



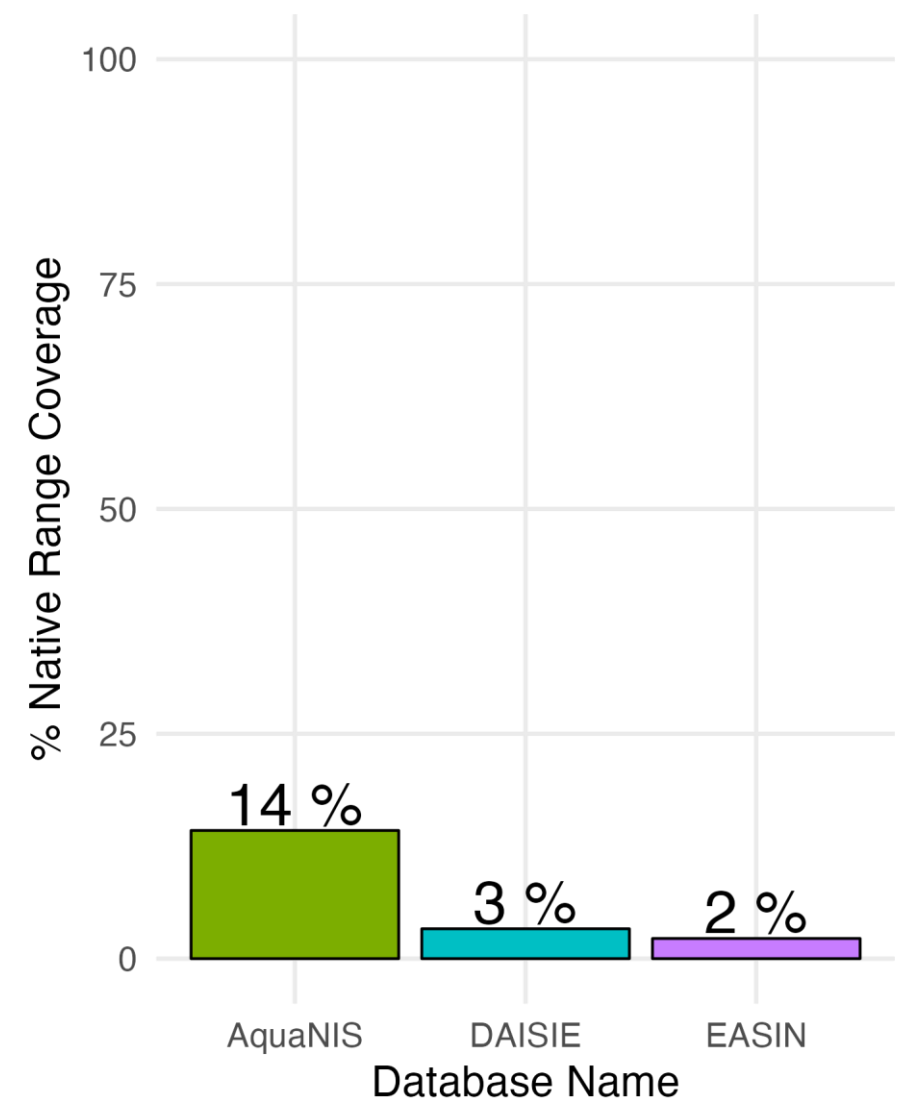
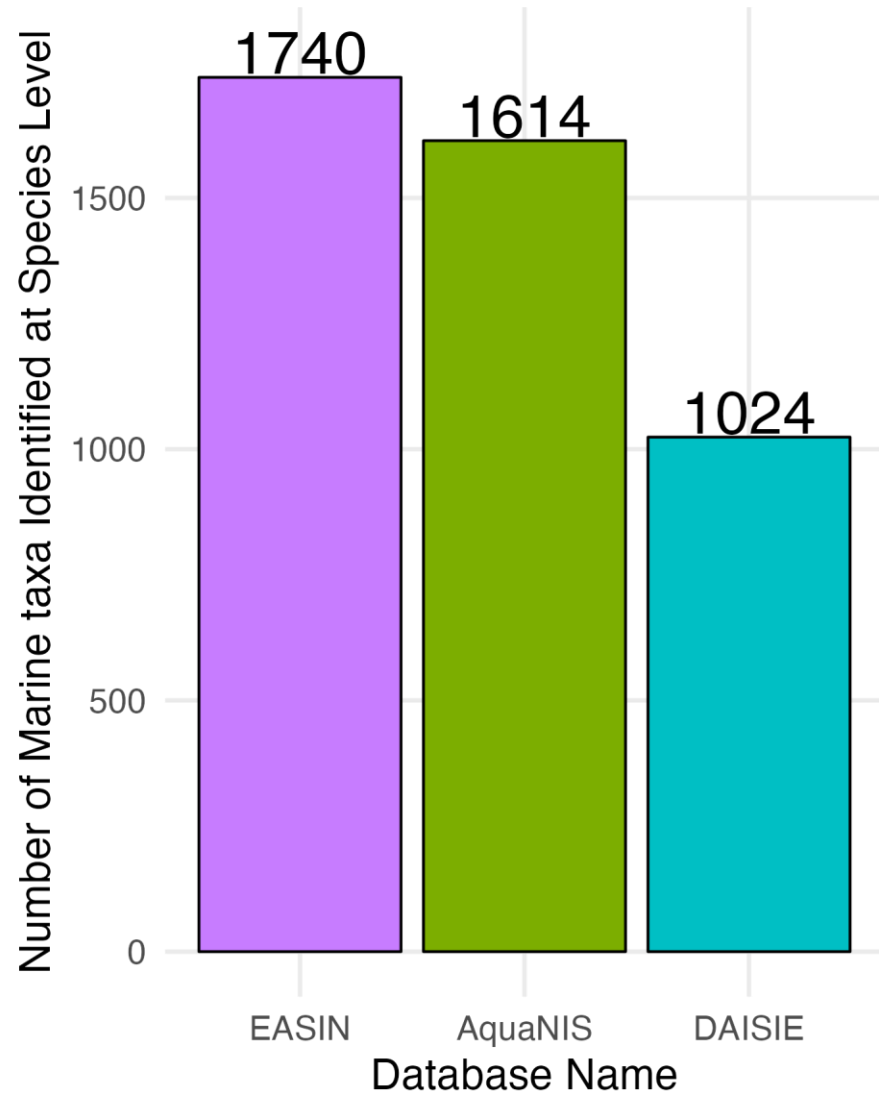
ANIS-E : Explorer l'origine des espèces non- indigènes en un clic

→ 02/02/2026

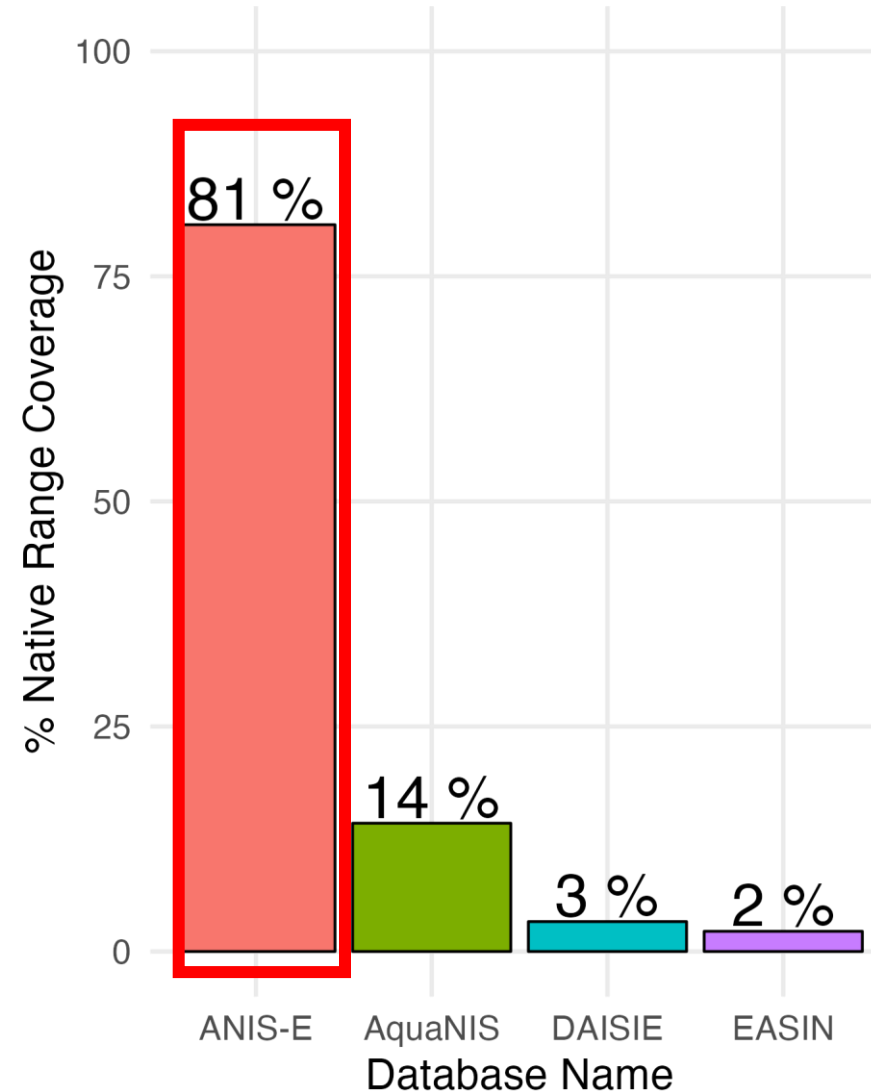
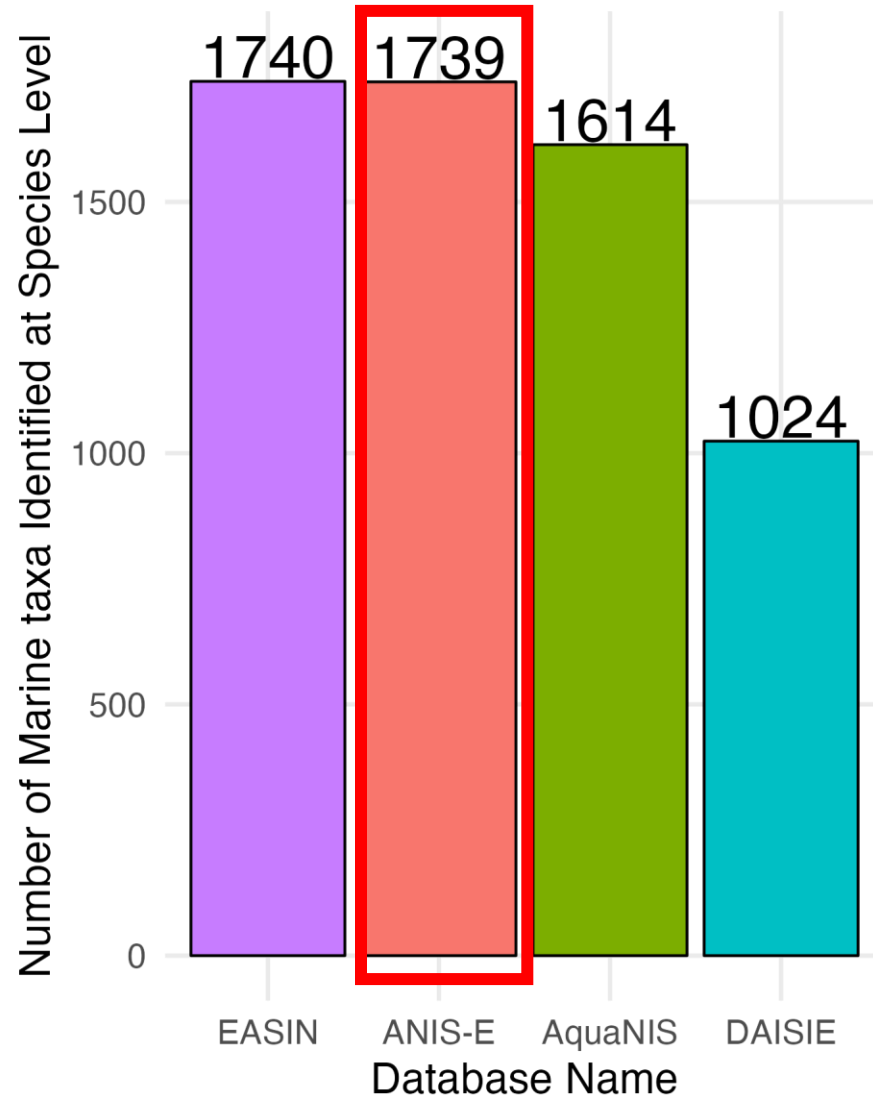
Raison d'être d'ANIS-E

- Connaître l'aire native des espèces non indigènes est important pour plusieurs raisons en écologie des invasions
 - Comprendre la tolérance physiologique, les exigences de niche (Broennimann et al., 2021)
 - Démographie des parasites (Blakeslee et al. 2012)
 - Reconstitution des voies d'introduction (Estoup & Guillemaud, 2010)
 - Comprendre le cycle de vie (traits, génétique des populations, etc.) (Phillips, Brown & Shine, 2010)
 - Interactions entre les traits et l'environnement (Ricciardi et al. 2021)
 - ...

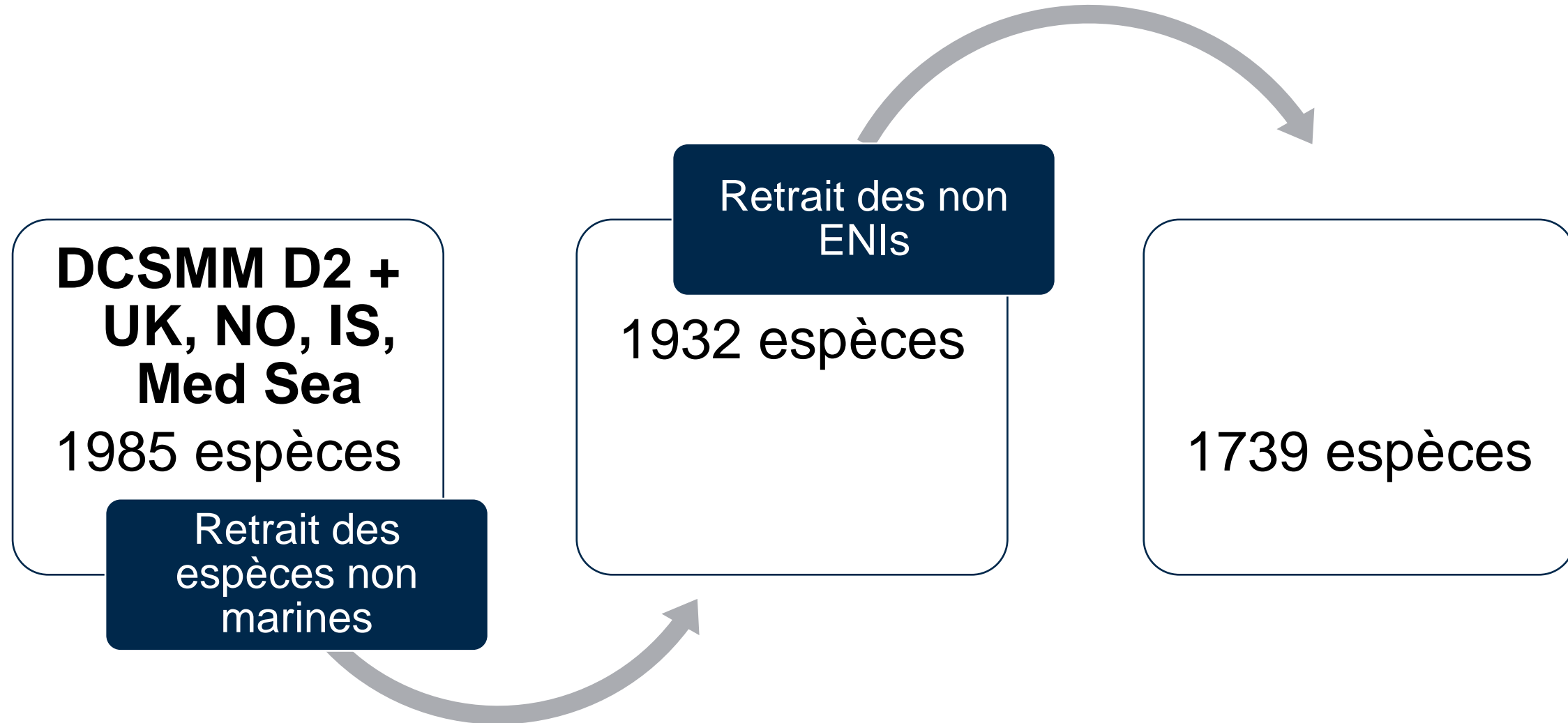
Bases de données sur les ENIs marines



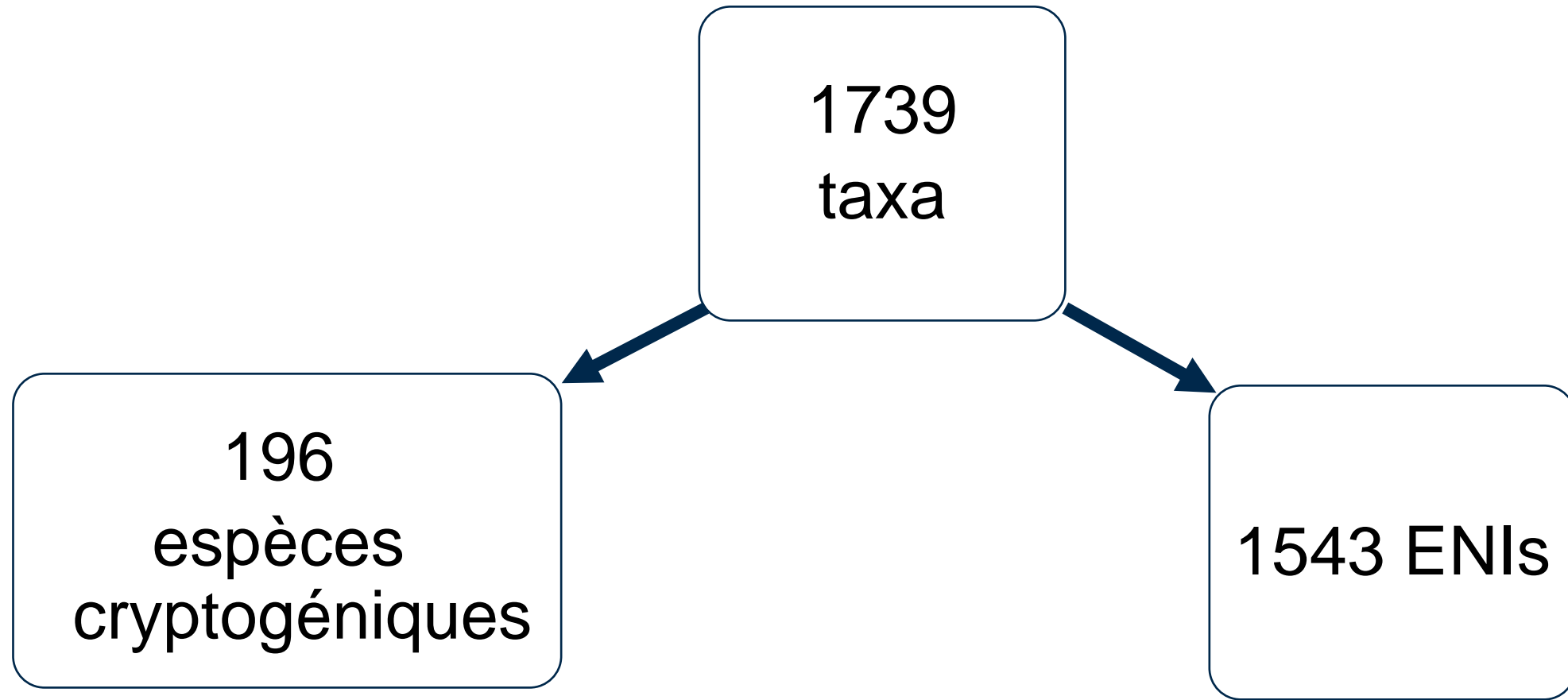
Bases de données sur les ENIs marines



Processus de production



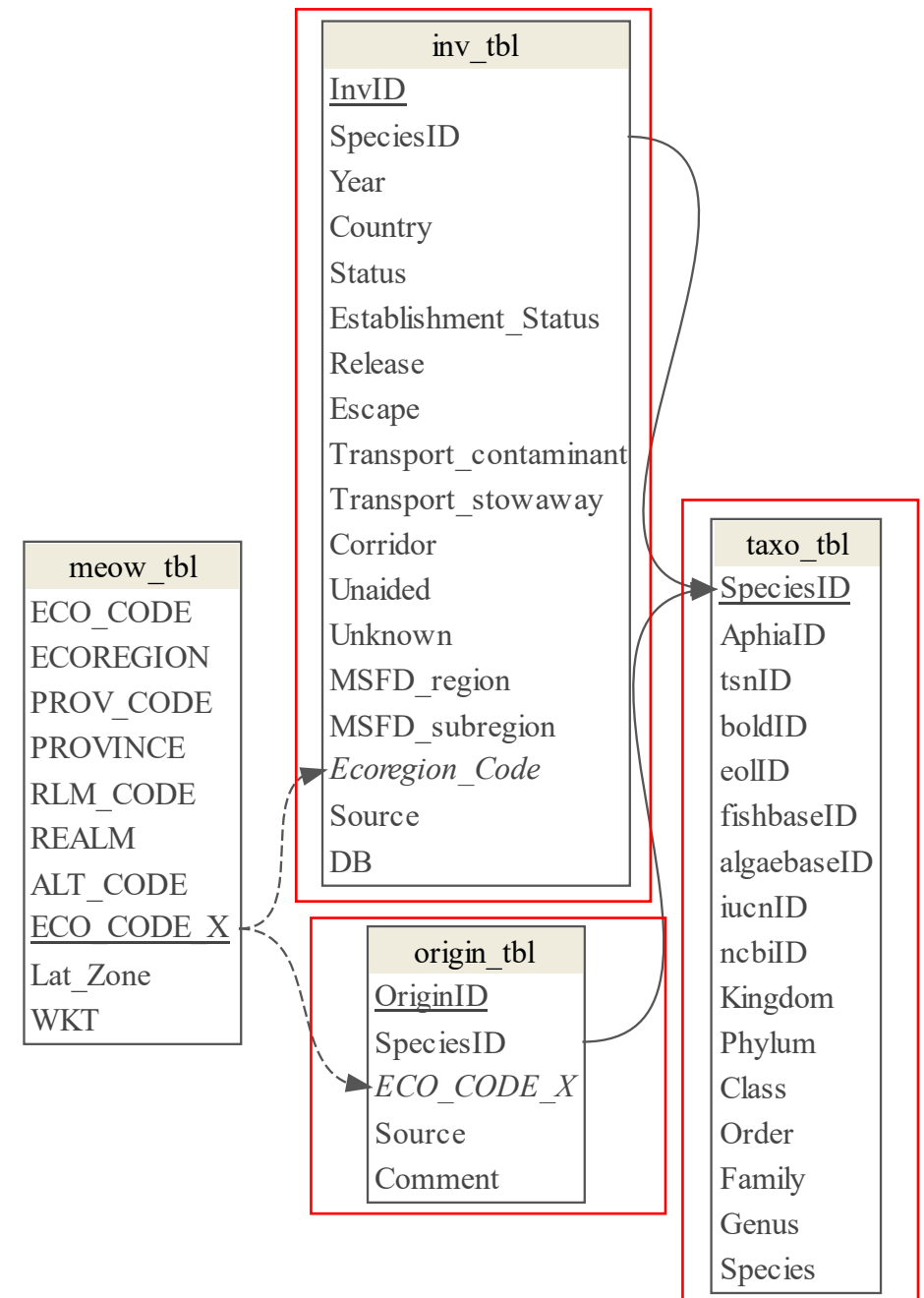
Composition d'ANIS-E



Métadonnées ANIS-E

3 Tables :

- `taxo_tbl` : Informations Taxonomiques
- `inv_tbl` : Hstorique des observations
- `origin_tbl` : Aire Natives des ENIS



Fonctionnement ANIS-E

E-MARINADE



ANIS-E

[Home](#)
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[Species Explorer](#)



ANIS-E

Welcome to ANIS-E

ANIS-E (Atlas of marine Non-Indigenous Species in Europe) is an interactive *R-Shiny* application designed to help you explore the spread and origin of marine *Non-Indigenous Species (NIS)* across European waters.


This tool provides access to harmonized datasets and visualization tools that allow users to:

- Explore where marine NIS have been introduced, by clicking on European Seas ecoregions.
- Visualize their native ranges, to better understand species origins and biogeographic pathways.
- Search and select individual species to view detailed maps of their introduced and native distributions.
- Download datasets for further analysis, and filter tables by taxonomy or geography.

The app combines spatial data, ecological metadata, and interactive maps to support researchers, policymakers, and educators in assessing patterns of biological invasions in marine ecosystems.

Fonctionnement ANIS-E

E-MARINADE



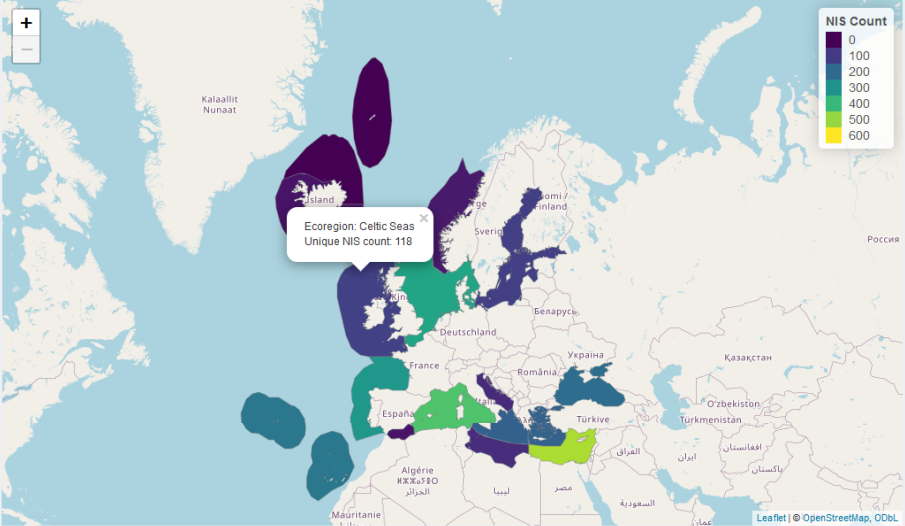
ANIS-E

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European Introduction

European Introduction Map

Use the map below to explore marine non-indigenous species (NIS) present in each European ecoregion. Click on one or multiple polygons to select ecoregions and view the corresponding NIS in the table. You can filter the table using the column headers, export the data using the buttons above the table, and reset your selection at any time by clicking the **Reset Table** button.



Selected Ecoregion: Celtic Seas [Reset Table](#)

[Copy](#) [CSV](#) [Excel](#)


Search:

	Kingdom	Phylum	Class	Order	Family	Genus	Species
	All	All	All	All	All	All	All
1	Chromista	Myzozoa	Dinophyceae	Gonyaulacales	Pyrocystaceae	Alexandrium	Alexandrium tan
2	Animalia	Arthropoda	Thecostraca	Balanomorpha	Balanidae	Amphibalanus	Amphibalanus ar
3	Animalia	Arthropoda	Thecostraca	Balanomorpha	Balanidae	Amphibalanus	Amphibalanus in
4	Animalia	Arthropoda	Thecostraca	Balanomorpha	Balanidae	Amphibalanus	Amphibalanus re
5	Animalia	Nematoda	Chromadorea	Rhabditida	Anguillicolidae	Anguillicola	Anguillicola crass

Showing 1 to 6 of 118 entries

Fonctionnement ANIS-E

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Species Explorer

Click on a row in the taxonomic table or use the input field to filter by species/AphiaIDs. ¹

In the tables below, you will be able to access and download the information about the introduced and native range.

Select Input Mode:
☒ Table selection ☐ Text input


Copy CSV Excel Search:

Class	Order	Family	Genus	Species	EU_native
All	All	All	All	All	All
Teleostei	Belontiiformes	Belontiidae	Ablennes	Ablennes hians	false
Teleostei	Ovalentaria incertae sedis	Pomacentridae	Abudefduf	Abudefduf hoefleri	false
Teleostei	Ovalentaria incertae sedis	Pomacentridae	Abudefduf	Abudefduf saxatilis	false
Teleostei	Ovalentaria incertae sedis	Pomacentridae	Abudefduf	Abudefduf sexfasciatus	false
Teleostei	Ovalentaria incertae sedis	Pomacentridae	Abudefduf	Abudefduf sordidus	false

Showing 1 to 6 of 1.739 entries

Refine species to plot and show in the tables

Actaeodes tomentosus, Alpheus rapacida, Calappa pelli, Cancer irroratus



☒ Native
☒ Native multiple sp.
☐ Cryptogenic
☐ Introduced

NB: If a species has no known native area, the **Native Range** subpanel will be empty.

Introduced Range

Native Range

Copy CSV Excel Search:

Kingdom	Phylum	Class	Order	Family	Genus	Species	AphiaID	tsnID
All	All	All	All	All	All	All	All	/
1	Animalia	Arthropoda	Malacostraca	Decapoda	Xanthidae	Actaeodes	Actaeodes tomentosus	209053
2	Animalia	Arthropoda	Malacostraca	Decapoda	Xanthidae	Actaeodes	Actaeodes tomentosus	209053
3	Animalia	Arthropoda	Malacostraca	Decapoda	Xanthidae	Actaeodes	Actaeodes tomentosus	209053
4	Animalia	Arthropoda	Malacostraca	Decapoda	Alpheidae	Alpheus	Alpheus rapacida	107482 659
5	Animalia	Arthropoda	Malacostraca	Decapoda	Alpheidae	Alpheus	Alpheus rapacida	107482 659

Showing 1 to 6 of 10 entries


¹ Searching by AphiaID is currently supported only at the species level. Future versions will extend this feature to all taxonomic levels.

CNRS

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Fonctionnement ANIS-E

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Species Explorer

Click on a row in the taxonomic table or use the input field to filter by species/AphiaIDs. ¹
In the tables below, you will be able to access and download the information about the introduced and native range.

Select Input Mode:
☐ Table selection ☒ Text input

Select taxonomic level of interest.
Note: If you have selected a taxonomic rank higher than Species, the search by AphiaID will not be available.

Species

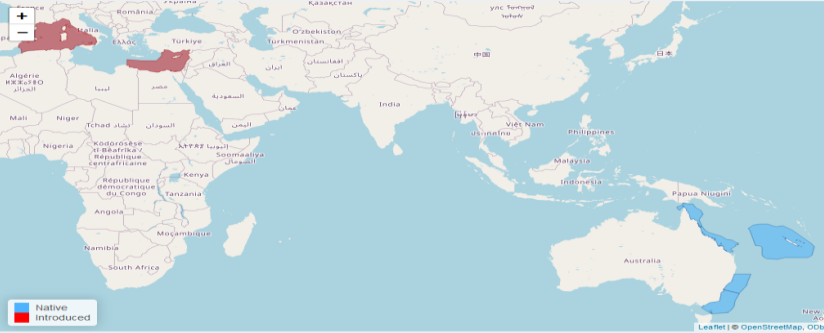
Species or AphiaIDs (one per line).

☒ Success - Recognised taxon/taxa
Caulerpa taxifolia

☒ Success - Recognised AphiaID(s)
417798

☐ Warning - Unrecognised taxon/taxa
Homo sapiens

Refine species to plot and show in the tables
Caulerpa taxifolia, Lagena setigera



Introduced Range **Native Range**

Copy CSV Excel

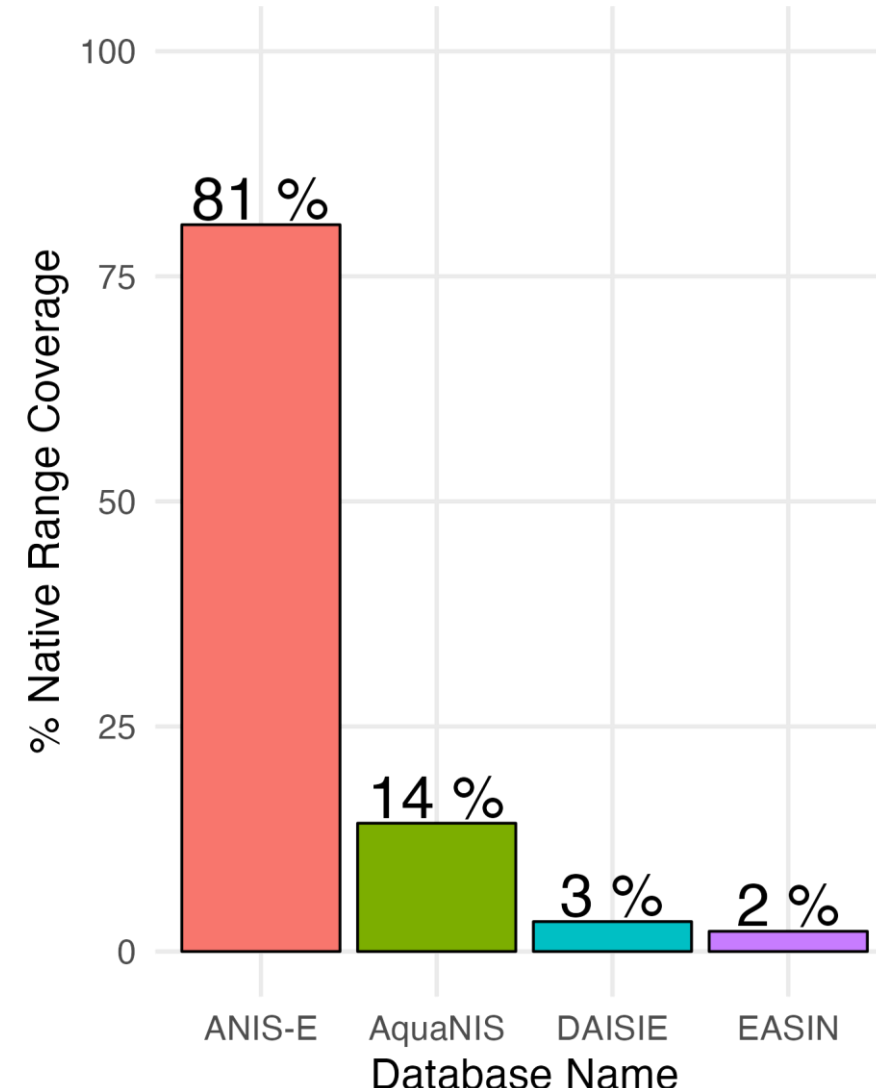
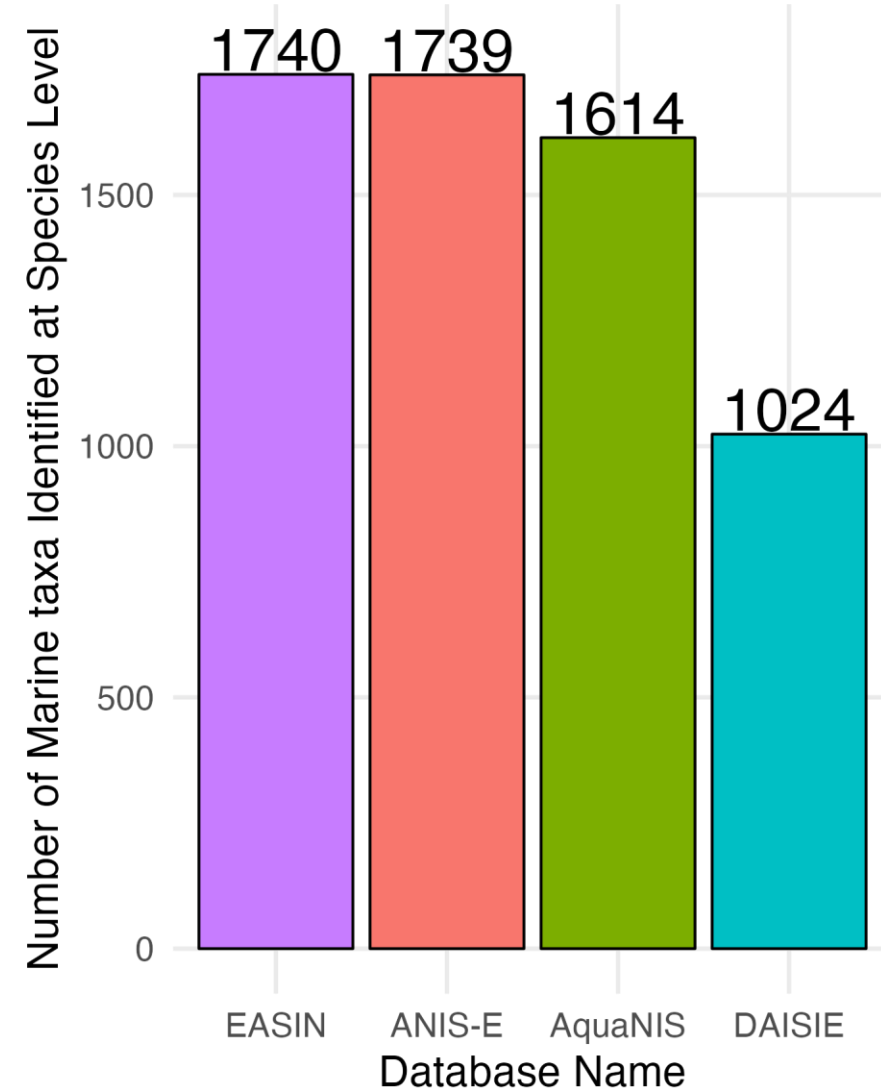
Search:

	Kingdom	Phylum	Class	Order	Family	Genus	Species	AphiaID	tsnID
1	Plantae	Chlorophyta	Ulvophyceae	Bryopsidales	Caulerpaceae	Caulerpa	Caulerpa taxifolia	144476	
2	Plantae	Chlorophyta	Ulvophyceae	Bryopsidales	Caulerpaceae	Caulerpa	Caulerpa taxifolia	144476	
3	Plantae	Chlorophyta	Ulvophyceae	Bryopsidales	Caulerpaceae	Caulerpa	Caulerpa taxifolia	144476	
4	Plantae	Chlorophyta	Ulvophyceae	Bryopsidales	Caulerpaceae	Caulerpa	Caulerpa taxifolia	144476	
5	Plantae	Chlorophyta	Ulvophyceae	Bryopsidales	Caulerpaceae	Caulerpa	Caulerpa taxifolia	144476	

Showing 1 to 5 of 5 entries

¹ Searching by AphiaID is currently supported only at the species level. Future versions will extend this feature to all taxonomic levels.

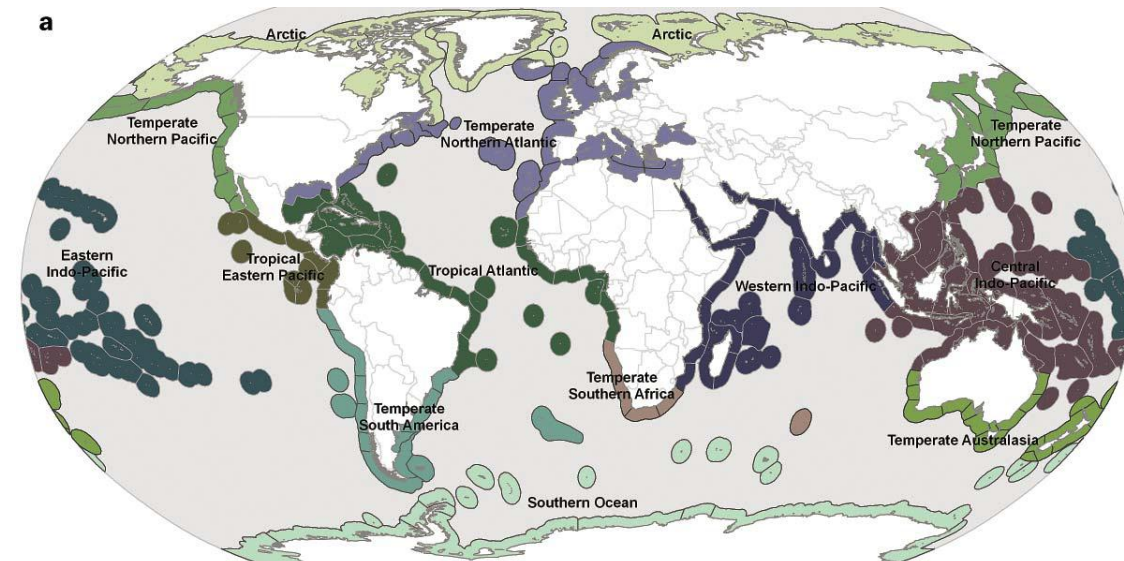
Comparaison ANIS-E vs autres SI



Comparaison Aire Natives ANIS-E vs autres SI

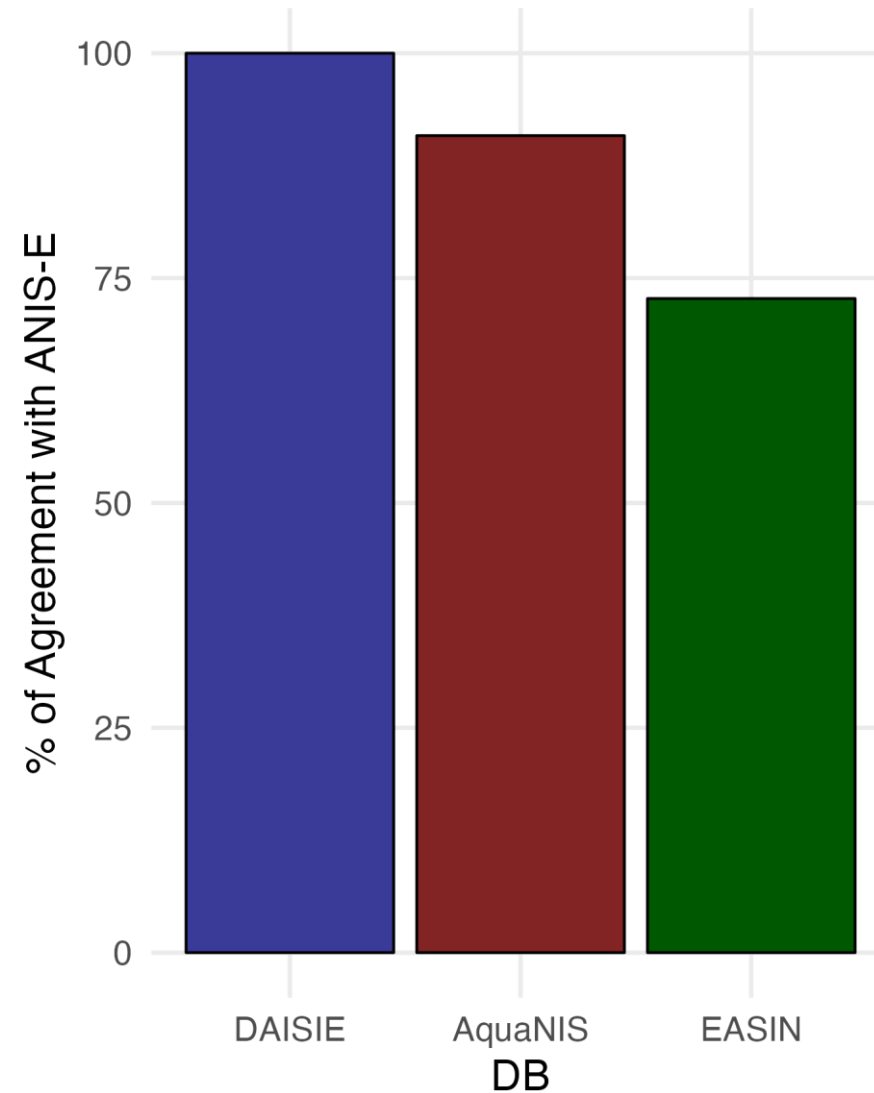
Systèmes biogéographiques difficilement comparable :

- DAISIE : Bassins océaniques
- EASIN : Bassins océaniques
- AquaNIS : Large Marine Ecosystems
- ANISE : Marine Ecoregions of the World



Adapté de Spalding et al. 2007

Comparaison Aire Natives ANIS-E vs autres SI



Conclusion

- Travail de compilation des aires natives des espèces
- Base de donnée « évolutive »
- ANIS-E Facilement accessible
 - Respect des principes FAIRs
 - Disponible CSV ou Shiny app
- Article en cours de révision.



Questions,
remarques,
propositions ?

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