



**Mediterranean
Action Plan**
Barcelona
Convention



*The Mediterranean
Biodiversity
Centre*

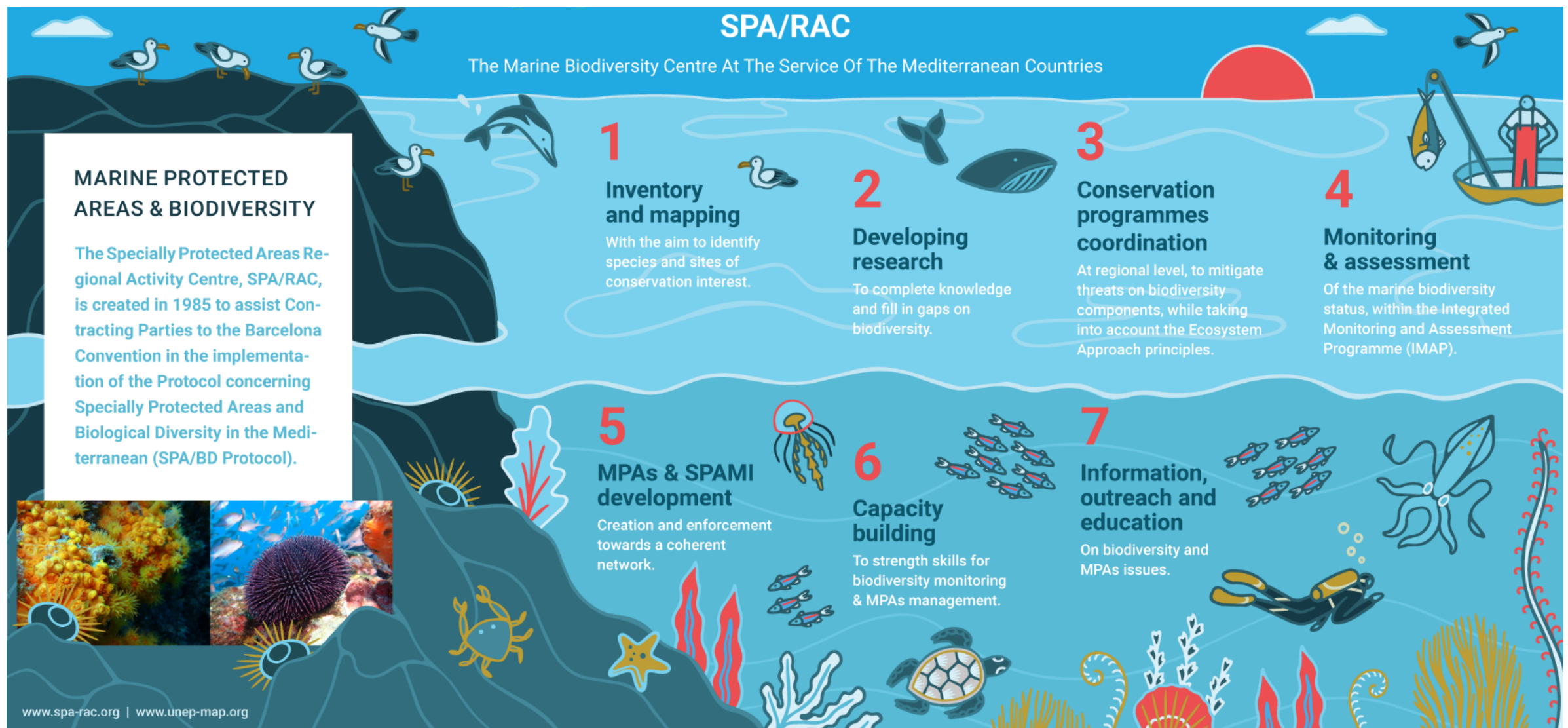
The non-indigenous species & the Barcelona Convention

Atef OUERGHI, Programme Officer - Ecosystem Conservation, Mediterranean Biodiversity Centre

MAP System



Le SPA/RAC, Mediterranean Biodiversity Centre



**PROTOCOL CONCERNING
SPECIALLY PROTECTED AREAS
AND BIOLOGICAL DIVERSITY
IN THE MEDITERRANEAN**



United Nations Environment Programme
Mediterranean Action Plan



Article 13

**INTRODUCTION OF NON-INDIGENOUS OR
GENETICALLY MODIFIED SPECIES**

1. The Parties shall take all appropriate measures to regulate the intentional or accidental introduction of non-indigenous or genetically modified species to the wild and prohibit those that may have harmful impacts on the ecosystems, habitats or species in the area to which this Protocol applies.
2. The Parties shall endeavour to implement all possible measures to eradicate species that have already been introduced when, after scientific assessment, it appears that such species cause or are likely to cause damage to ecosystems, habitats or species in the area to which this Protocol applies.

SAP/BIO : Strategic Action Programme for the conservation of Biological Diversity in the Mediterranean Region

PAS BIO 2003



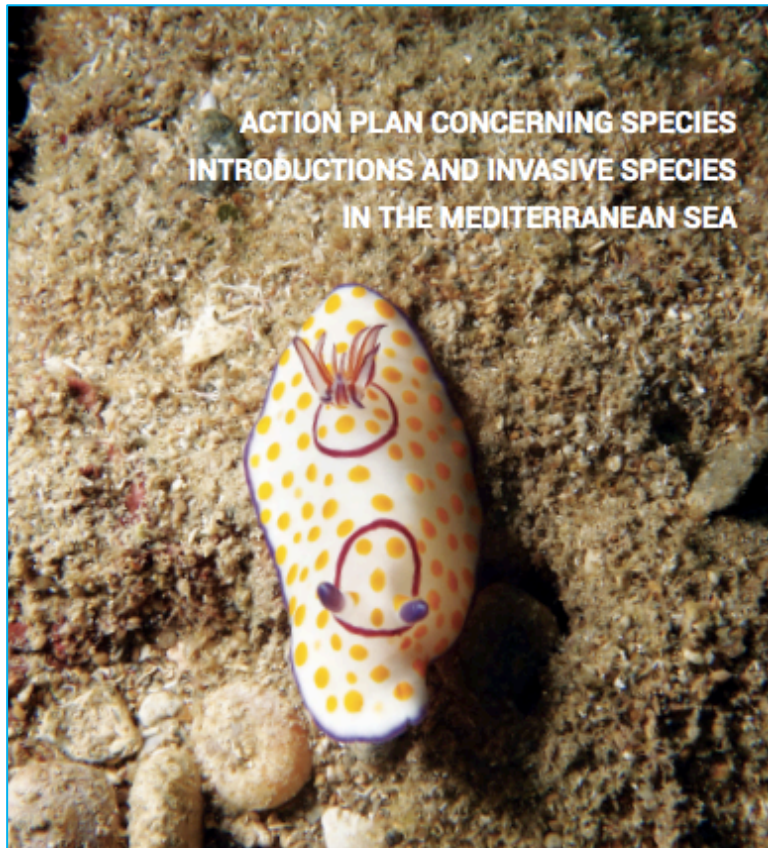
→ Main threats affecting Mediterranean marine and coastal biodiversity

→ 15) Control and mitigate the introduction and spread of alien and invasive species (high, first priority rank)

Post-2020 SAPBIO



Action Plan concerning species introduction and invasive species



Regional Strategy outlines objectives, priorities, and implementation measures in different fields as well as their coordination

Action Plan concerning species introduction and invasive species (updated in 2016)

A. OBJECTIVES OF THE ACTION PLAN

14. The main objective of the present Action Plan is to promote the development of coordinated efforts and management measures throughout the Mediterranean region in order to prevent as appropriate, minimize and limit, monitor, and control marine biological invasions and their impacts on biodiversity, human health, and ecosystem services, particularly by:
 1. strengthening the capacity of the Mediterranean countries to deal with the issue of alien species, within the framework of the EcAp;
 2. supporting a regional information network for the efficient exploitation of alien species data and to support the regional policies on biological invasions;
 3. further developing MAMIAS, an online platform for the collection, exploitation, and dissemination of information on marine biological invasions in the Mediterranean Sea to support relevant regional and international policies;
 4. strengthening the institutional and legislative frameworks at the level of the countries of the region;
 5. conducting baseline studies and establishing monitoring programmes, within the framework of the EcAp Integrated Monitoring and Assessment Programme, to collect reliable and pertinent scientific data that can be used for decision-making where necessary;
 6. setting up mechanisms for cooperation and the exchange of information among the Mediterranean countries;
 7. Elaborating guidelines and any other technical documentation.



The Ecosystem Approach in the Mediterranean

How EU Member States develop marine strategies



IMPLEMENTATION OF THE ECOSYSTEM APPROACH IN THE MEDITERRANEAN

For A Healthy Mediterranean With Marine And Biological
Ecosystems That Are Productive And Biologically Diverse
For The Benefit Of Present And Future Generations



IMAP:

Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria



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PROGRAMME DE SURVEILLANCE ET D'ÉVALUATION INTÉGRÉES DE LA MER ET DES CÔTES MÉDITERRANÉENNES ET CRITÈRES D'ÉVALUATION CONNEXES



Plan d'Action pour la Méditerranée
Convention de Barcelone

44. The common indicator in relation to NIS is:

COMMON INDICATOR 6: Trends in abundance, temporal occurrence, and spatial distribution of non-indigenous species, particularly invasive, non-indigenous species, notably in risk areas (EO2, in relation to the main vectors and pathways of spreading of such species in the water column and seabed, as appropriate):

45. Non-indigenous species monitoring in the Mediterranean is a trend monitoring, where it is key to establish reliable, long-term data-sets as a first step of monitoring.

46. In addition, monitoring of non-indigenous species (NIS), following the risk based approach, needs to be focused on the invasive alien species (IAS) in IAS introduction "hot spots" (e.g. ports and their surrounding areas, docks, marinas, aquaculture installations, heated power plant effluents sites, offshore structures). In addition, areas of special interest such as marine protected areas or lagoons may be selected on a case by case basis, as appropriate, depending on the proximity to alien species introduction hot spots.

50. As the most effective monitoring method a Rapid Assessment Survey (RAS) will be carried out, at least yearly by the Contracting Parties in hot-spot areas (e.g. ports and their surrounding areas, docks, marinas, aquaculture installations, heated power plant effluents sites, offshore structures).

51. In addition, UNEP/IMAP will develop during the initial phase of IMAP citizen survey guidance for NIS, to enable Contracting Parties to use this additional cost-efficient methodology, which also strengthens public awareness and participation.



IMAP:

Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria



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48. Based on existing regional databases, such as the Marine Mediterranean Invasive Alien Species database, (MAMIAS), the “Andromeda” invasive species database for the Mediterranean and Black Sea, and the European Alien Species Information Network (EASIN), each Contracting Party will determine the list of IAS to be monitored in its national monitoring programme during the initial phase of the IMAP and start collecting data regarding these species. Guidance on developing IAS national lists and a regional and or sub regional reference list will be developed by 2017.



UNITED
NATIONS

EP

UNEP(DEP1)/MED WG.431/Inf.14



UNEP

UNITED NATIONS
ENVIRONMENT PROGRAMME
MEDITERRANEAN ACTION PLAN

7 April 2017
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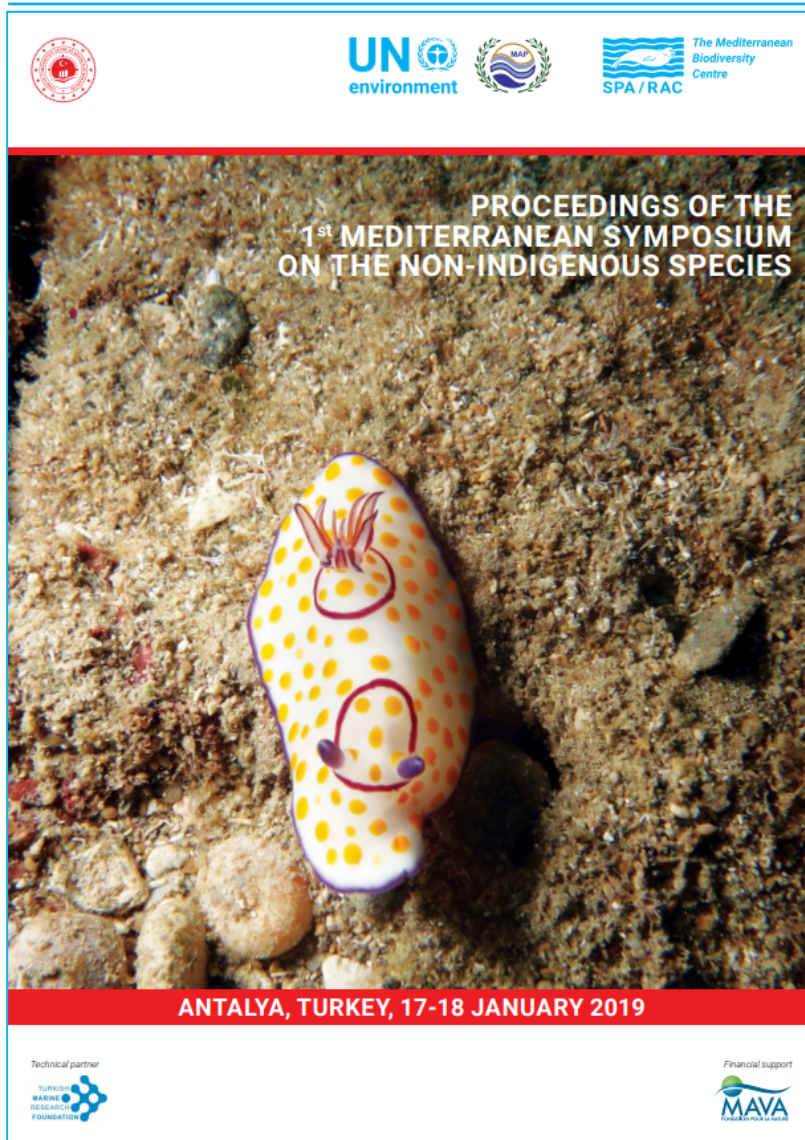
Thirteenth Meeting of Focal Points for Specially Protected Areas
Alexandria, Egypt, 9-12 May 2017

Agenda item 9: Assistance in the implementation of the first phase of the Integrated Monitoring and Assessment Programme (IMAP) on biodiversity and non-indigenous species in the framework of the EcAp roadmap

Guidance on developing invasive alien species national and sub-regional lists

For environmental and economy reasons, this document is printed in a limited number and will not be distributed at the meeting. Delegates are kindly requested to bring their copies to meetings and not to request additional copies.

Implementation measures (1)



GUIDELINES FOR CONTROLLING
THE VECTORS OF INTRODUCTION INTO THE
MEDITERRANEAN OF NON-INDIGENOUS
SPECIES AND INVASIVE MARINE SPECIES

LIGNES DIRECTRICES POUR LE CONTRÔLE
DES VECTEURS D'INTRODUCTION D'ESPÈCES
NON-INDIGÈNES ET DES ESPÈCES
ENVAHISSANTES MARINES EN MÉDITERRANÉE



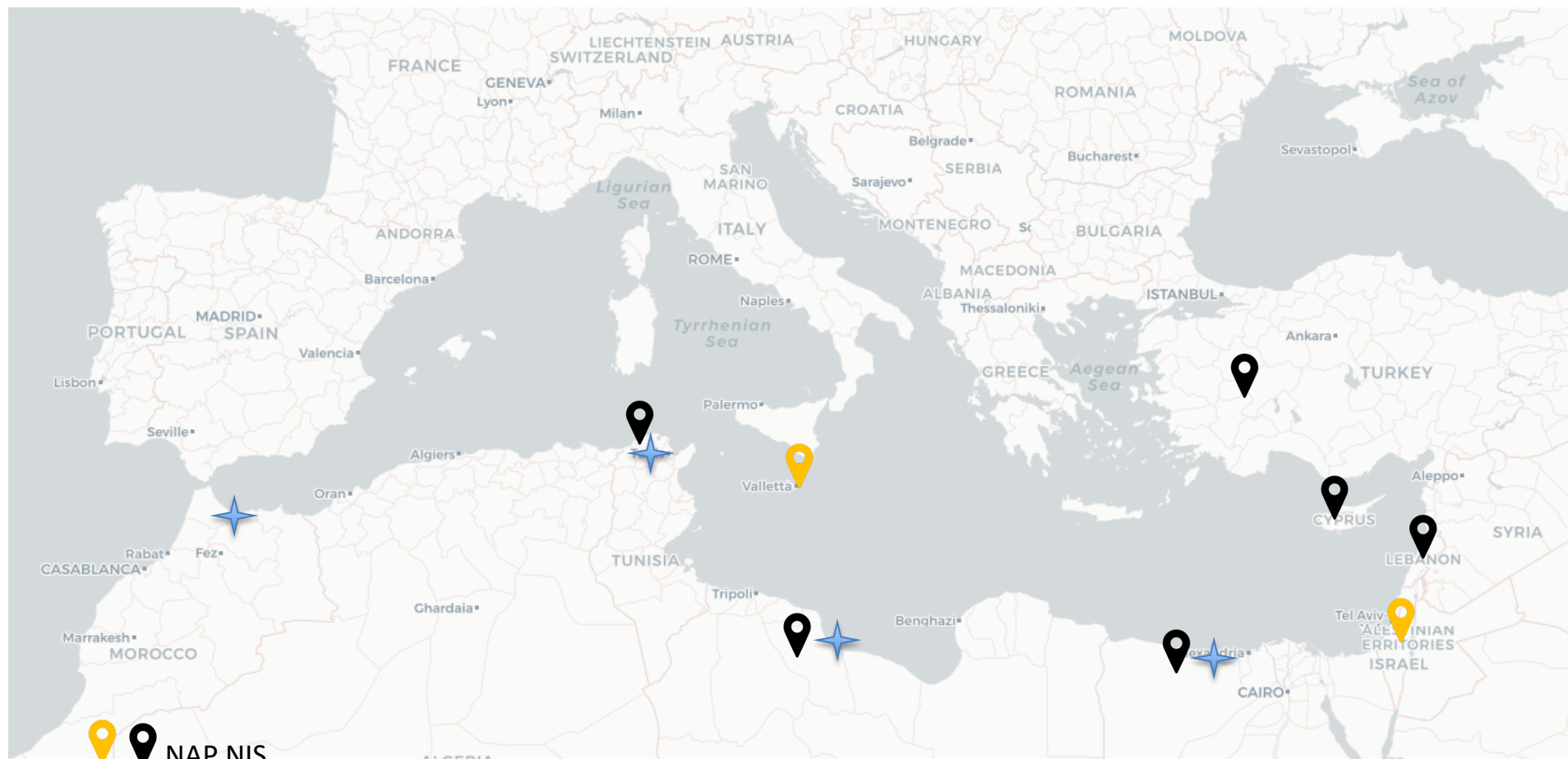
GUIDE FOR RISK ANALYSIS ASSESSING
THE IMPACTS OF THE INTRODUCTION
OF NON-INDIGENOUS SPECIES

GUIDE POUR L'ANALYSE DES RISQUES
ET L'EVALUATION DES IMPACTS DES
INTRODUCTIONS D'ESPÈCES NON-INDIGÈNES


ARRIVAL
Mediterranean
Sea



Implementation measures (2)



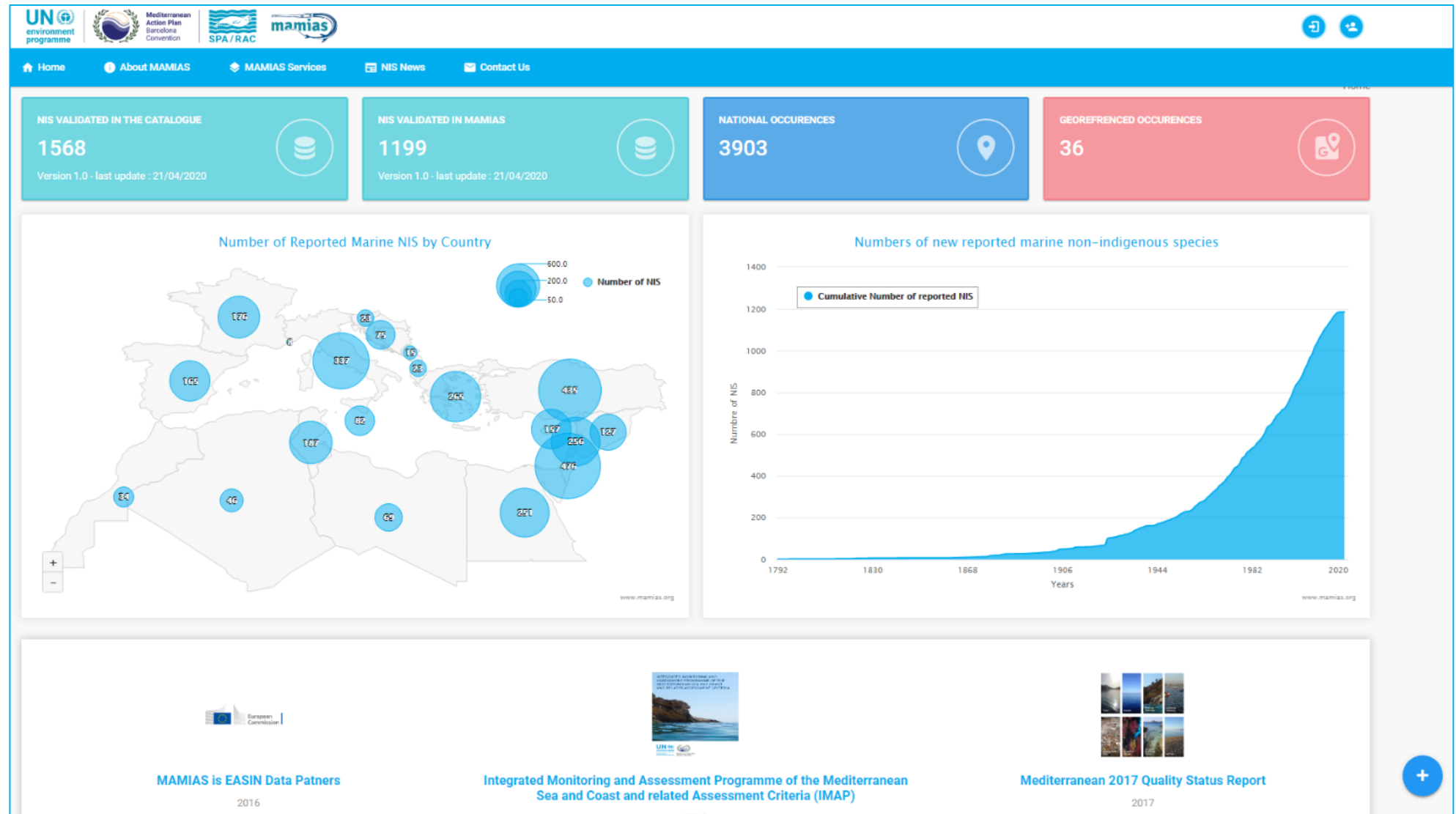
  NAP NIS

 Monitoring Programme for biodiversity & NIS

Map Source : <http://data.medchm.net>

MARine Mediterranean non-indigenous and InvAsive Species Database (MAMIAS)

www.mamias.org





MAMIAS Catalogue

Protocol for the
correction of spelling
errors

Checking synonyms

Checking autonyms

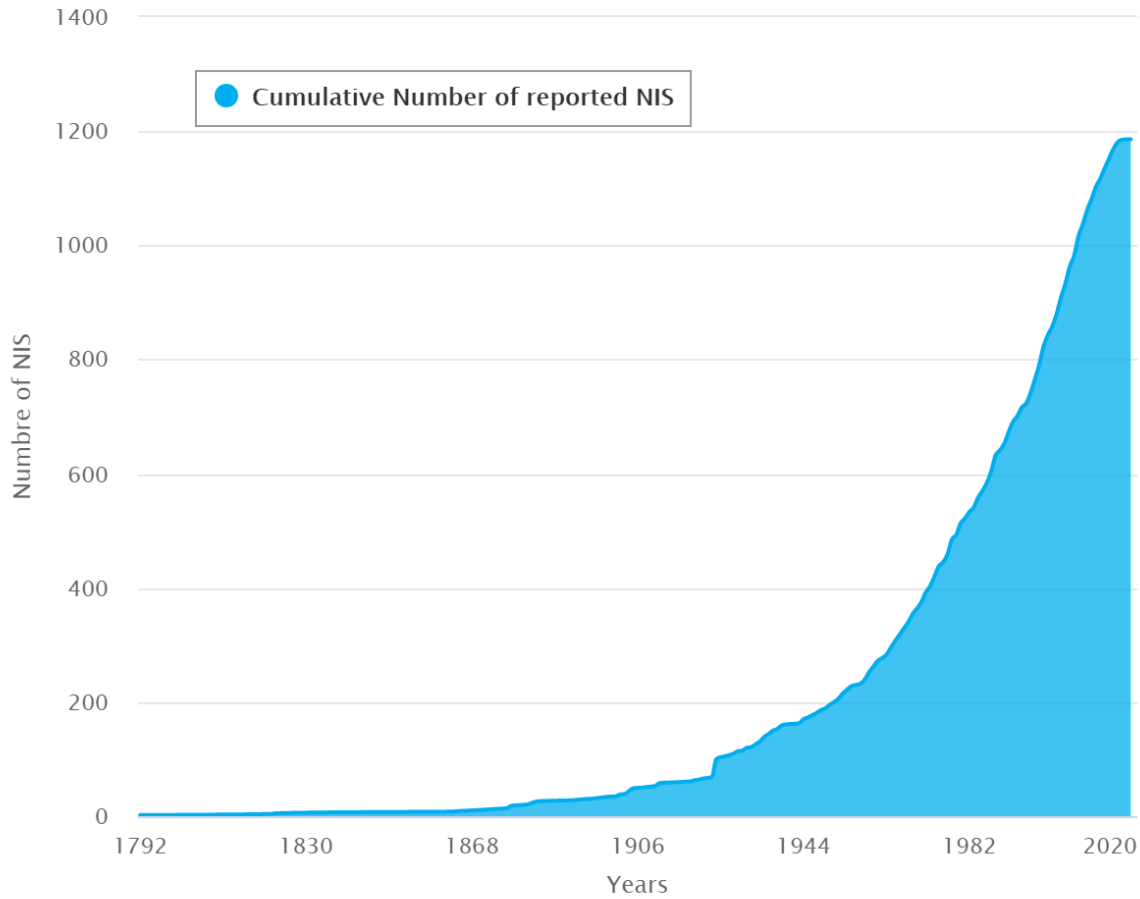


GBIF

Global Biodiversity
Information Facility

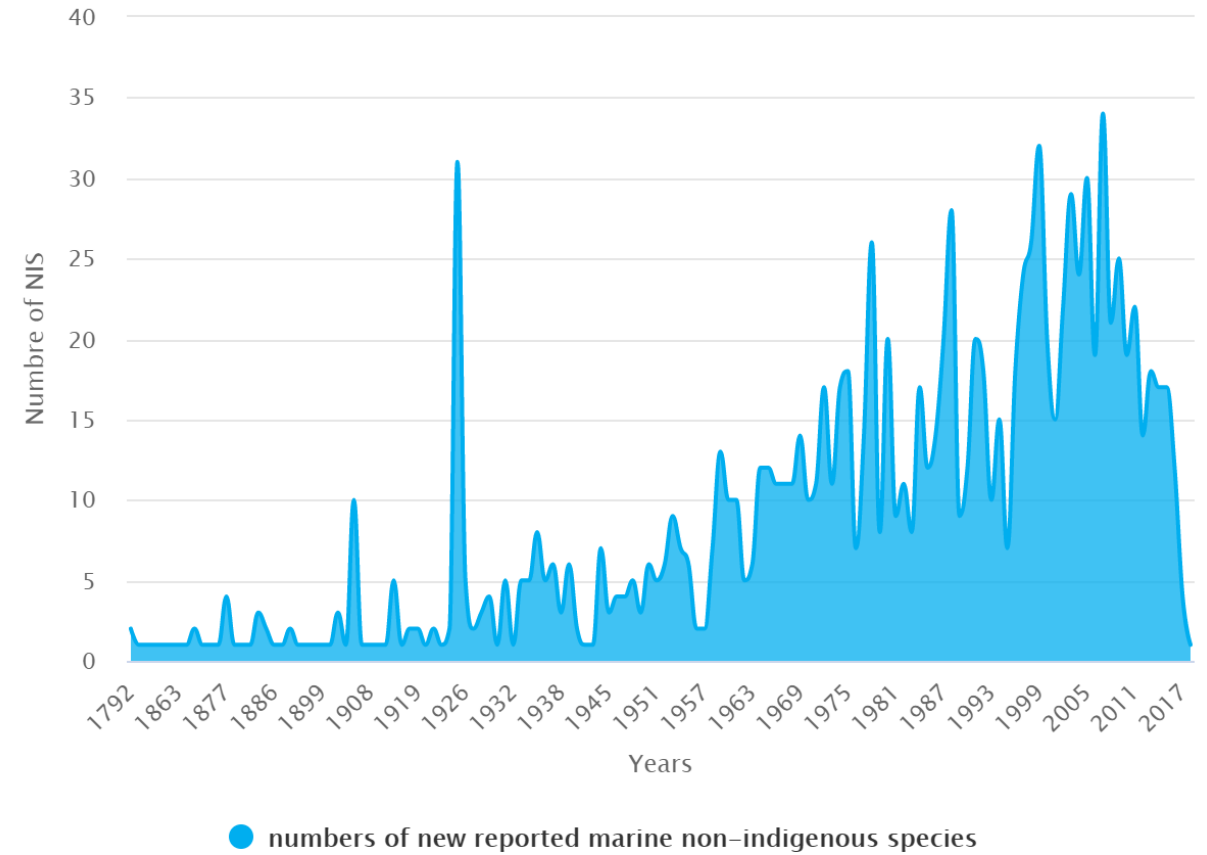
MArine Mediterranean non-indigenous and InvAsive Species Database (MAMIAS)

Numbers of new reported marine non-indigenous species



www.mamias.org

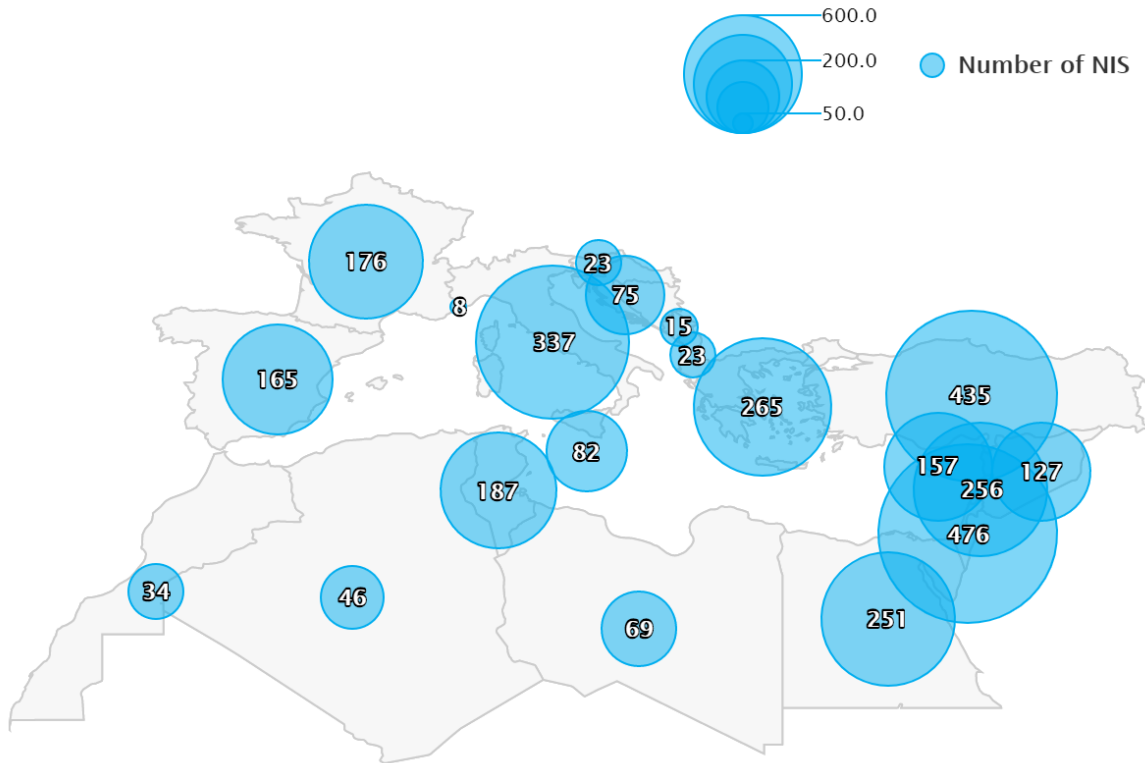
Temporal variability in numbers of new reported marine non-indigenous species



www.mamias.org

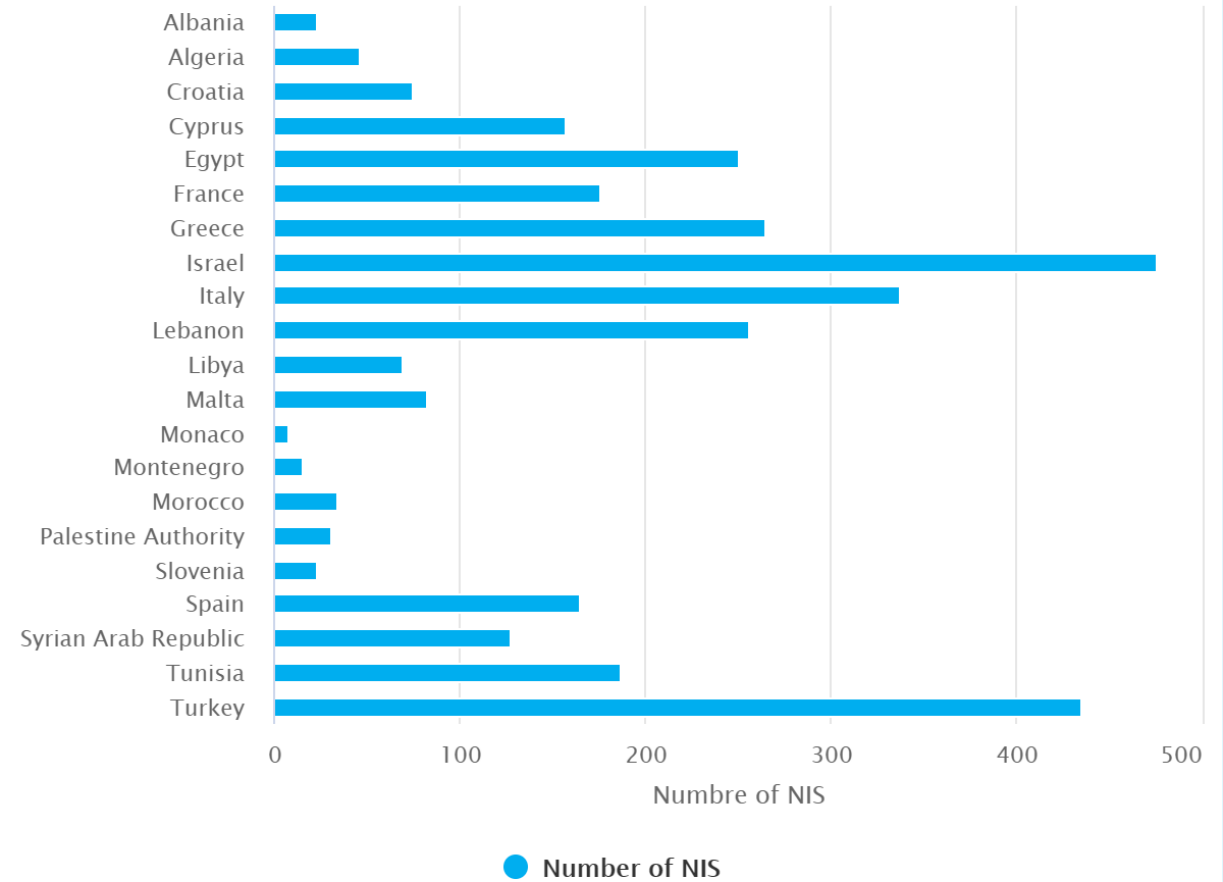
Marine Mediterranean non-indigenous and InvAsive Species Database (MAMIAS)

Number of Reported Marine NIS by Country



www.mamias.org

Number of reported NIS per Country



www.mamias.org

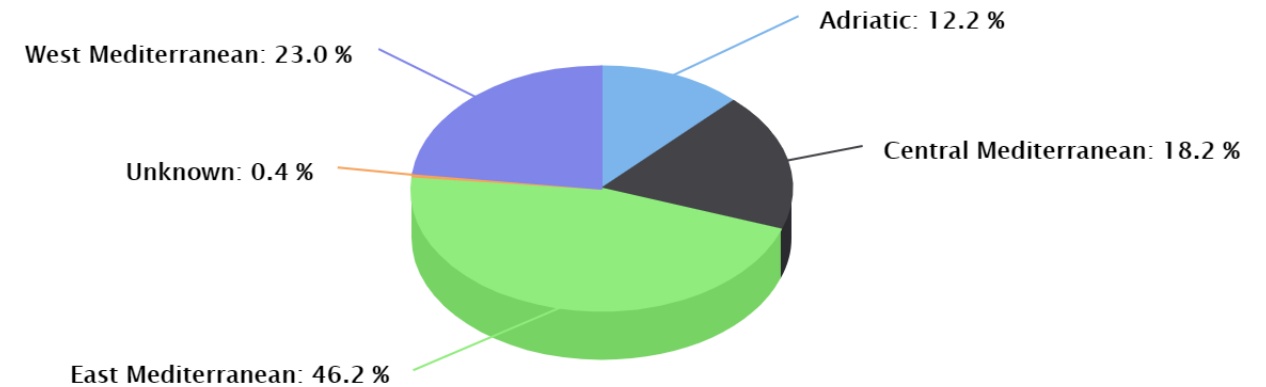
MArine Mediterranean non-indigenous and InvAsive Species Database (MAMIAS)

Ecological sub-regions in the Mediterranean



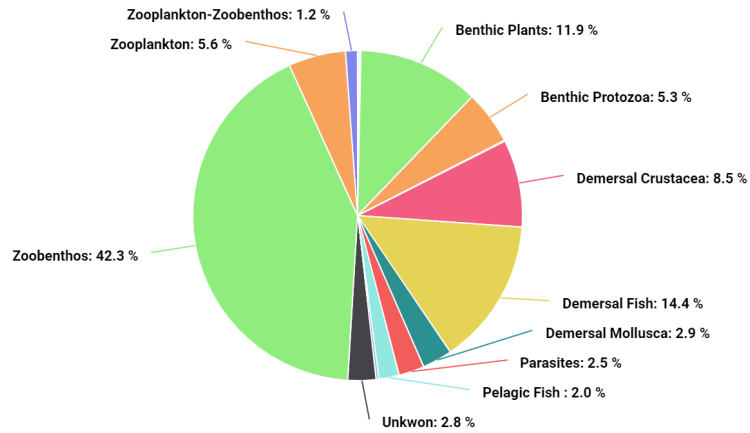
Source: UNEP/MAP, 2011

Number of Reported NIS / EcAp Sub-region



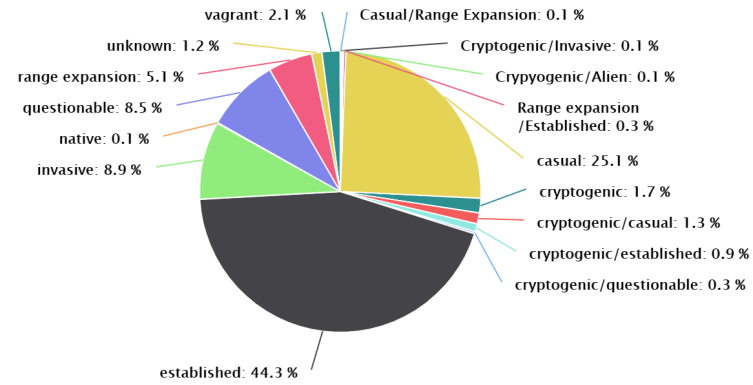
MArine Mediterranean non-indigenous and InvAsive Species Database (MAMIAS)

Ecofunctional Groups of Reported NIS



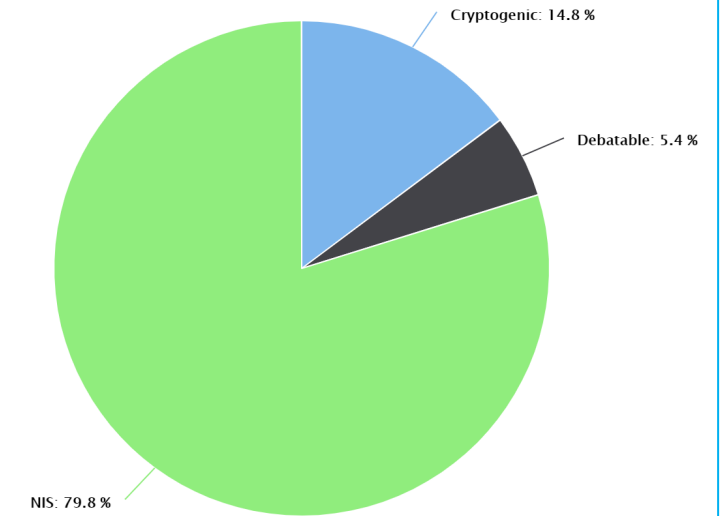
www.mamias.org

Establishment of the Reported NIS



www.mamias.org

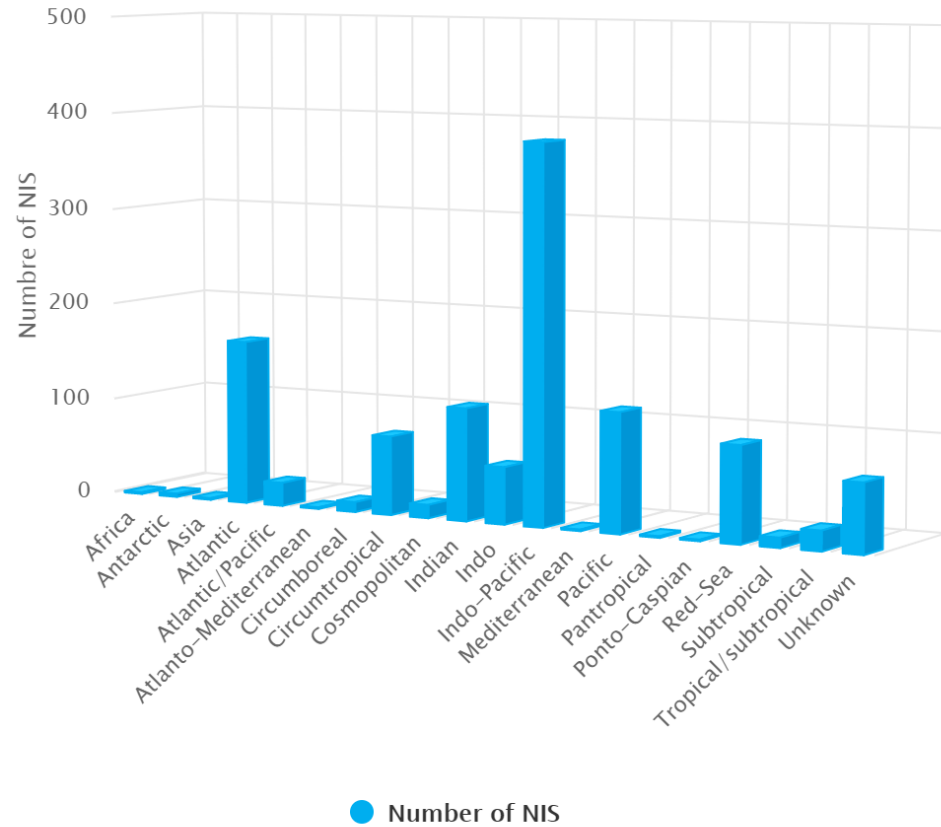
Status of the Reported NIS



www.mamias.org

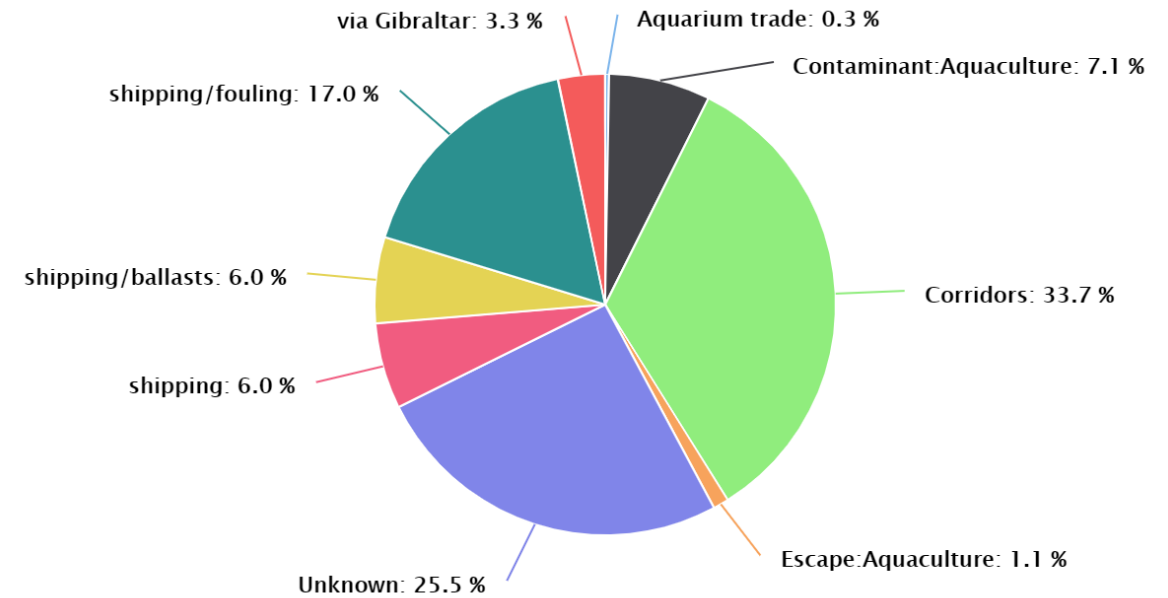
MArine Mediterranean non-indigenous and InvAsive Species Database (MAMIAS)

Origin of the Reported NIS



www.mamias.org

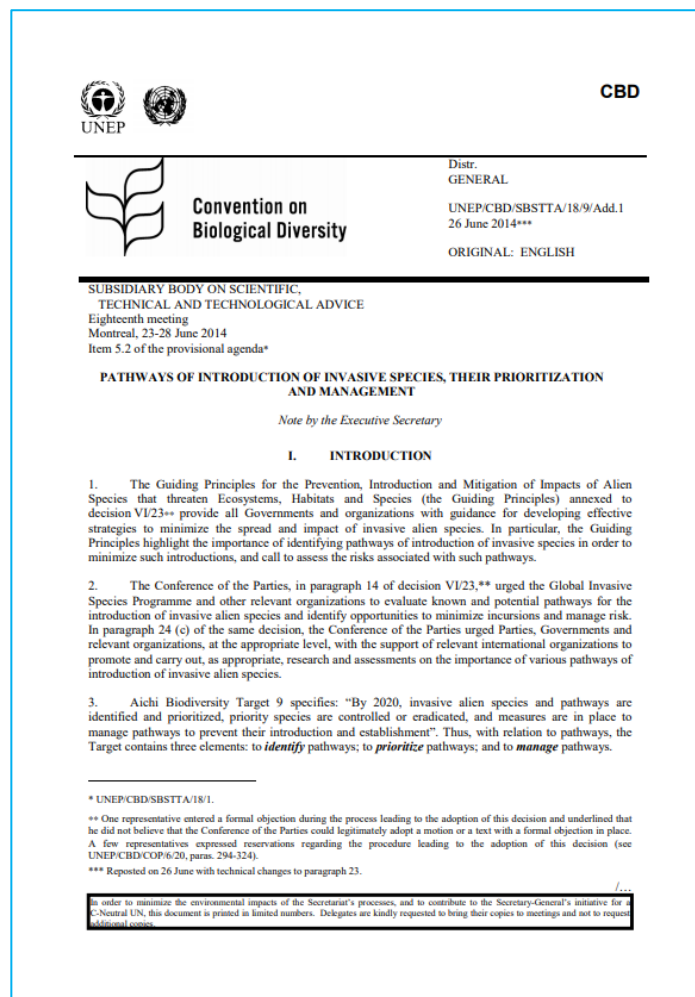
Number of Reported NIS per Pathway/Vector



www.mamias.org

CBD categorization of pathways (CBD 2014)

the CBD categorization of pathways (CBD 2014) should be adopted



Transport stowaway: moving of live organisms by maritime transport via various vectors: ballast water and sediments (T-S/ballast water), bio-fouling of ships, boats, offshore oil and gas platforms and other water vessels (T-S/hull fouling) and dredging, angling or fishing equipment (T-S/other).

Release in nature: intentional introduction of live alien organisms (e.g. for fishing or hunting in the wild).

Escape from confinement: movement of (potentially) invasive alien species from confinement (e.g. aquaculture).

Transport contaminant: unintentional movement of live organisms as (e.g. pests, through international trade).

Corridor: movement of alien organisms via transport infrastructure (e.g. canals).

Key messages(MedQSR 2017)

- Corridors are the most important pathways of new introductions in the Mediterranean, followed by shipping and aquaculture.
- A considerable increase is noticeable in the trends of new non-indigenous species introduced to the Mediterranean Sea.
- Progress has been made in creating national and regional inventories of non-indigenous species and assessing their pathways and impacts.
- Evidence for most of the reported impacts of alien species is weak, mostly based on expert judgement; a need for stronger inference is needed based on experiments or ecological modelling. The assessment of trends in abundance and spatial distribution is largely lacking. NIS identification is of crucial importance, and the lack of taxonomical expertise has already resulted in several NIS having been overlooked for certain time periods. The use of molecular approaches including bar-coding are often useful besides traditional species identification.
- Regular dedicated monitoring and long- time series will be needed so that estimation of such trends is possible in the future. There is a need for better coordination at national and sub-regional level on NIS monitoring.





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Thank you !

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