

# EASIN: European Alien Species Information Network

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**LIFE platform meeting on Invasive Alien Species**

Milano, 29-30 November 2017

# Content

- EASIN components
- Citizen Science
- Support to policy and research

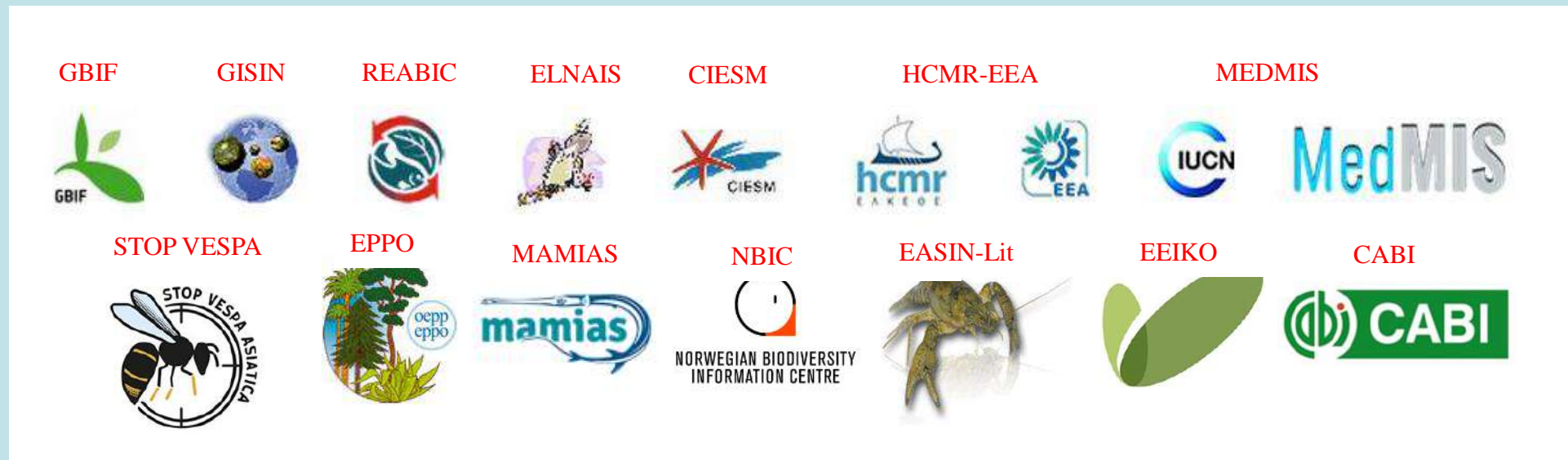
# EASIN in a nutshell

- Interconnects databases enabling access to data on about 14,000 alien species (AS) occurring in Europe
- Works in partnership with European and global databases
- Official information system assisting EC and MS in the implementation of the EU Regulation 1143/2014 on IAS:
  - includes a platform for invasive alien species (IAS) notifications (early detection, rapid eradication and effectiveness of measures)
  - cooperation with EC and MS Competent Authorities
- Integration of citizen science (CS) data

# EASIN Catalogue: pan-European inventory of AS

- Valid names, synonyms
- Taxonomy
- Species status (alien, cryptogenic, questionable)
- Environment (terrestrial, freshwater, marine and oligohaline)
- Impact
- Native range
- Pathways
- Year and country of first introduction in Europe
- Links to additional information sources

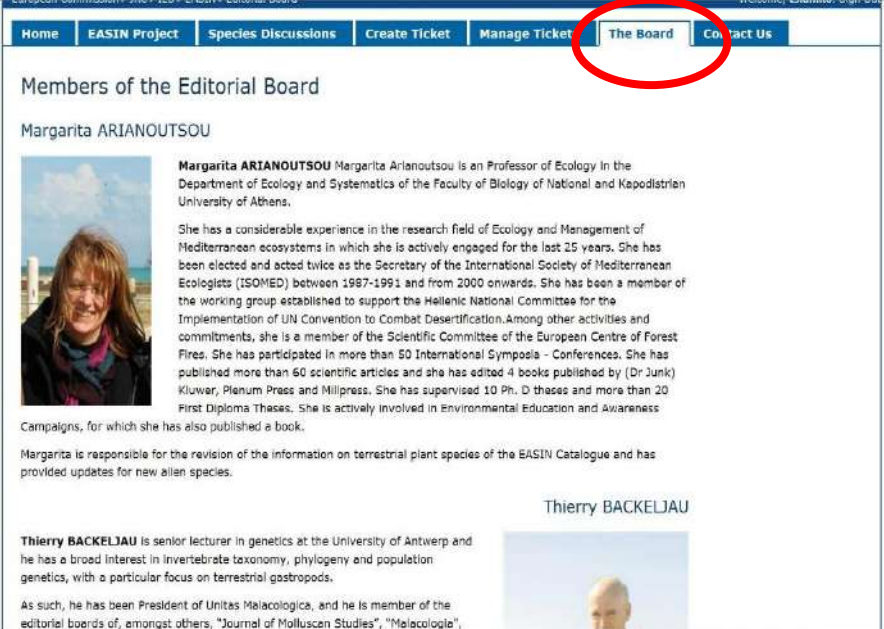
# EASIN Data Partners



- Discussion on collaboration include: VLIZ, AQUANIS, NOBANIS, ESENIAS, NCBI GenBank, EMBL-EBI European Nucleotide Archive
- MS surveillance reports under Reg. 1143/2014, National and Regional data
- EASIN-Lit: geodatabase including species distribution from the review of scientific literature, e.g. updating information of IAS of Union concern or for emerging alien species in Europe

# EASIN Editorial Board


- Data quality assurance
- Systematic update of EASIN Catalogue
- Participatory approach
- 29 Members
- On-line platform for discussions
- Working procedures



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## Members of the Editorial Board

**Margarita ARIANOUTSOU**




**Margarita ARIANOUTSOU** Margarita Arianoutsou is an Professor of Ecology In the Department of Ecology and Systematics of the Faculty of Biology of National and Kapodistrian University of Athens.

She has a considerable experience in the research field of Ecology and Management of Mediterranean ecosystems in which she is actively engaged for the last 25 years. She has been elected and acted twice as the Secretary of the International Society of Mediterranean Ecologists (ISOMED) between 1987-1991 and from 2000 onwards. She has been a member of the working group established to support the Hellenic National Committee for the Implementation of UN Convention to Combat Desertification. Among other activities and commitments, she is a member of the Scientific Committee of the European Centre of Forest Fires. She has participated in more than 50 International Symposia - Conferences. She has published more than 60 scientific articles and she has edited 4 books published by (Dr Junk) Kluwer, Plenum Press and Millpress. She has supervised 10 Ph. D theses and more than 20 First Diploma Theses. She is actively involved in Environmental Education and Awareness Campaigns, for which she has also published a book.

Margarita is responsible for the revision of the information on terrestrial plant species of the EASIN Catalogue and has provided updates for new alien species.

**Thierry BACKELJAU**



**Thierry BACKELJAU** is senior lecturer in genetics at the University of Antwerp and he has a broad interest in invertebrate taxonomy, phylogeny and population genetics, with a particular focus on terrestrial gastropods.

As such, he has been President of Unites Malacologica, and he is member of the editorial boards of, amongst others, "Journal of Molluscan Studies", "Malacologia",

<http://easin-eb.jrc.ec.europa.eu/>

# EASIN web tools and services

- Search functions by species name or combined criteria (e.g. pathways, habitat, impact, etc.)
- Access original data sources
- Visualize maps
- Select data from specific data partners
- Native range
- Time slider

The screenshot displays the EASIN Species Mapper interface. At the top, it features the European Commission logo and the text 'JOINT RESEARCH CENTRE European Alien Species Information Network - Species Mapper'. Below this is a navigation bar with 'Species Search and Mapping'. The main interface includes tabs for 'Basic Search', 'Advanced Search', 'Terms and Conditions', and 'About'. Under 'Advanced Search', there are filters for 'Environment' (Terrestrial, FreshWater, Marine, Oligohaline), 'Impact' (High, Low/Unknown, All), 'Species Status' (Alien, Cryptogenic, Questionable, Union Concern), and 'Species Lists'. A 'Taxonomy' section allows selection of taxonomic groups and pathways. Below these filters is a table of search results.

Scientific Name	Kingdom	Phylum	Class	Order	Family	Environment	Impact
'Candidatus Liberibacter solanacearum'	Bacteri..	Proteob..	Alphapr..	Incerta..	Incerta..	TER	Low/Unkn
'Candidatus Phytoplasma asteris'	Bacteri..	Teneric..	Mollicu..	Acholep..	Incerta..	TER	Low/Unkn
'Candidatus Phytoplasma brasiliense'	Bacteri..	Teneric..	Mollicu..	Acholep..	Incerta..	TER	Low/Unkn
'Candidatus Phytoplasma cirsii'	Bacteri..	Teneric..	Mollicu..	Acholep..	Incerta..	TER	Low/Unkn
'Candidatus Phytoplasma convolvuli'	Bacteri..	Teneric..	Mollicu..	Acholep..	Incerta..	TER	Low/Unkn
'Candidatus Phytoplasma cynodontis'	Bacteri..	Teneric..	Mollicu..	Acholep..	Incerta..	TER	Low/Unkn
'Candidatus Phytoplasma fragariae'	Bacteri..	Teneric..	Mollicu..	Acholep..	Incerta..	TER	Low/Unkn
'Candidatus Phytoplasma fraxini'	Bacteri..	Teneric..	Mollicu..	Acholep..	Incerta..	TER	Low/Unkn
'Candidatus Phytoplasma mali'	Bacteri..	Teneric..	Mollicu..	Acholep..	Incerta..	TER	High
'Candidatus Phytoplasma pini'	Bacteri..	Teneric..	Mollicu..	Acholep..	Incerta..	TER	Low/Unkn
'Candidatus Phytoplasma vitis'	Bacteri..	Teneric..	Mollicu..	Acholep..	Incerta..	TER	Low/Unkn

Advanced search: combined criteria allow a tailored query selecting taxa/ environment/ impact/ species status/ pathways

# EASIN & Citizen Science

- Workshop on CS with COST, BXL 8 February 2017) (RIO <https://doi.org/10.3897/rio.3.e14811>)
- EASIN web page relevant to CS
- Posts on Twitter & Facebook concerning CS and IAS (monitoring, eradication)
- Collaboration with ECSA drafting policy document on Bioblitz and contribution to a capacity building WS and City Nature Challenge 2018
- COST joint proposal on IAS and CS submitted





# JOINT RESEARCH CENTRE European Alien Species Information Network - EASIN

European Commission > EU Science Hub > EASIN

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CITIZEN SCIENCE

## Become a citizen scientist

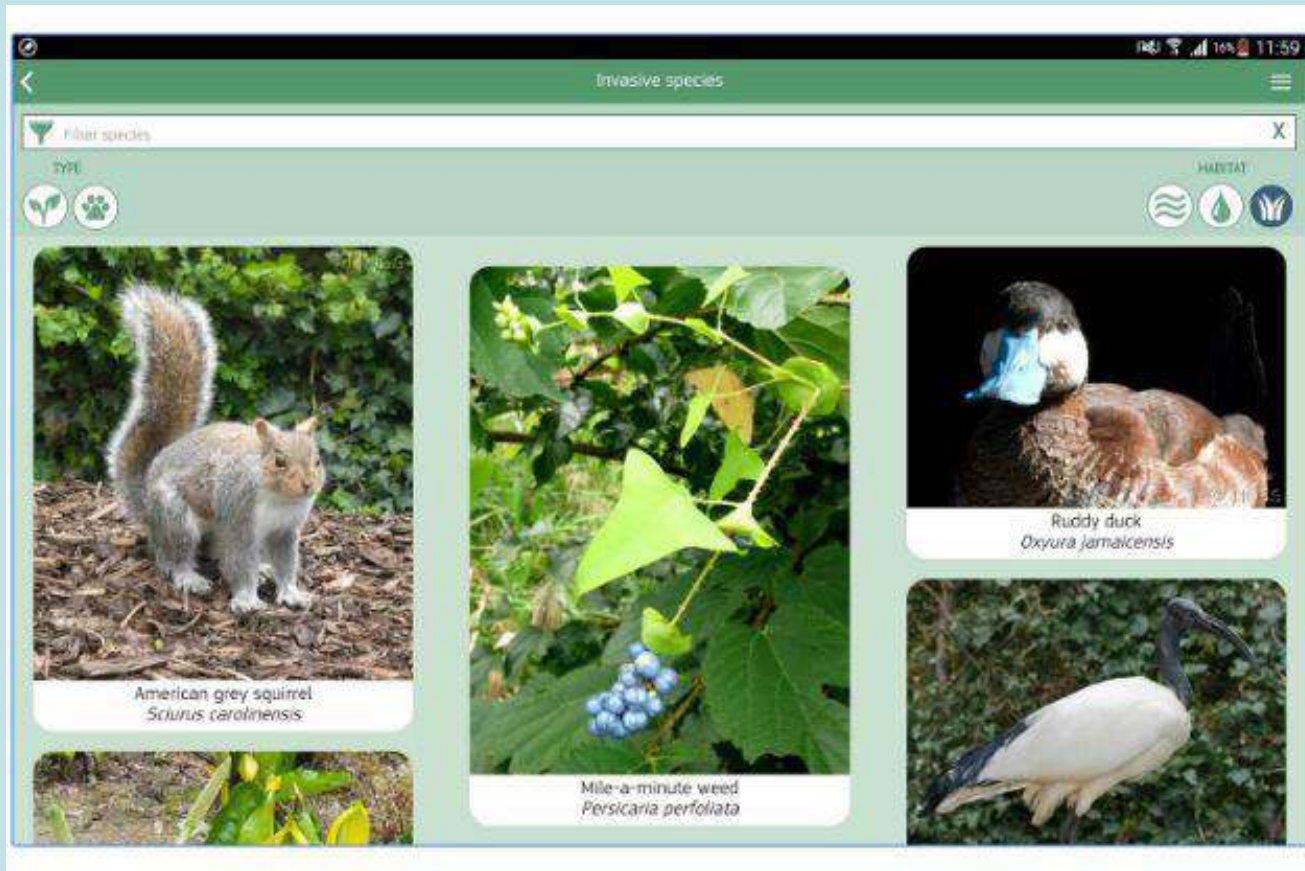


### How it works?

- Download the "Invasive Alien Species Europe" App (Android, iOS)
- Take a photo of the species that you might have spotted from the list of Union concern and use the "Report a sighting" form in the App to send it to us, together with your location and other details
- Make sure to check the species factsheets included in the App or the Training section on the website for more information about the 37 invasive alien species of Union Concern
- The photo will then be reviewed by experts working with the EASIN team and, following validation, your report will be visible on the map and used to update the EASIN geodatabase

By following these steps you will help improve the information on invasive alien species distribution in Europe. Why is this so important? Knowing the distribution of these species will facilitate the official surveillance, the adoption of efficient measures for prevention, early detection and control of IAS, reducing the ecological and economical damages that they may cause.

# Citizen Science: *Invasive Alien Species* App



**Focus on IAS  
of Union  
concern**



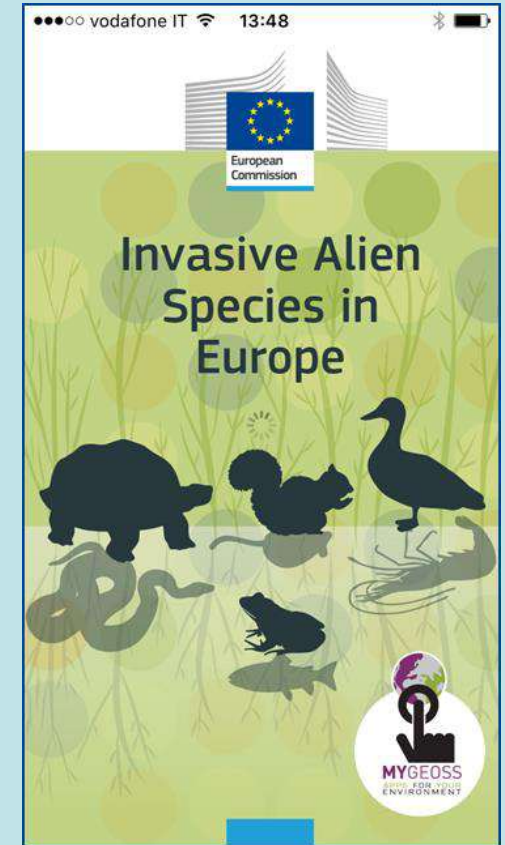
# Citizen Science: *Invasive Alien Species* App

## Purpose and scope

- Stimulating citizen awareness and engagement in environmental monitoring and reporting
- Complementing existing surveillance systems on IAS of Union Concern in Member States

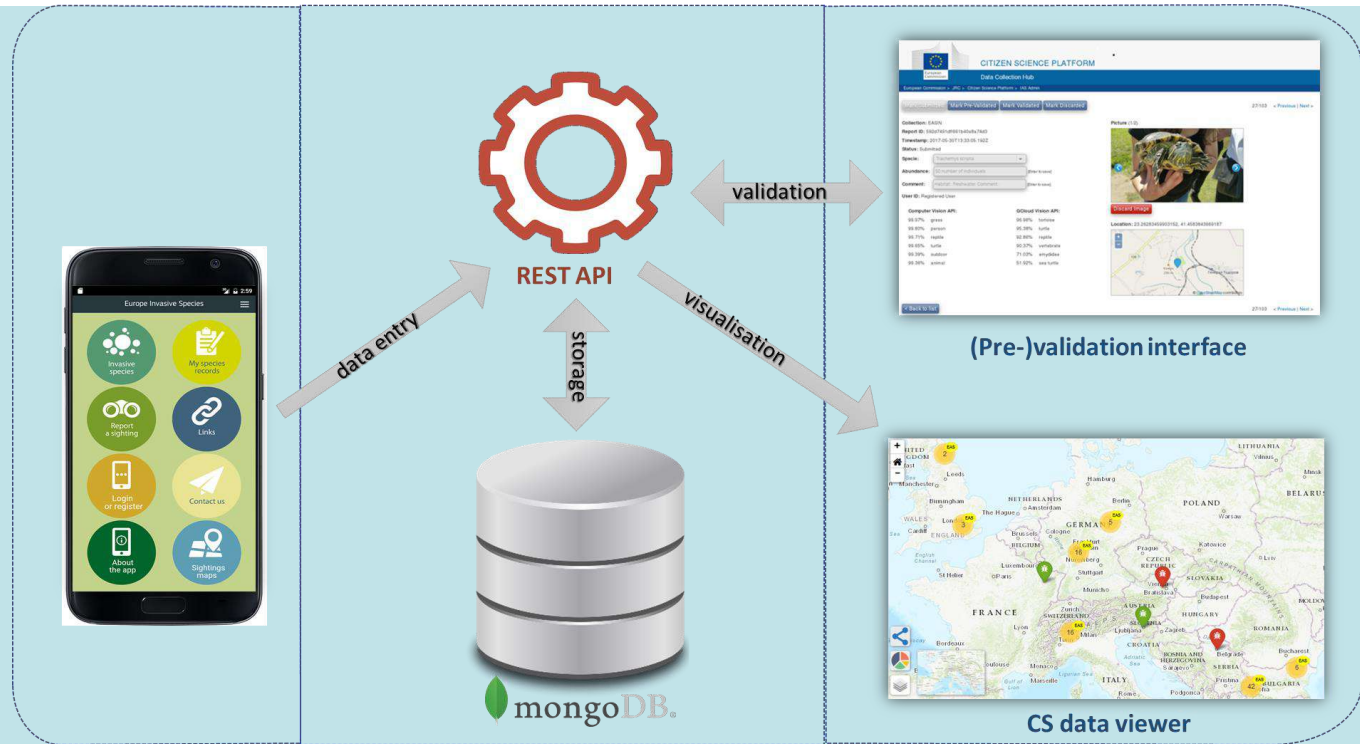
## Development status

- Published in Google and Apple stores
- Website for data visualization
- Web application for back-end management continuously evolving
- Integration with EASIN to be completed



# Citizen Science: *Invasive Alien Species* App

Framework designed for re-use!



integration of validated data into EASIN geodatabase



# Support to implementation EU Reg. 1143/2014

- EU COMM Impl. Reg. 2016/1141
- EU COMM Impl. Reg. 2017/1263
- 49 invasive alien species of Union concern



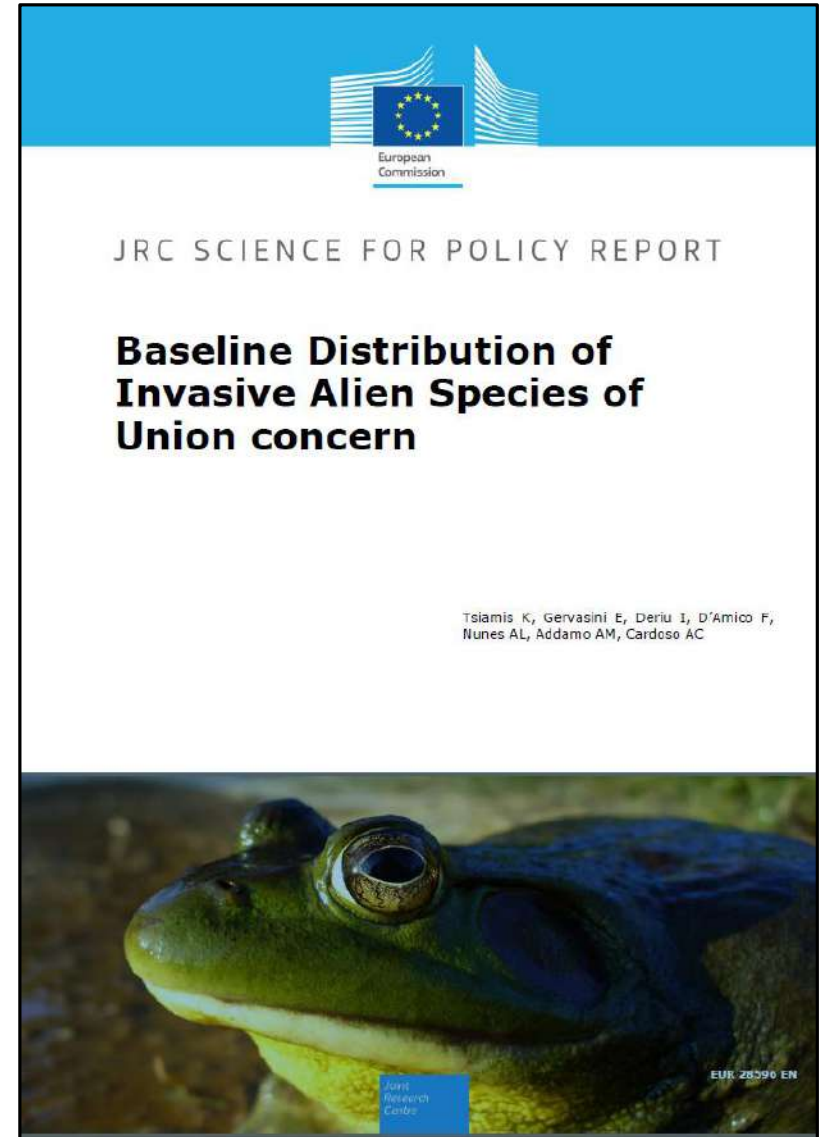
# EU Impl. Regulation 1141/2016

Based on the best available knowledge:

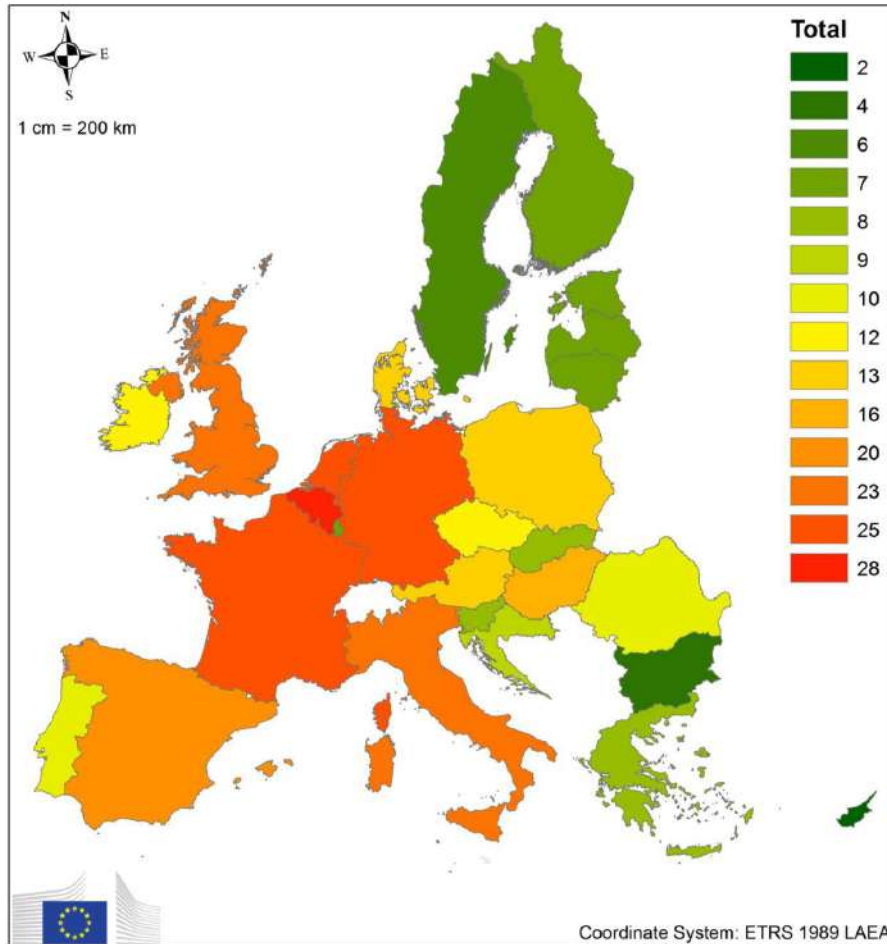
- data aggregated through EASIN, in collaboration with the competent authorities of the MS

Provides useful information supporting:

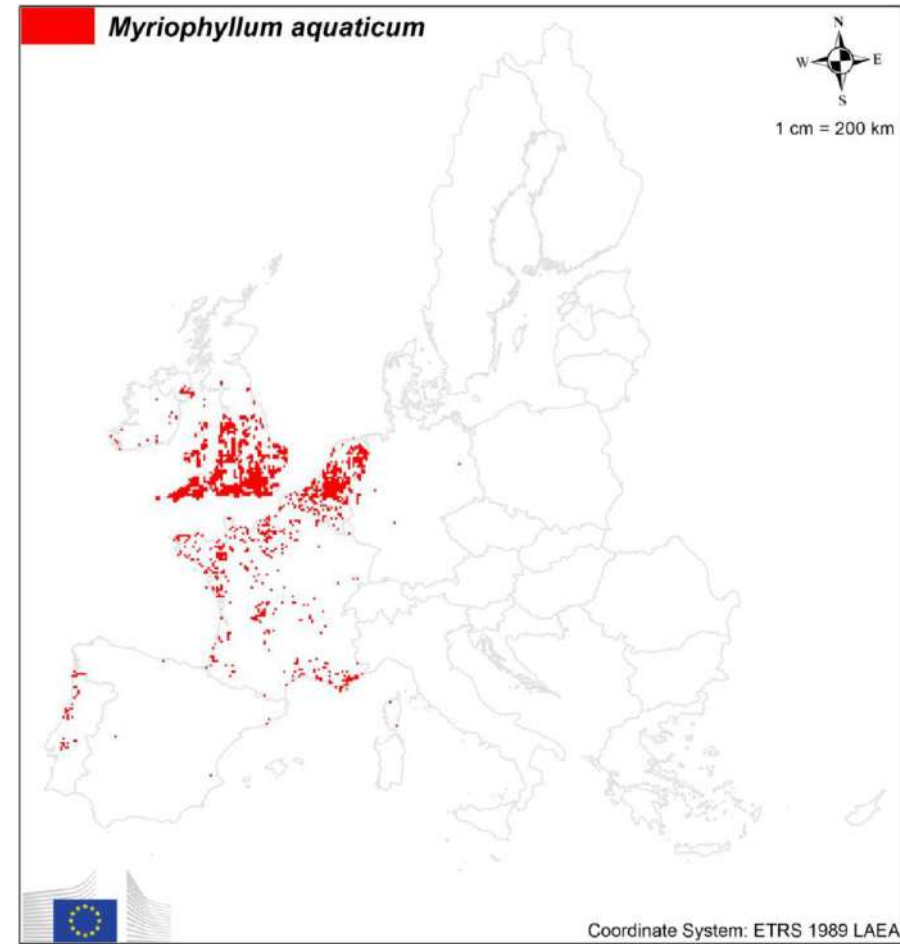
- MS establishment of a surveillance system for the targeted species;
- factual basis for the review of the application of the IAS Regulation



# Baseline distribution of IAS of Union concern

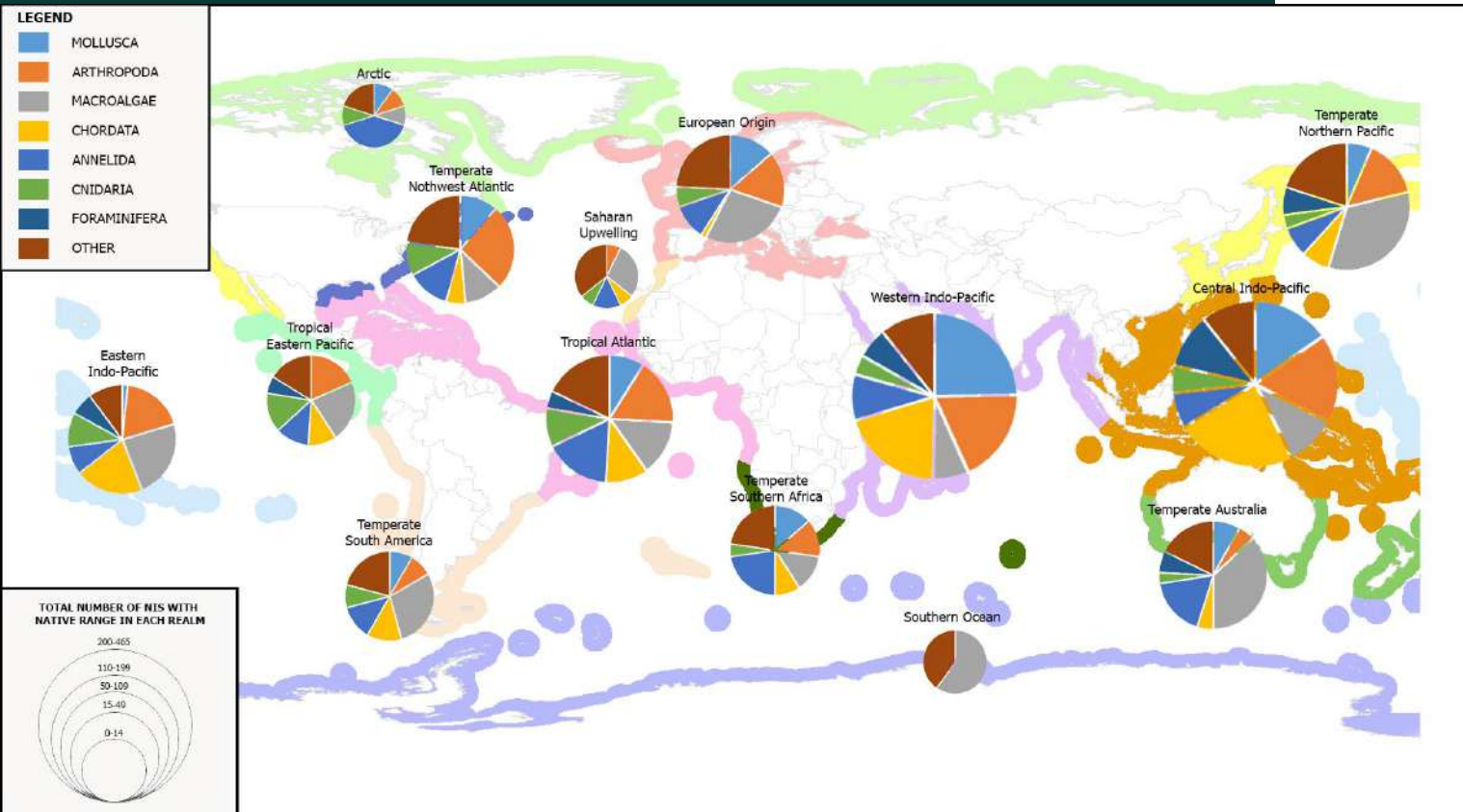


Cumulative number of IAS of Union concern per EU MS (established + casual included)

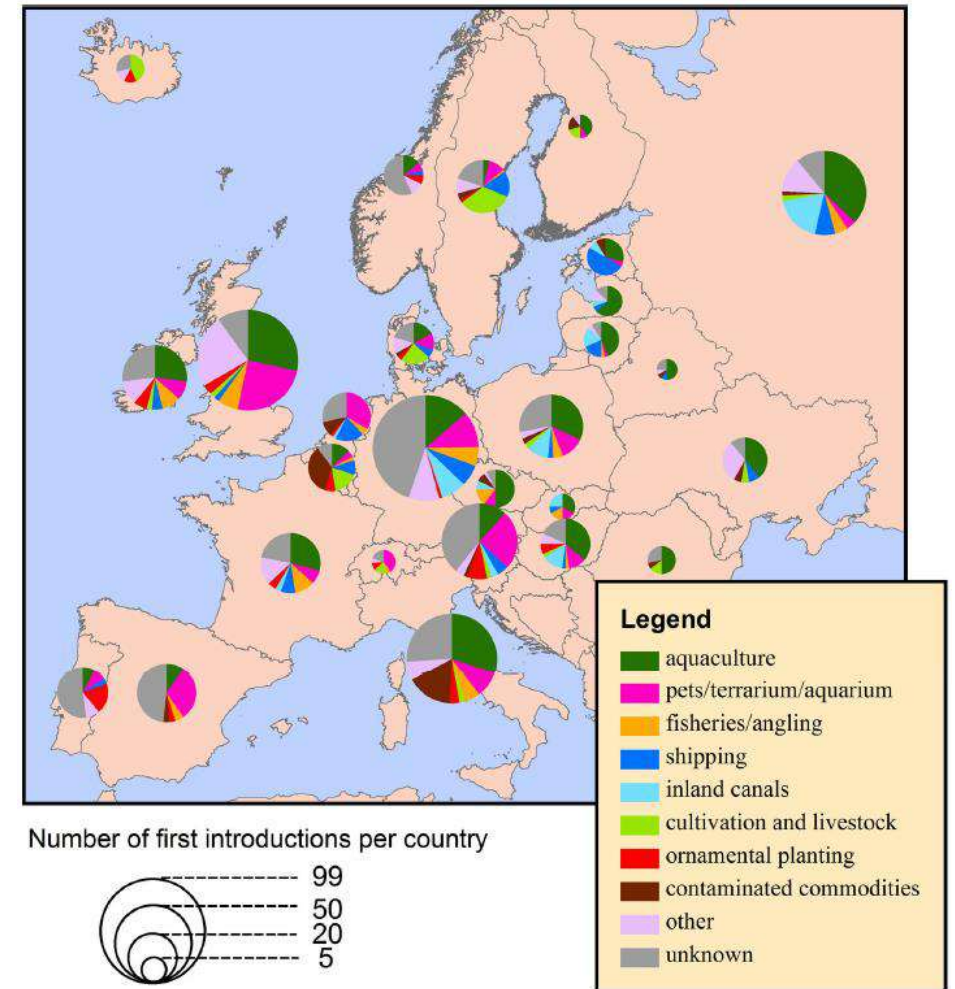


Distribution of *Myriophyllum aquaticum* in EU

# Support to scientific research



Native distribution range of European marine AS  
(*Aquatic Invasions- under revision*)



*Aquatic Invasions (2015) Vol. 10, Issue 4: 359–370*



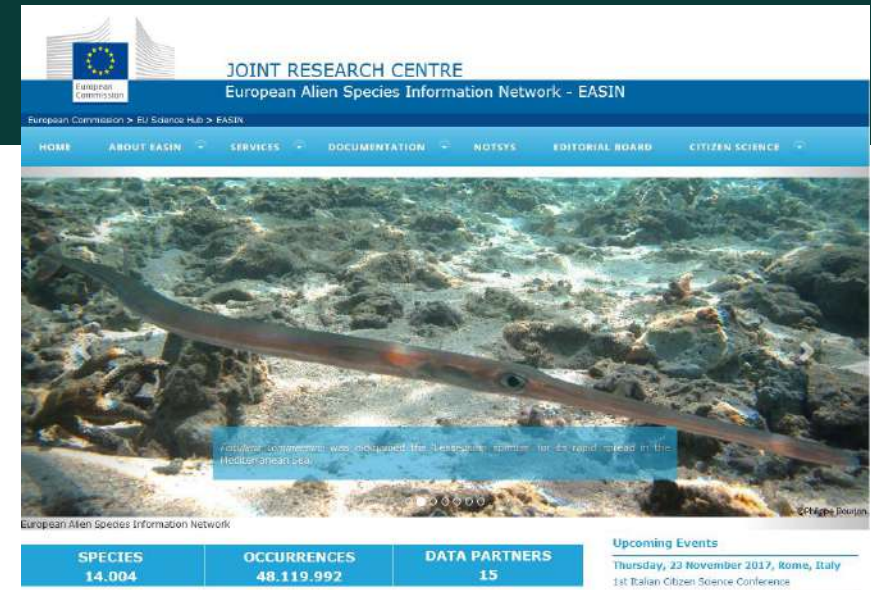
# On-going activities

- EASIN website updates (widgets, maps, “news”, etc.)
- Updates of EASIN Catalogue and Geodatabase
- Integration of new Data Partners
- Baseline of spatial distribution of the species recently added to the list of Union concern
- Integration of Citizen Science contributions

# Take-home messages

- EASIN = official tool of the EU Commission on IAS
- Based on collaboration with existing AS initiatives
  - aggregates, integrates, harmonizes AS data and information for their management at European level
  - facilitates access to AS data and information
  - increases credibility, visibility and impact of data partners

**The EASIN team invites you to join the network and share data and expertise through a common network**





# Any questions?

You can find me [EASIN@ec.europa.eu](mailto:EASIN@ec.europa.eu)