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EASIN

European Alien Species Information Network
a novel tool for the exploration of alien species information



The screenshot shows the EASIN website interface. At the top, there is a navigation bar with links: A-Z Index | Sitemap | About this site | FAQ | Legal notice | Contact | Search | English (en). Below this is the European Commission logo and the text "JOINT RESEARCH CENTRE EASIN - European Alien Species Information Network". The main content area features a large image of a squid with the caption: "Sepioteuthis lessoniana is an Indo-Pacific squid recently introduced in the Mediterranean via the Suez Canal". To the right of the image is a sidebar titled "EASIN at a Glance" with links: What's EASIN, What, Why and How, Join the network, Recent articles, Tools and Services (Species Search by Name, Combined Criteria Search, Subscribe to EASIN search), Software (Widget Framework, Documentation), FAQ, and News. Below the main content area are sections for "LATEST POSTS" and "LATEST NEWS". The "LATEST POSTS" section includes links to "EASIN core catalogue" and "EASIN catalogue structure". The "LATEST NEWS" section includes links to "EASIN in the 50th ECSA Conference" and "Official launch of EASIN". At the bottom, there is a "STAY CONNECTED" section with social media icons for Facebook, Twitter, YouTube, and LinkedIn.

EASIN TEAM

Ana Cristina Cardoso

Ana Nunes

Fabio D'Amico

Ivan Deriu

Konstantins Bogucarskis

Marco Trombetti

Stelios Katsanevakis

Outline

- **Support to European Policies**
- **EASIN approach**
- **EASIN web services (search & mapping tools)**



Israel, April 2013

Outline

- **Support to European Policies**
- EASIN approach
- EASIN web services (search & mapping tools)



Israel, April 2013

Support to European policies

COM (2011) 244 an EU biodiversity strategy to 2020

Target 5: By 2020, **Invasive Alien Species** and their **pathways** are identified and prioritized, priority species are **controlled** or **eradicated**, and **pathways are managed** to prevent the introduction and establishment of new IAS.

Action 16: ...a **dedicated EU legislative instrument** which could tackle outstanding challenges relating inter alia to IAS pathways, early detection and response and containment and management of IAS



EU Regulation (2013)

Support to European policies

MSFD* Descriptor 2: Non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystem

2.1.1 Trends in abundance, temporal occurrence and **spatial distribution** in the wild of non-indigenous species (...) in relation to the main **vectors** and **pathways** (...)

2.2.1 **Ratio between invasive non-indigenous species and native species** in some well studied taxonomic groups (...) that may provide a measure of change in species composition (...)

2.2.2 **Impacts** of non-indigenous invasive species (...)

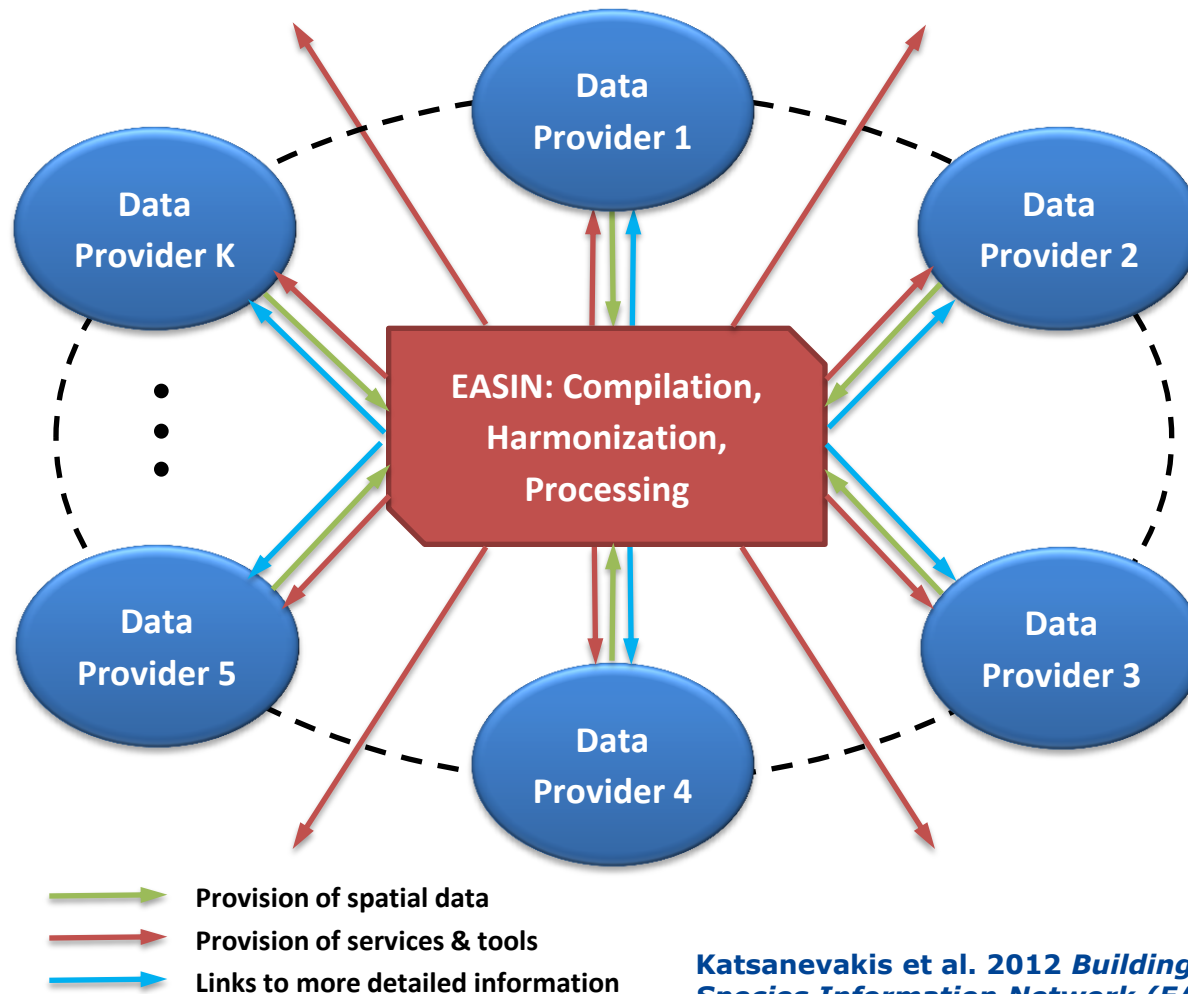
Outline

- Support to European Policies
- **EASIN approach**
- EASIN web services (search & mapping tools)



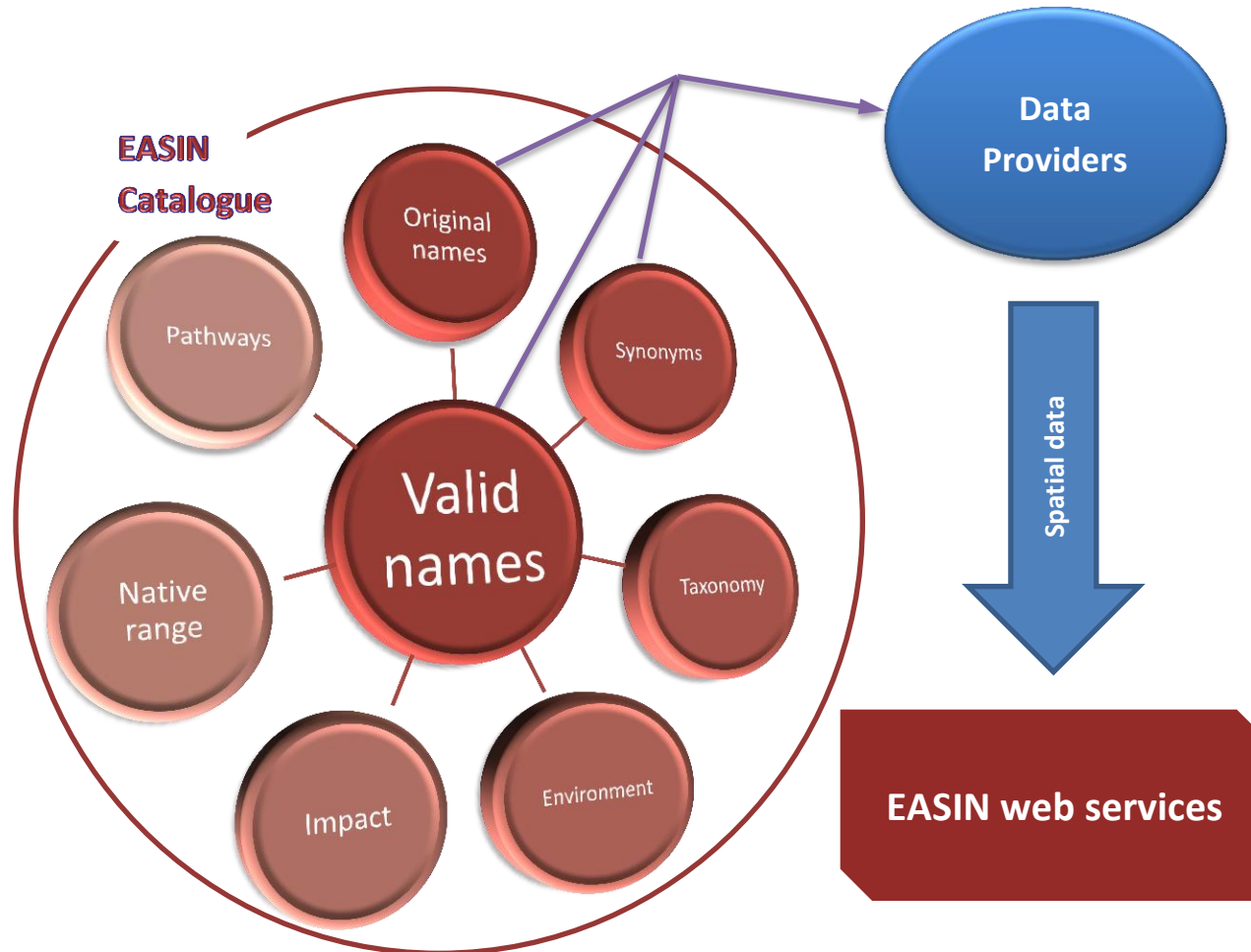
Israel, April 2013

Network of online interoperable web services



Katsanevakis et al. 2012 *Building the European Alien Species Information Network (EASIN): a novel approach for the exploration of distributed alien species data. BioInvasions Records 1: 235–245*

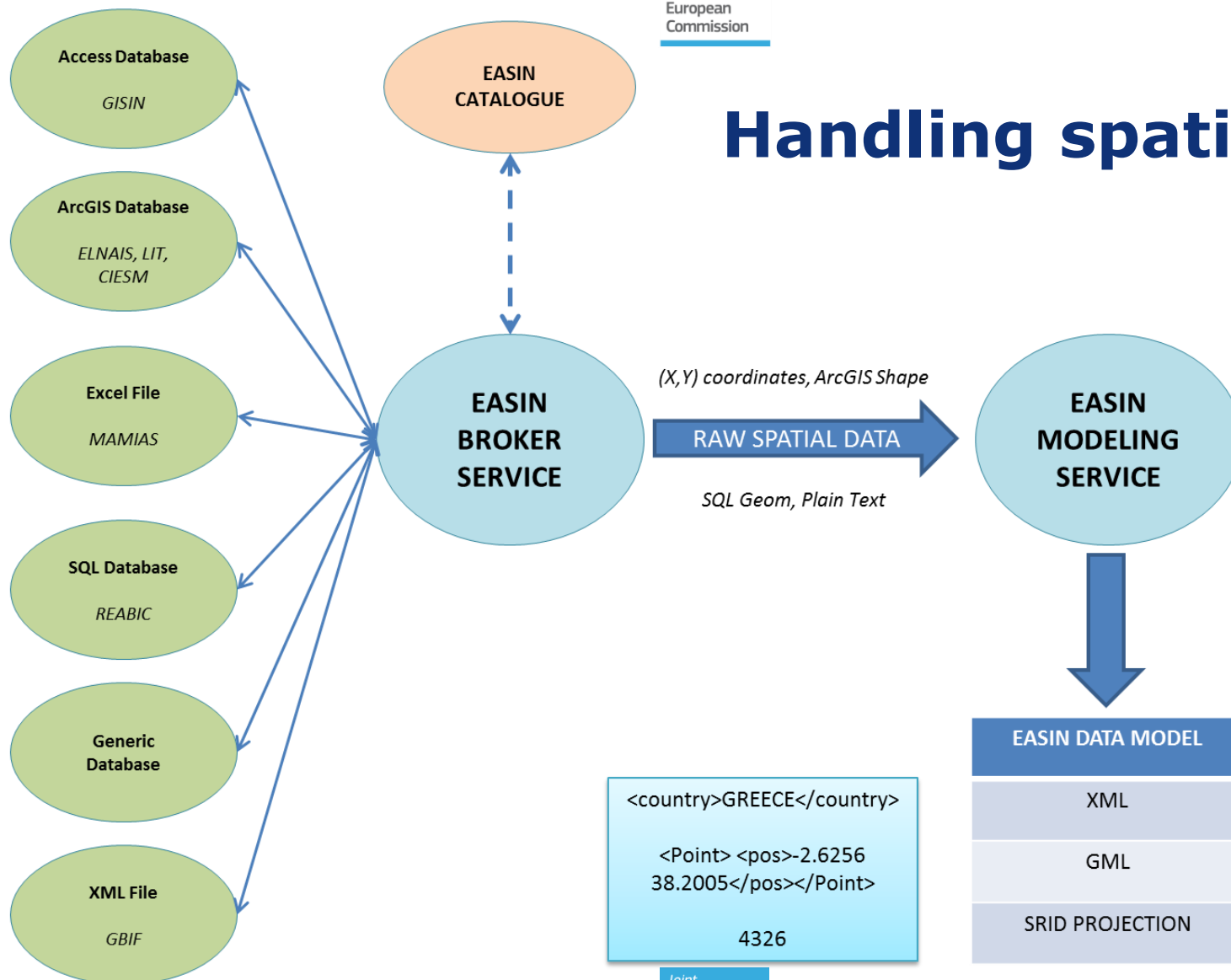
EASIN core catalogue



Handling spatial info

OFFLINE

ONLINE



Outline

- Support to European Policies
- EASIN approach
- **EASIN web services (search & mapping tools)**



Israel, April 2013



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EASIN - European Alien Species Information Network

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Species Search

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Species Search using Scientific or Common Name




Search

About

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Type scientific or common name

 Search

Environment

Impact

Terrestrial

FreshWater

Marine

High

Low/Unknown

All

Show 10 entries

Ext	Name by EASIN Catalog	Environment	Impact
-----	-----------------------	-------------	--------

No species found



Last update: 25/09/2012 | [Top](#)

Pinctada imbricata radiata

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Species Search using Scientific or Common Name



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Type scientific or common name

Pinctada imbricata radiata

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Environment

Impact

[Terrestrial](#)

[FreshWater](#)

[Marine](#)

[High](#)

[Low/Unknown](#)

[All](#)

Show entries

Ext	Name by EASIN Catalog	Environment	Impact
<input checked="" type="checkbox"/>	Pinctada imbricata radiata	MAR	High

Showing 1 to 1 of 1 entries



Environment

Terrestrial FreshWater Marine

Show 10 entries

Ext Name by EASIN Catalog

Pinctada imbricata radiata

Found in EASIN catalog. STATUS: VALID

- LSID
 - urn:lsid:alien.jrc.ec.europa.eu:species:R
- Factsheets
 - [DAISIE factsheet] [CIESM factsheet]
 - [CABI factsheet] [WoRMS factsheet]
- Taxonomy
 - Kingdom: Animalia >> Phylum: Mollusca >

Environment

Terrestrial FreshWater Marine

Show 10 entries

Ext Name by EASIN Catalog

Pinctada imbricata radiata

Found in EASIN catalog. STATUS: VALID

- LSID
 - urn:lsid:alien.jrc.ec.europa.eu:species:R
- Factsheets
 - [DAISIE factsheet] [CIESM factsheet]
 - [CABI factsheet] [WoRMS factsheet]
- Taxonomy
 - Kingdom: Animalia >> Phylum: Mollusca >

WoRMS

World Register of Marine Species

Home About Search taxa Taxon tree Literature Distribution Specimens Match taxa Editors Statistics Users Webservice Photogallery Info downloads Sponsors Glossary Log in

WoRMS taxon details

***Pinctada imbricata radiata* (Leach, 1814)**
AlphaID: 964660

Classification: Biota > Animalia (Kingdom) > Mollusca (Phylum) > Bivalvia (Class) > Pteriomorpha (Subclass) > Pterioidea (Order) > Pterioidea (Superfamily) > imbricata (Species)

Status: accepted
Record status: Checked by Taxonomic Editor

Rank: Subspecies

Parent: *Pinctada imbricata* Röding, 1798

Synonymised taxa: *Pinctada radiata* (Leach, 1814)
Peria ostraea Reeve, 1857

Sources: additional source: Cunha R.L., Blanc F., Bonhomme F. & Arnaud-Haond S. (2011) Evolutionary patterns in pearl oyster *Pinctada* (Mollusca, Bivalvia, Pterioidea) available online at <http://www.biomedcentral.com/content/pdf/1471-2148-10-342.pdf> [details]

status source: Témkin I. (2010) Molecular phylogeny of pearl oysters and their relatives (Mollusca, Bivalvia, Pterioidea) available online at <http://www.biomedcentral.com/content/pdf/1471-2148-10-342.pdf> [details]

from synonym: Gofas, S., Le Renard, J., Bouchet, P. (2001). Mollusca, in: Costello, M.J. et al. (Ed.) (2001). *Europe marine species in Europe and a bibliography of guides to their identification*. Collection Patrimoines Naturels, 50: pp. 43-50. [details] [view taxon]

from synonym: Sheppard, A. (1984). The molluscan fauna of Chagos (Indian Ocean) and an analysis of its broad distribution. *Oceanogr. Mar. Biol. Ann. Rev.* 43: 419-453 (look up in [JMS] [details] [view taxon])

from synonym: Streftaris, N., Zenetos, A., Papathanassiou, E. (2005). Globalisation in marine ecosystems: the story of the Mediterranean Sea. *Oceanogr. Mar. Biol. Ann. Rev.* 43: 419-453 (look up in [JMS] [details] [view taxon])

from synonym: Zamouri-Langar, N., Chouba, L., Ajabi Chebli, L., Mrabet, R., El Abed, A. (2011). Les coquillages bivalves de la Mer Méditerranée. ISBN 978-9938-9512-0-2. 128 pp. (look up in [JMS] [details] [view taxon])

from synonym: Dautzenberg, Ph. (1923). Liste préliminaire des mollusques marins de Madagascar et description de nouveaux genres et espèces. *Revue de la Société de Biogéographie* 10: 1-10 (look up in [JMS] [details] [view taxon])

Vernacular Names

Language	Name
English	rayed pearl oyster (from synonym) [details]
Modern Greek (1453-)	Μαργαροπόπο αρπάζο (from synonym) [details]

Invasive Species

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Main Menu

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ISC Browse

- Animal diseases
- Animals
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- Fungi
- Oomycetes
- Plants
- Protozoa
- Viruses
- Pathway causes
- Pathway vectors

Datasheets > Pinctada radiata (rayed pearl oyster)

Cover Images Identity Distribution Biology & Ecology

Last modified: 13 June 2011

Datasheet Type(s): Invasive Species

Preferred Scientific Name: *Pinctada radiata*

Preferred Common Name: rayed pearl oyster

Taxonomic Tree

Domain: Eukaryota
Kingdom: Metazoa
Phylum: Mollusca
Class: Bivalvia
Class: Pinctada radiata

Summary of Invasiveness

According to Streftaris and Zenetos (2006), *P. radiata* is considered to be one of the worst invasive species in the Mediterranean Sea, in terms of spread

PTERIIDAE
pearl oysters

Pinctada radiata
(Leach, 1814)

Relevant Synonyms

Meleagrina radiata "Dahms"

Photos: P. Pavlis / Coll. A. Zenetos

SHORT DESCRIPTION

Shell fragile, compressed, inequivalve very more inflated. Outline almost quadrangular, higher than long; dorsal margin longer than body of shell; posterior margin slightly concave. Beaks pointing anteriorly. Sculpture: concentric lamellae often with rows of appressed spines. Hinge line straight. No teeth. Ligament in a single triangular depression. Spiny sculpture and color accounts for the large number of synonyms.

color: externally variable, generally brown with shades of red. Internally very pearly.

common size: usually to 50-65 mm, up to 106 mm in length.

Pinctada radiata

Delivering Alien Invasive Species Inventories for Europe

Taxon	Family / Order / Class / Phylum
<i>Pinctada radiata</i> (Leach, 1814)	Pteriidae / Pterioidea / Bivalvia / Mollusca

COMMON NAMES (English only)
Gulf pearl oyster

SYNONYMS

Avicula radiata Leach, 1814
Meleagrina conomenosi Monterosato, 1884
Meleagrina savignyi Monterosato, 1884
Avicula albina var. *vallanti* Vassel, 1897

SHORT DESCRIPTION

A large bivalve, length commonly 50-65 mm, up to 106 mm. The shell is compressed, inequivalve with the outline almost quadrate. The shell is brownish with shades of red, inner surface pearly. The dorsal margin is longer than the body of shell and the posterior margin slightly concave. The beaks are pointing anteriorly. It has a sculpture of concentric lamellae often with rows of appressed spines, a hinge line straight and spiny margins.

More.

PTERIIDAE
pearl oysters

Pinctada radiata
(Leach, 1814)

Relevant Synonyms

Meleagrina radiata "Dahms"

ECOCLOGY

sal mechanisms:agic larvae are dispersed by water currents.

reproduction:andric hermaphrodite species with sex inversion occurring in shells 32-57 mm. Gonad maturity is controlled temperature. In the Mediterranean, gonad activity is nearly year-round, spawning occurs mainly in summer / early autumn.

predators:known.

ant stages (seeds, spores etc.):iv shell may provide some protection.

Photo: Menachem Goren

Pinctada radiata
Photo: Menachem Goren

Species Maps About

Stelios Katsanevakis Log Out

EASIN Layers

- Countries
- Grid 10x 10 km
- River Basin Districts

Legend

- Present

Data - EASIN partners, Maps - © European Commission JRC, ETRS89-LAEA



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EASIN

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Species Search using Combined Criteria

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Environment Impact Query (692 selected)

Taxonomy Pathways

☐ Select all
 ☐ Primary only

☐ Animalia
☐ Bacteria
☐ Chromista
☐ Fungi
☐ Plantae
☐ Unresolved

☐ CONTAMINANT
☐ CORRIDOR
☐ ESCAPE
☐ RELEASE
☒ STOWAWAY
☒ Shipping
☐ NOT ASSESSED
☐ OTHER
☐ UNKNOWN

<input checked="" type="checkbox"/>	Ext	Scientific Name	Taxonomy Kingdom	Phylum	Class	Order	Family	Environment	Impact
<input checked="" type="checkbox"/>		Abudefduf vaigiensis	Animali..	Chordat..	Actinop..	Percifo..	Pomacen..	MAR	Low/Unkn
<input checked="" type="checkbox"/>		Acabaria erythraea	Animali..	Cnidari..	Anthozo..	Alcyona..	Melitha..	MAR	Low/Unkn
<input checked="" type="checkbox"/>		Acanthaster planci	Animali..	Echinod..	Asteroi..	Valvati..	Acantha..	MAR	Low/Unkn
<input checked="" type="checkbox"/>		Acanthophora nayadiformis	Plantae	Rhodoph..	Floride..	Ceramia..	Rhodome..	MAR	Low/Unkn
<input checked="" type="checkbox"/>		Acartia (Acartiura) omorii	Animali..	Arthrop..	Maxillo..	Calanoi..	Acartii..	MAR	Low/Unkn
<input checked="" type="checkbox"/>		Acartia (Odontacartia) centrura	Animali..	Arthrop..	Maxillo..	Calanoi..	Acartii..	MAR	Low/Unkn
<input checked="" type="checkbox"/>		Acartia tonsa	Animali..	Arthrop..	Maxillo..	Calanoi..	Acartii..	FW-MAR	High
<input checked="" type="checkbox"/>		Achnanthes	Chromis	Chloroph	Basilla	Achnant	Achnant	FW-MAR	Low/Unkn

EASIN Species, Maps & Services LSID: [urn:lsid:alien.jrc.ec.europa.eu:query:BLKsa2I77EOrWq34GBAKLw:2.5]

[close]

Species **Maps** About

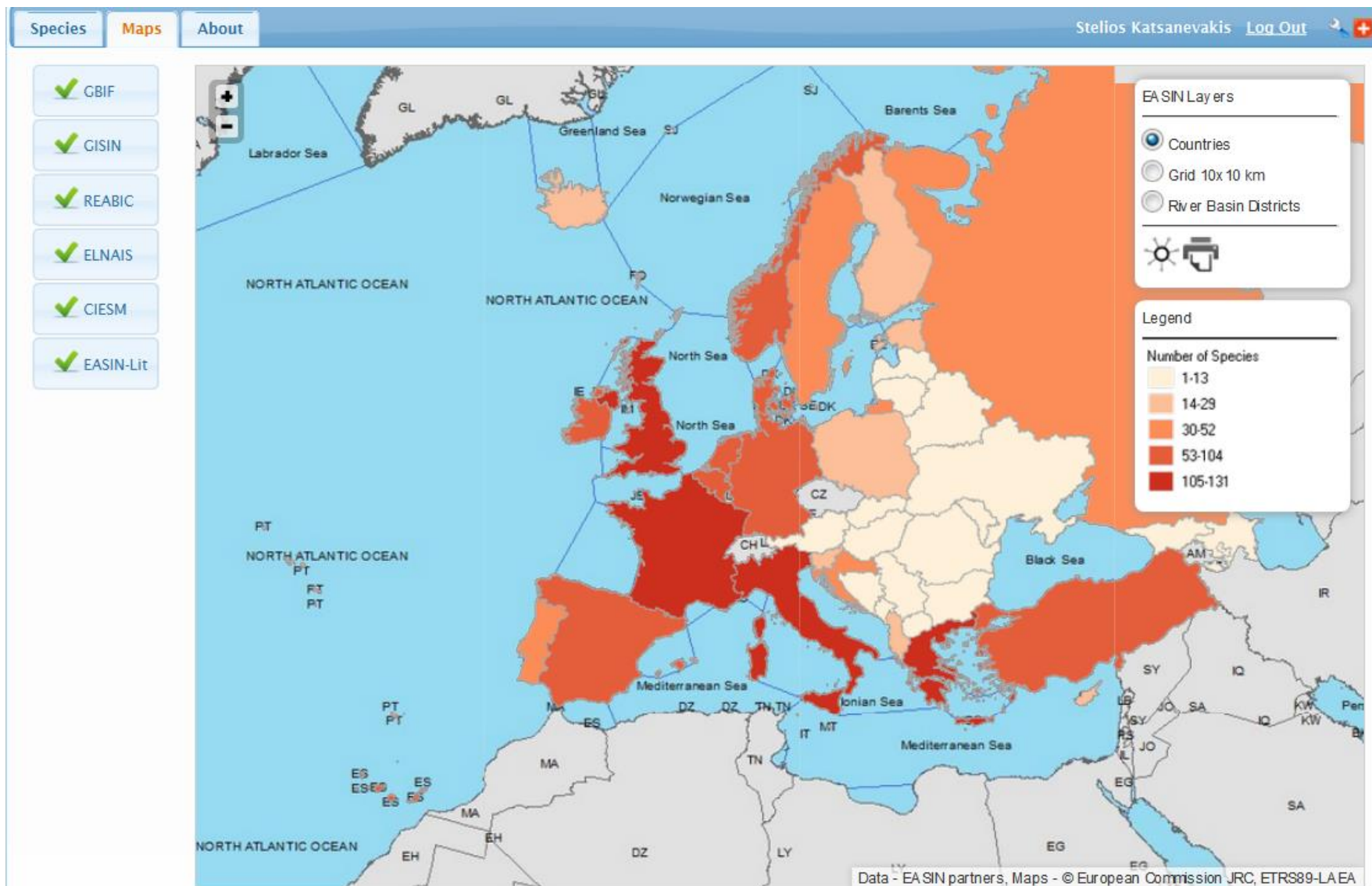
Stelios Katsanevakis [Log Out](#)

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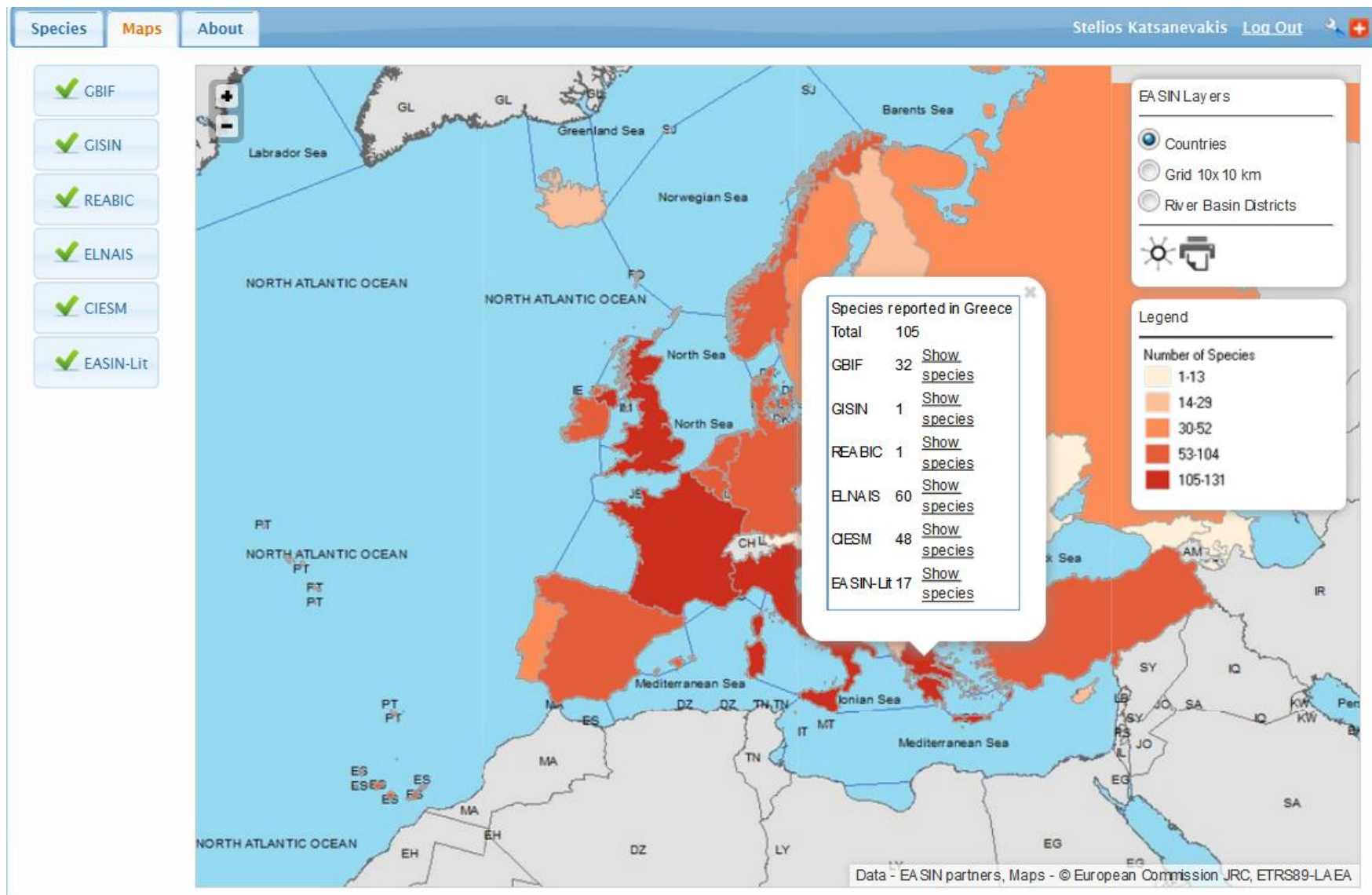
Ext	Scientific Name	Catalog Status	Indexed
	Abudefduf vaigiensis	Valid	Yes
	Acabaria erythraea	Valid	No
	Acanthaster planci	Valid	No
	Acanthophora nayadiformis	Valid	Yes
	Acartia (Acartiura) omorii	Valid	No
	Acartia (Odontacartia) centrura	Valid	No
	Acartia tonsa	Valid	Yes
	Achnanthes pseudogroenlandica	Valid	No
	Acrochaetium robustum	Valid	Yes
	Acrochaetium spathoglossi	Valid	Yes
	Acrochaetium subseriatum	Valid	Yes
	Acrothamnion preissii	Valid	Yes
	Acteocina crithodes	Valid	No
	Actumnus globulus	Valid	Yes
	Aequorea globosa	Valid	No
	Aeverrillia setigera	Valid	No
	Agardhiella subulata	Valid	Yes
	Aglaothamnion feldmanniae	Valid	Yes
	Aglaothamnion halliae	Valid	No
	Alexandrium acatenella	Valid	No
	Alexandrium affine	Valid	Yes

Showing 1 to 20 of 689 entries

Pathway: shipping



Pathway: shipping



Species

Maps

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✓ GBIF

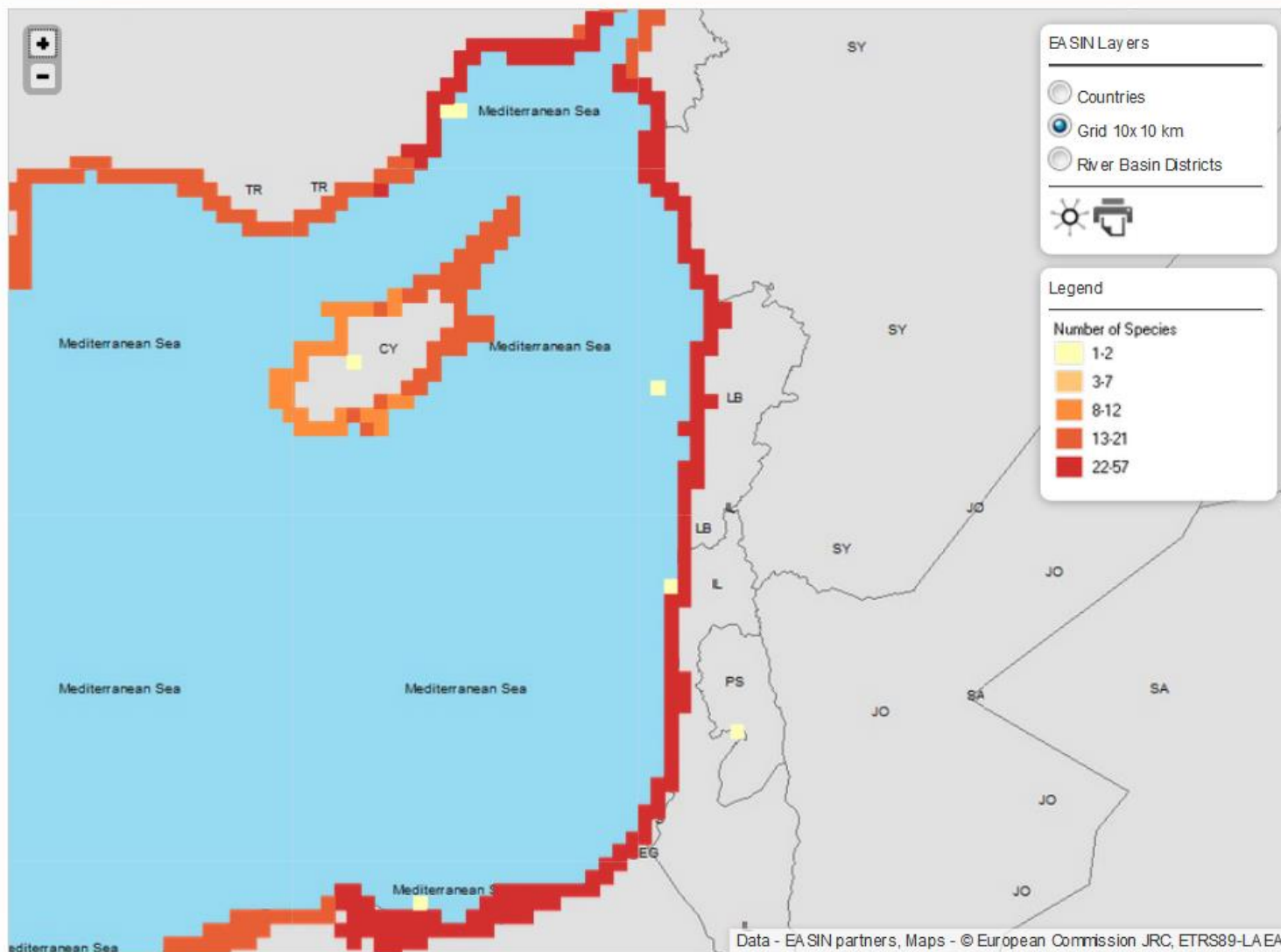
✓ GISIN

✓ REABIC

✓ ELNAIS

✓ CIESM

✓ EASIN-Lit



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✓ GBIF

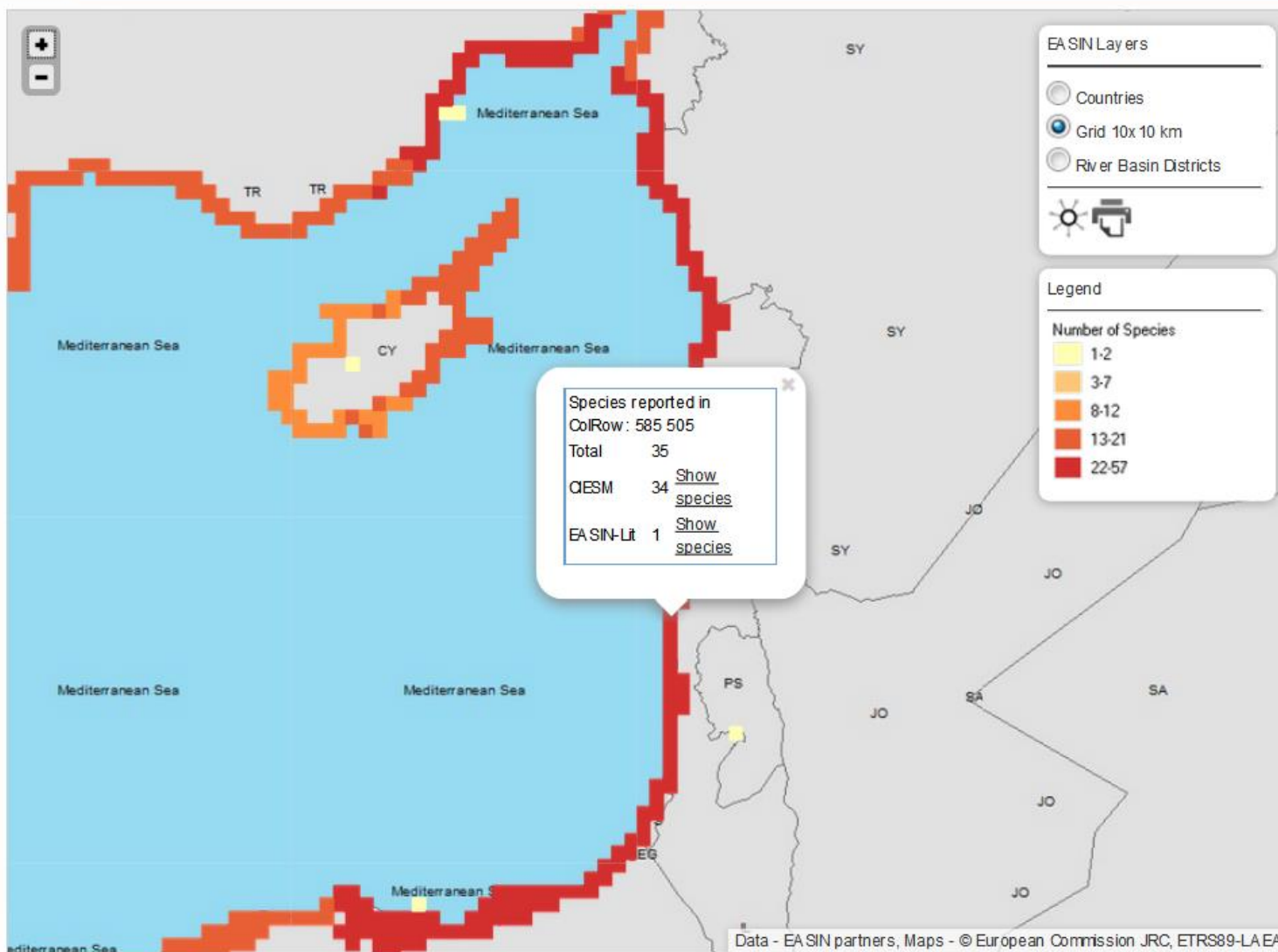
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✓ REABIC

✓ ELNAIS

✓ CIESM

✓ EASIN-Lit



Species Search using Combined Criteria

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Search

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You authorized as Stelios K

Show 10 entries

Ext	Title
	Marine alien
	Shipping/Le
	Marine alien
	Marine alien
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Showing 1 to 7 of 7 entries

Share Query

LSID:

urn:lsid:alien.jrc.ec.europa.eu:query:T_ggZZJce

Subject* (left 25 chars):

Share via:



Send to Email

From:

easin@jrc.e

To:

Send

Bookmark & Share

marine alien molluscs

<http://easin.jrc.ec.europa.eu/data/aggregations?lsid=urn:lsid:alien.jrc.ec....>



- | | | |
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| Armenix | Arto | Aviary Capture |
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| BallTribe | Beat100 | Bebo |
| Bentio | BiggerPockets | Bit.ly |
| bizSugar | Bland takkinn | Blinklist |
| Blip | Blogger | Bloggy |
| Blogkeen | Blogmarks | Blogtrottr |
| Blurpalicious | BO.LT | BobrdoBr |
| BonzoBox | BookmarkingNet | Bookmarky.cz |
| Bookmerken | Box.net | Brainify |
| Bryderi | BuddyMarks | Buffer |
| Buzzy | Camyoo | CardThis |
| Care2 | Chime.In | Chiq |
| Cirip | CiteULike | ClassicalPlace |
| CleanPrint | CleanSave | clipDO |
| Cndig | Colivia.de | Communicate |
| Connotea | cOOTopia | COSMIQ |
| CSS Based | Curate.Ux | Delicious |
| DesignBump | Dig This Webhost | DigaCultura |
| Digg | Diggita | Digo |
| Digzign | Diigo | Dipdive |
| doMelhor | Dosti | DotNetKicks |



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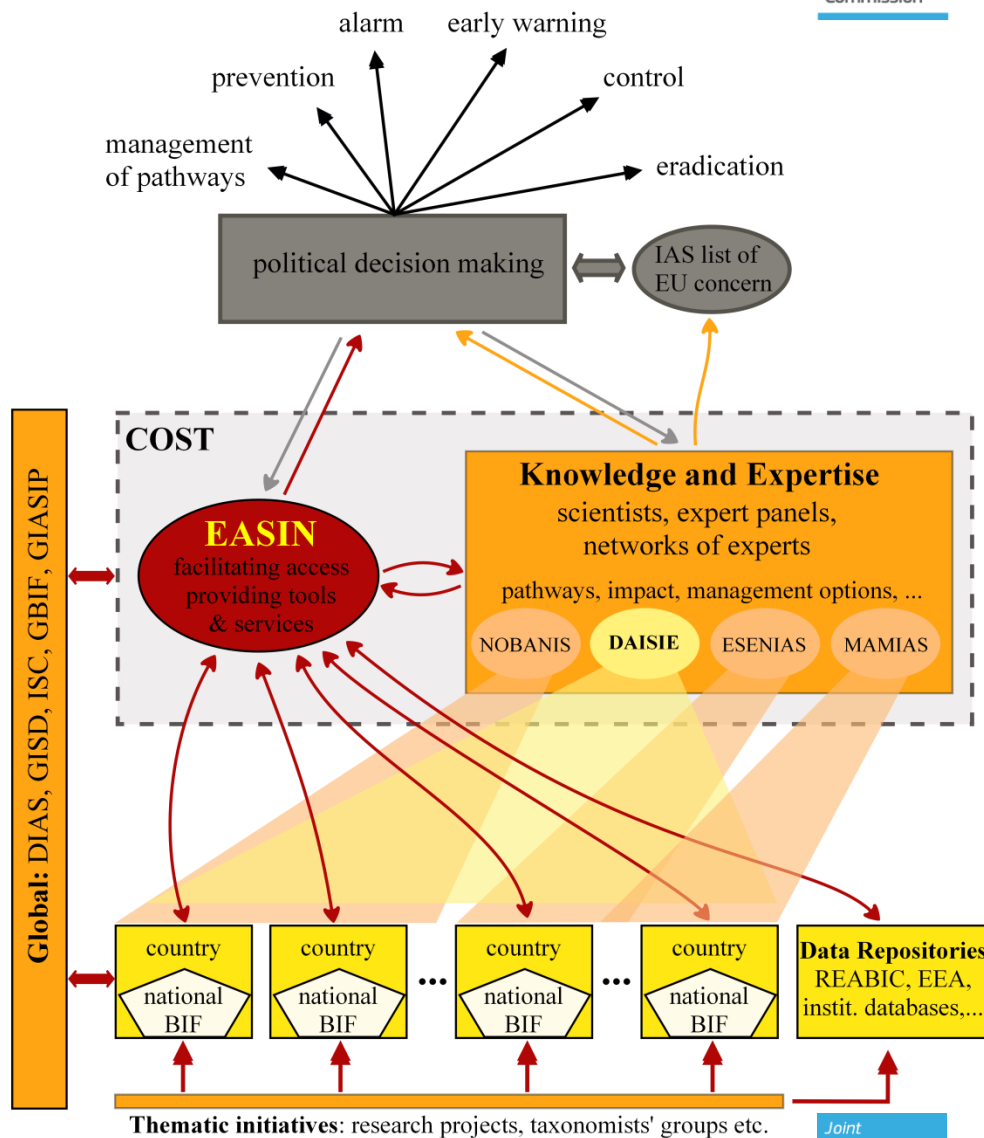
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Katsanevakis S, Genovesi P, Gaiji S, Nyegaard Hvid H, Roy H, Nunes AL, Sánchez Aguado F, Bogucarskis K, Debusscher B, Deriu I, Harrower C, Josefsson M, Lucy FE, Marchini A, Richards G, Trichkova T, Vanderhoeven S, Zenetos A, Cardoso AC, 2013. Implementing the European policies for alien species – networking, science, and partnership in a complex environment. *Management of Biological Invasions* 4(1): 3–6.

Ocean & Coastal Management 76 (2013) 64–74



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Ocean & Coastal Management

journal homepage: www.elsevier.com/locate/ocecoaman



Invading European Seas: Assessing pathways of introduction of marine aliens

Stelios Katsanevakis ^{a,*}, Argyro Zenetos ^b, Constança Belchior ^c, Ana Cristina Cardoso ^a