acanthurus chirurgus (Bloch, 1787)	Acanthurus chirurgus	Western Mediterran	Mediterranean Sea		non-indigenous	Vertebrate	VER	2012	2012-2017													0		NA	
Acanthurus coeruleus Bloch & Schneid, 1801	Acanthurus coeruleus Bloch & Schneid, 1801	Acanthurus coeruleus	Aegean-Levantine Si	Mediterranean Sea		non-indigenous	Vertebrate	VER	2011	2006-2011	0.5									0.5			1		P_HIGH	
Acanthurus coeruleus Bloch & Schneid, 1801	Acanthurus coeruleus Bloch & Schneid, 1801	Acanthurus coeruleus	Ionian Sea and the	Mediterranean Sea		non-indigenous	Vertebrate	VER	2013	2012-2017	0.3			0.33						0.33			1			
Acanthurus coeruleus Bloch & Schneid, 1801	Acanthurus coeruleus Bloch & Schneid, 1801	Acanthurus coeruleus	Macaronesia	North-East Atlantic		non-indigenous	Vertebrate	VER	2013	2012-2017			1										1		P_HIGH	
Acanthurus gahhm (Forsskål, 1775)	Acanthurus gahhm (Forsskål, 1775)	Acanthurus gahhm	Aegean-Levantine Si	Mediterranean Sea		non-indigenous	Vertebrate	VER	2019	2018-2021	1												1		P_HIGH	
Acanthurus monroviae Steindachner, 1860	Acanthurus monroviae Steindachner, 1860	Acanthurus monroviae	Bay of Biscay and th	North-East Atlantic		non-indigenous	Vertebrate	VER	2007	2006-2011	0.5		0.5										1		P_MED	
Acanthurus monroviae Steindachner, 1860	Acanthurus monroviae Steindachner, 1860	Acanthurus monroviae	Macaronesia	North-East Atlantic		range expandi	Vertebrate	VER	1988	1988-1993			1										1		P_HIGH	
Acanthurus sohal (Forsskål, 1775)	Acanthurus sohal (Forsskål, 1775)	Acanthurus sohal	Aegean-Levantine Si	Mediterranean Sea		non-indigenous	Vertebrate	VER	2017	2012-2017										1			1		P_HIGH	
Acanthurus tractus Poey, 1860	Acanthurus tractus Poey, 1860	Acanthurus tractus	Macaronesia	North-East Atlantic		non-indigenous	Vertebrate	VER	2013	2012-2017			1										1		P_HIGH	
Acartia tonsa Dana, 1849	Acartia (Acartiaria) tonsa Dana, 1849	Acartia (Acartiaria) tonsa Dana	Adriatic Sea	Mediterranean Sea		non-indigenous	Invertebrate	INV	1987	1982-1987			0.5	0.5									1		P_MED	
Acartia tonsa Dana, 1849	Acartia (Acartiaria) tonsa Dana, 1849	Acartia (Acartiaria) tonsa Dana	Aegean-Levantine Si	Mediterranean Sea		non-indigenous	Invertebrate	INV	1988	1988-1993										1			1			Gaudy & Vina
Acartia tonsa Dana, 1849	Acartia (Acartiaria) tonsa Dana, 1849	Acartia (Acartiaria) tonsa Dana	Baltic Sea	Baltic Sea		non-indigenous	Invertebrate	INV	1921	<1970			0.5		0.5								1		P_MED	
Acartia tonsa Dana, 1849	Acartia (Acartiaria) tonsa Dana, 1849	Acartia (Acartiaria) tonsa Dana	Bay of Biscay and th	North-East Atlantic		non-indigenous	Invertebrate	INV	1977	1976-1981			1										1		P_HIGH	
Acartia tonsa Dana, 1849	Acartia (Acartiaria) tonsa Dana, 1849	Acartia (Acartiaria) tonsa Dana	Black Sea	Black Sea		non-indigenous	Invertebrate	INV	1976	1976-1981			0.5	0.5									1		P_MED	Acartia (Acartiaria)
Acartia tonsa Dana, 1849	Acartia (Acartiaria) tonsa Dana, 1849	Acartia (Acartiaria) tonsa Dana	Greater North Sea, ii	North-East Atlantic		non-indigenous	Invertebrate	INV	1921	<1970			1										1		NA	
Acartia tonsa Dana, 1849	Acartia (Acartiaria) tonsa Dana, 1849	Acartia (Acartiaria) tonsa Dana	Ionian Sea and the	Mediterranean Sea		non-indigenous	Invertebrate	INV	2005	2000-2005			0.5	0.5									1			
Acartia tonsa Dana, 1849	Acartia (Acartiaria) tonsa Dana, 1849	Acartia (Acartiaria) tonsa Dana	Western Mediterran	Mediterranean Sea		non-indigenous	Invertebrate	INV	1986	1982-1987			0.5	0.5									1		NA	
Acartia (Acartiaria) omorii Bradford, 1914	Acartia (Acartiaria) omorii Bradford, 1914	Acartia (Acartiaria) omorii	Greater North Sea, ii	North-East Atlantic		non-indigenous	Invertebrate	INV	2004	2000-2005			1										1			
Acartia (Acartiaria) omorii Bradford, 1914	Acartia (Acartiaria) omorii Bradford, 1914	Acartia (Acartiaria) omorii	Western Mediterran	Mediterranean Sea		absent	Invertebrate	INV	2004	2000-2005													1		1	NA
Achelia sawayai Marcus, 1940	Achelia sawayai Marcus, 1940	Achelia sawayai	Ionian Sea and the	Mediterranean Sea		non-indigenous	Invertebrate	INV	2016	2012-2017										1			1			
Achnanthes pseudogreenlandica Heide, 1984	Achnanthes pseudogreenlandica Heide, 1984	Achnanthes pseudogreenlandica	Black Sea	Black Sea	microalgae	questionable	Primary produ	PP/mi	1984	1982-1987			1										1			Aleksandrov I.
Acipenser baerii Brandt, 1869	Acipenser baerii Brandt, 1869	Acipenser baerii	Baltic Sea	Baltic Sea		non-indigenous	Vertebrate	VER	1960	<1970	0.3	0.33										0.33		1	P_HIGH	

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