



# Invasive Alien Species and public-ecosystem health

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***EASIN – European Alien Species Information Network***

*Integrating Public and Ecosystem Health Systems to Foster Resilience:  
Approaches for developing solutions*

*US National Academies, online, 29 September 2022*

# Invasive alien species- what are they?

- Alien Species (AS= non-native, exotic) are living organisms introduced by human activities in places outside their natural range
- Some of these organisms can become invasive
- Invasive Alien Species (IAS) are, alongside with pollution, one of the five main drivers of change with large global negative impact on biodiversity

# The problem

- Increasing number of human disease outbreaks
- High number of emerging infectious zoonotic diseases from wildlife
- Several disease outbreaks can be directly or indirectly related to invasive alien species introductions
- Invasive Alien Species can be the source of new pathogens and vectors of local pathogens
- Invasive alien plants and animals can have multiple impacts across sectors

# IAS can cause severe ecological, health, economic and social damages

Some examples:

- ***Acridotheres tristis*, common myna**
- *Solenopsis richteri*, black imported fire ant
- *Trachemys scripta*, red-eared terrapin
- *Nyctereutes procyonoides*, Raccoon dog

# *Acridotheres tristis*, common myna



- Native to central and southern Asia
- Deliberately introduced in Europe for the **control of insect pests**, and unintentionally by **escape from cages in bird trade**
- **Threat to indigenous biota and a human health risk**

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# Solenopsis richteri, black imported fire ant



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- Native to South America
- Accidentally introduced with **imported goods**, especially potted plants, or as **stowaway** via multiple transportation modes
- Highly invasive, may have **negative ecological impact** especially due to their feeding habits and aggressivity
- Stings can **cause allergic reactions**

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# *Trachemys scripta*, red-eared terrapin



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- Native in Eastern USA and adjacent areas
- Introduced in Europe through **pet and food trade**
- Very **popular as a pet** because of its small size and low price
- Can **outcompete native animals**, including the endangered European pond turtle *Emys orbicularis*
- considered as a potential **vector of Salmonella**, and large individuals can **inflict painful bites to humans**

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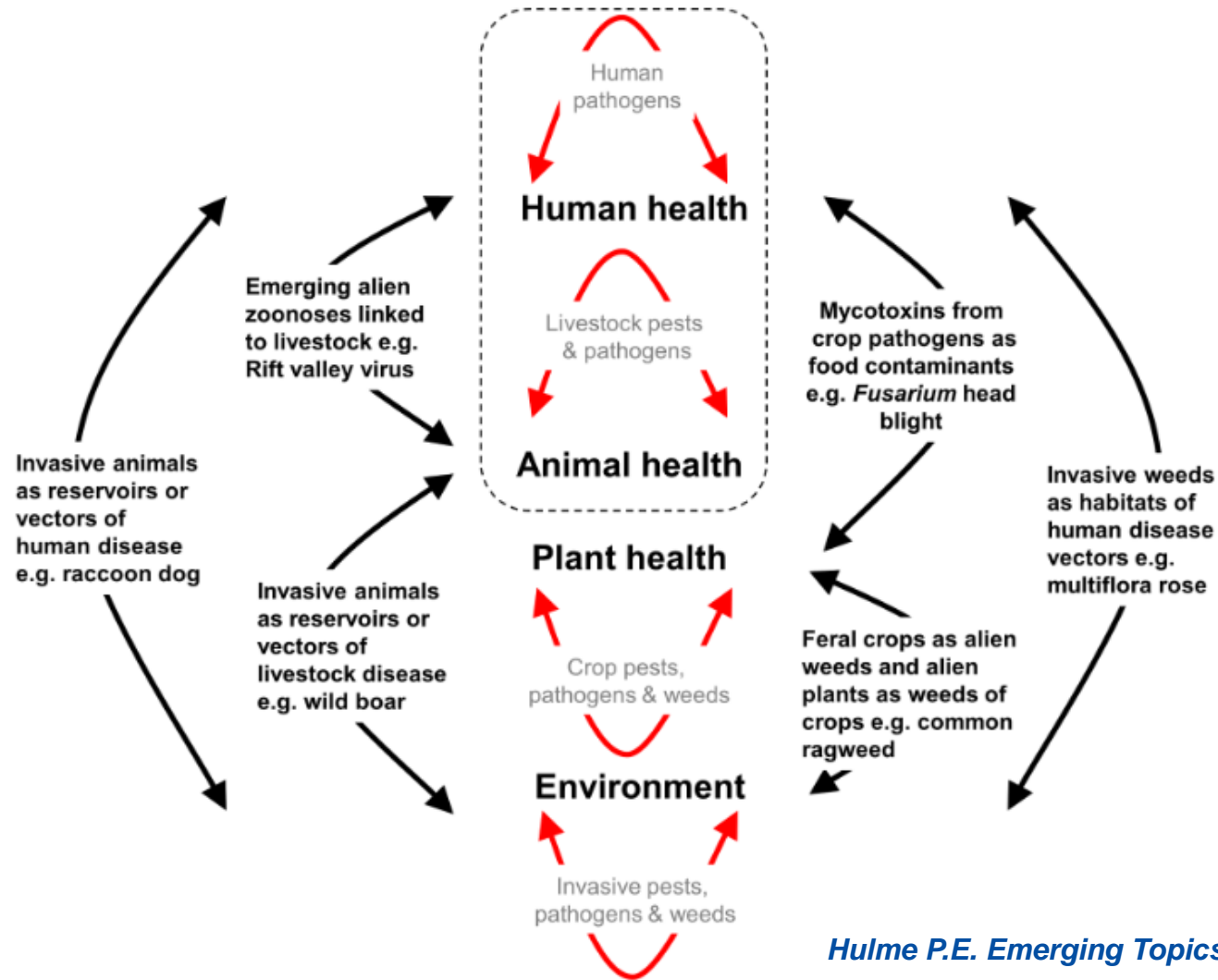
# *Nyctereutes procyonoides*, Raccoon dog



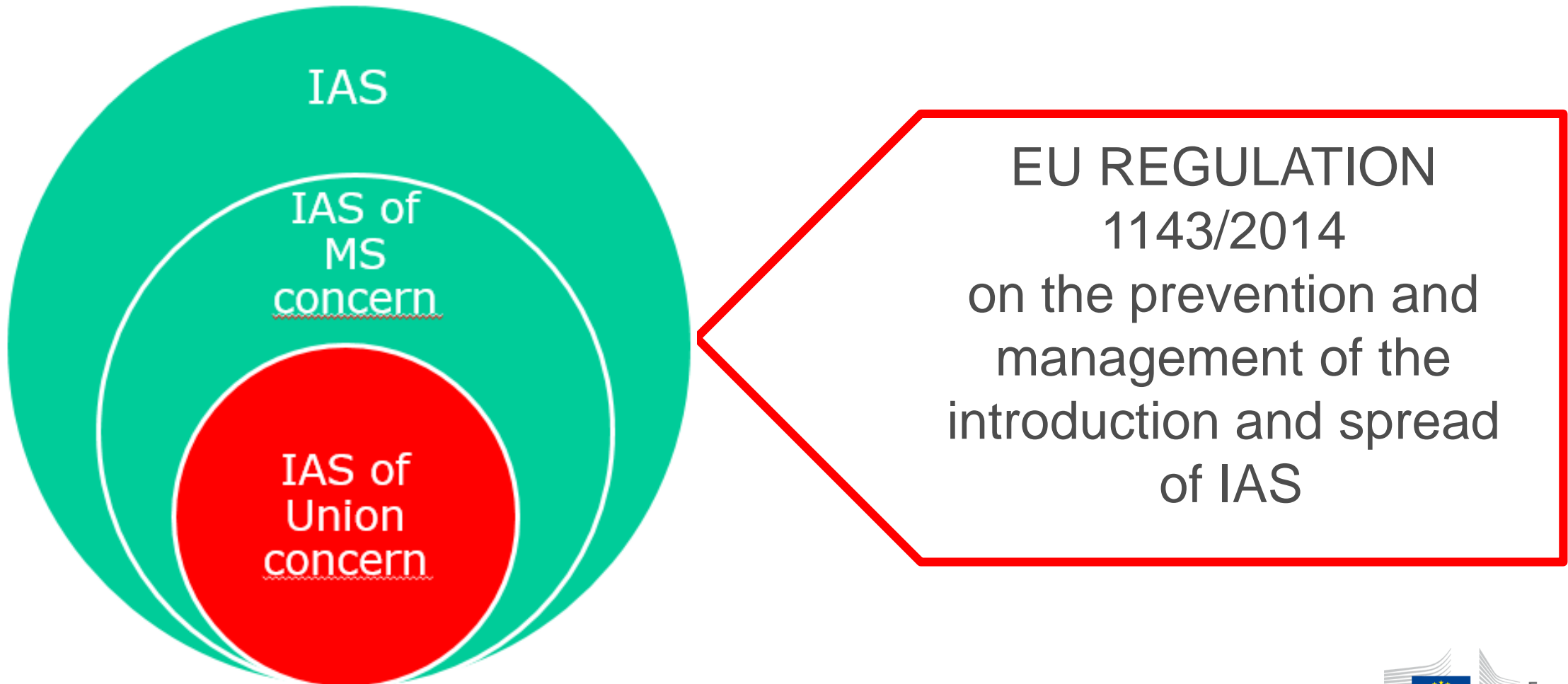
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- Native from south-eastern Siberia
- Introduced for **hunting and fur**
- High capability to spread to new areas, it may also spread to northern areas due to global warming
- **Predation of native birds and frogs**
- Important **vector of rabies and parasites**

# One Biosecurity: progressing invasion science beyond One Health



# European Regulation on IAS





# European Alien Species Information Network (EASIN)

EASIN - European Alien Species Information Network

Home About Services NOTSYS Documentation Citizen Science Contribute Contact us

**European Alien Invasive Species Notification System**  
Facilitates timely notifications of Invasive Alien Species (IAS) of Union Concern as required by the EU Regulation 1143/2014 on IAS

EASIN facilitates information on Alien Species and officially supports the EU Regulation 1143/2014

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2h  
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Registration open!! Join the @EU\_ScienceHub @LifeInvasqua @CREA\_Ricerca & @EU\_Aliens ONLINE SESSION about "Involving young people in nature protection" 🌱🌿 See you on the 12th of October! 📅 Book your place 📍 [bit.ly/3KLSy7N](https://bit.ly/3KLSy7N) #EURegionsWeek #YouthEmpowerment twitter.com/EU\_CoR/status/...

11 days

**Last updates**

**Catalogue of species**  
14,283 alien species  
Database Version 9.9 - 19/7/2022

**Observations of species**  
113,523,521 records  
Geodatabase Version 6.3 - 16/9/2022

**Data Partners**  
32

**Upcoming events**

13 SEP 2022 Tartu, Estonia  
NEOBIOTA 2022

19 SEP 2022 Gdańsk, Poland  
55th European Marine Biology Symposium

21 SEP 2022 London, UK  
International Plant Protection Convention

**Explore EASIN data**

Species Search and Mapping  
API and Web services  
EASIN-Lit

**Learn about Alien Species**

EU Regulation 1143/2014  
Species of Union concern  
Questions & Answers

**Join our Network**

Invasive Alien Species app  
Become a Data Partner  
Citizen Science projects

**Join us!**  
5 SEP 2022  
Registration to the #EURRegionsWeek 2022 open  
Europe Biodiversity

**New EASIN publication**  
8 AUG 2022  
Bacteria and viruses in Europe  
Europe AlienSpecies

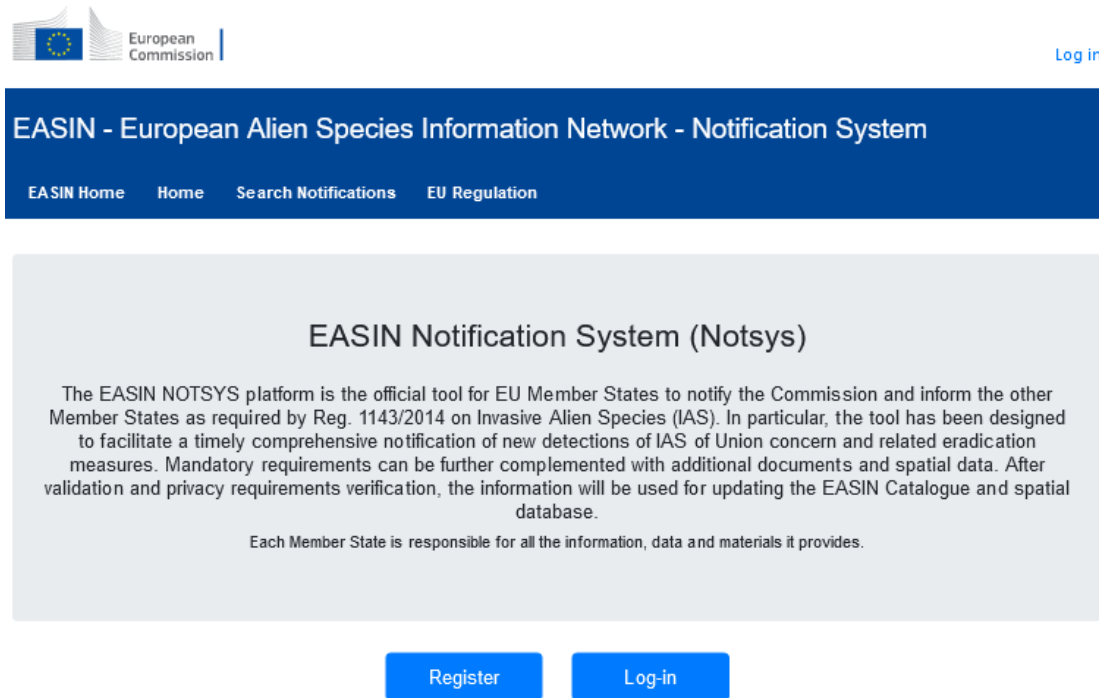
**Stay tuned on EASIN!**  
4 AUG 2022  
IAS of Union concern included in services and tools  
EASIN EURegulation

- Facilitates access to updated scientific information and spatial data on more than 14,000 alien species occurring in Europe
- Web services to support policy makers, researchers, managers, stakeholders
- Official information and notification system supporting EU Member States in the implementation of the EU Regulation on Invasive Alien Species (EU Reg.1143/2014), WFD & MSFD

# Harvesting existing knowledge: EASIN interconnects European and global databases

					
REABIC Partner Since 14 September 2012	GISIN Partner Since 14 September 2012	GBIF Partner Since 14 September 2012	ELNAIS Partner Since 15 November 2012	EASIN-Lit Partner Since 11 March 2013	CIESM Partner Since 11 March 2013
					
EEA Partner Since 17 June 2013	HCMR Partner Since 17 June 2013	IUCN MedMis Partner Since 26 September 2014	EPPPO Partner Since 16 February 2016	NBIC Partner Since 21 October 2016	MAMIAS Partner Since 21 October 2016
					
CABI Partner Since 10 July 2017	STOPVESPA Partner Since 28 July 2017	EEIKO Partner Since 28 July 2017	T0 Belgium Partner Since 29 March 2018	NBN UK Partner Since 29 March 2018	INVASORAS Partner Since 4 April 2018
					
MITECO Partner Since 23 July 2018	BASELINE Partner Since 28 August 2018	NOTSYS Partner Since 12 November 2018	IASIE Partner Since 12 November 2018	IZASM Partner Since 14 May 2019	NBDC Partner Since 14 May 2019
					
OUC Partner Since 14 May 2019	ESENIAS Partner Since 14 May 2019	ISEA Partner Since 14 May 2019	IINH Partner Since 14 May 2019	INVAZIVKE Partner Since 17 July 2019	

# Cooperation with EC and Member State competent authorities



Official tool implementing the IAS Regulation with regards of:

- Art.16(2): detection and early notification of species, application of eradication measures and their effectiveness;
- Art. 15: Official controls detection;
- Art. 18 and 19: decision on Derogation from applying eradication measures.



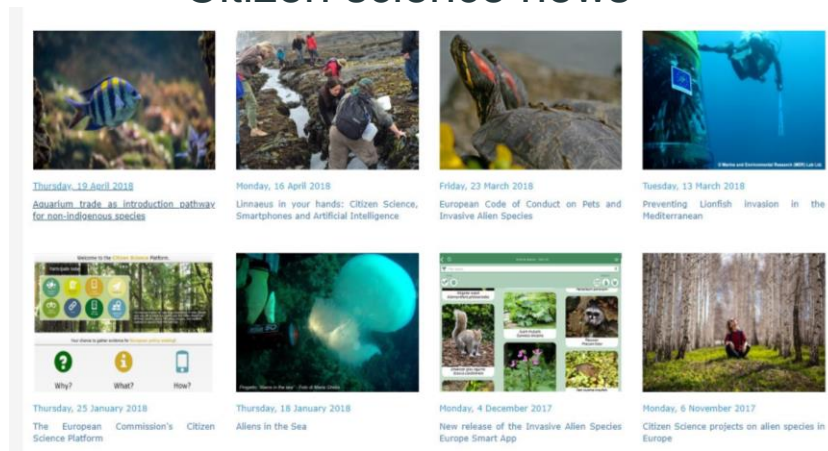
# EASIN aims to increase people's awareness, literacy and engagement on biodiversity and IAS

**Website**  
Citizen science projects  
Repository



**Citizens**

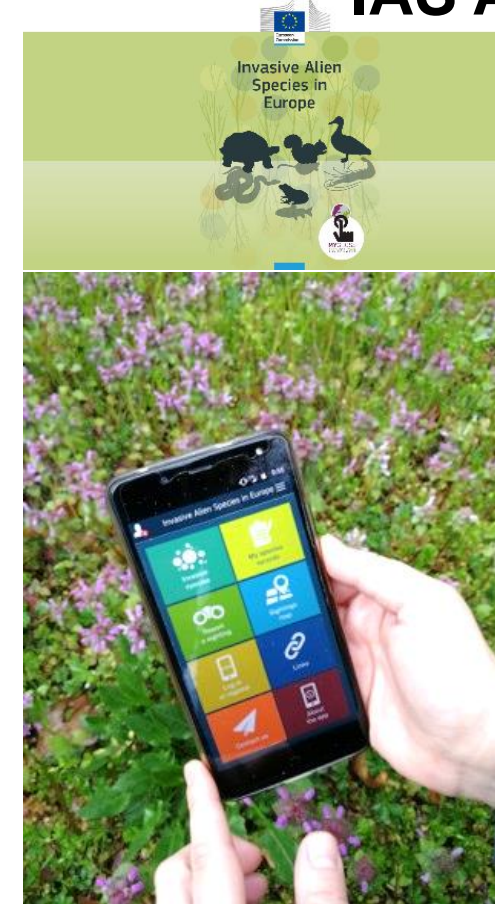
**Website**  
Citizen science news



**Social media**  
Facebook, Twitter



**IAS App**



# EASIN solutions contributing to One biosecurity (ongoing)

- Strengthening communication and exchange of data, experience, guidelines, codes of conduct
- Support coherence and coordination among policy sectors by associating species to the relevant policy sectors with evidence on their impact
- Building on research outcomes improve the EASIN species catalogue information on pathways of introduction and transmission (vector, reservoir) of pathogenic IAS
- Step up the work on awareness raising and engagement of citizen in monitoring harmful organisms

# Thank you very much for listening!



<https://easin.jrc.ec.europa.eu/>



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