

SPECIE ALIENE INVASIVE: ANDAMENTI, IMPATTI E RISPOSTE

Modulo 1 – Le invasioni biologiche

UNITA' FORMATIVA 3 Vettori e modalità di ingresso

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finanziato da



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beneficiario coordinatore



partner



cofinanziatori



Indice

- ✓ Noi spostiamo piante, animali, funghi
- ✓ Come
- ✓ Perché è importante conoscerli
- ✓ Come identificarli
- ✓ Definizione classificazione standard
- ✓ Identificare i vettori prioritari
- ✓ Piano d'azione sui vettori

Noi spostiamo piante, animali, funghi...



Come

Volontariamente

Commercio animali d'affezione

Acquacoltura



Orticoltura

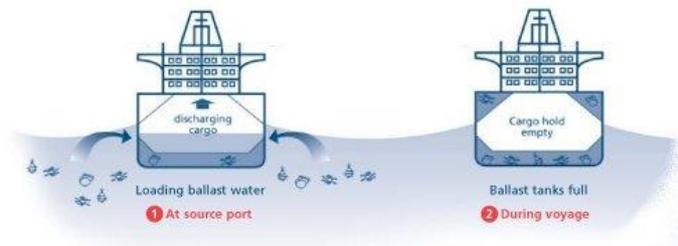


Turismo

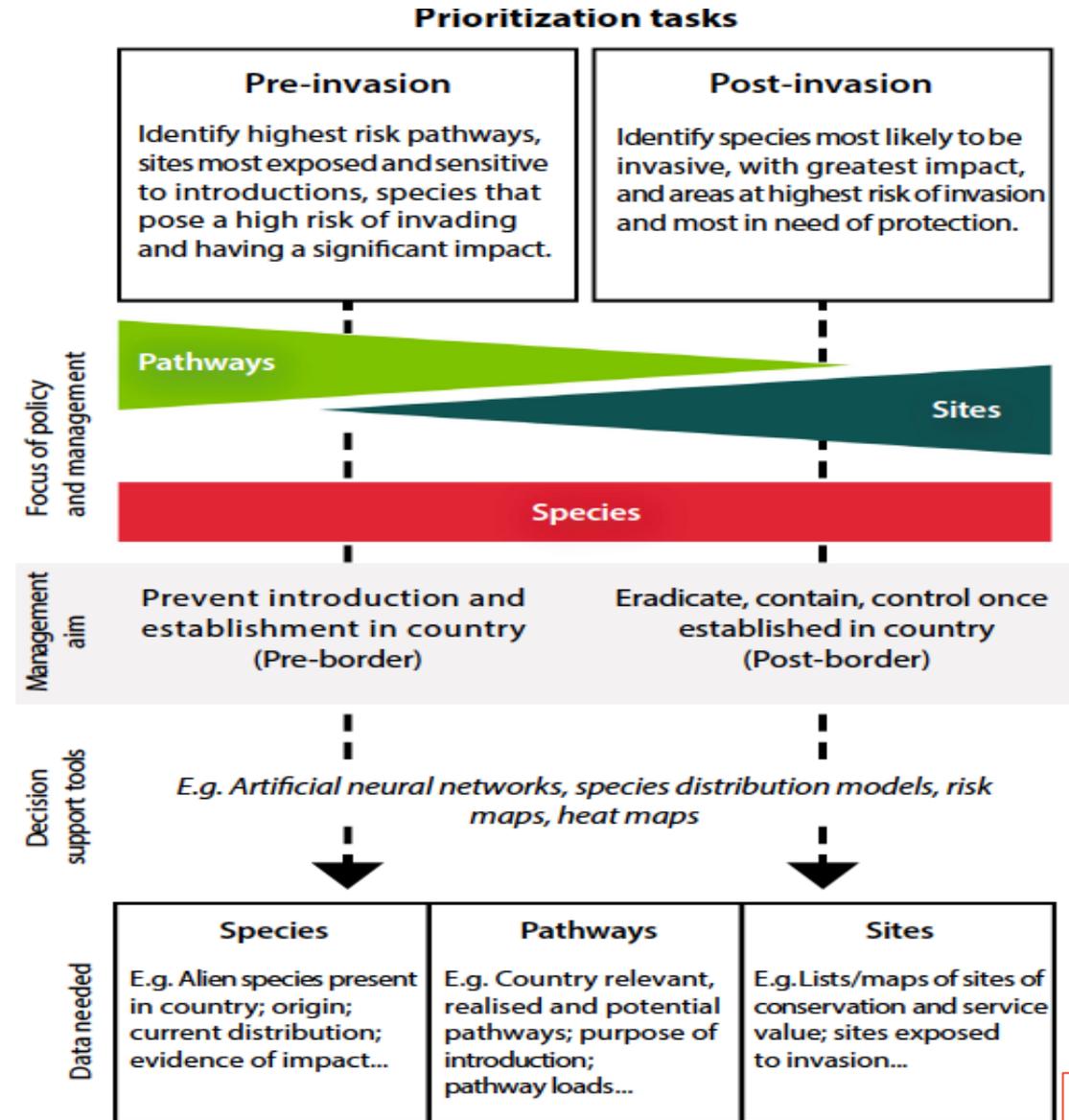


Involontariamente

Trasporto accidentale



Perché è importante conoscere i vettori



McGeoch, M.A., Genovesi, P., et al. (2016) Prioritizing species, pathways, and sites to achieve conservation targets for biological invasion. *Biological Invasions*, 299–314. Springer International Publishing.

Come identificare i vettori

Essenziale parlare la stessa lingua



Definizione classificazione standard dei vettori (1)

- ✓ Input di esperti mondiali, e testate sui dati del [Global Invasive Species Database GISD](#)
- ✓ Adottato formalmente con decisione XII/17 della Convention on Biological Diversity (CBD), che chiede ai Paesi di utilizzare questo schema

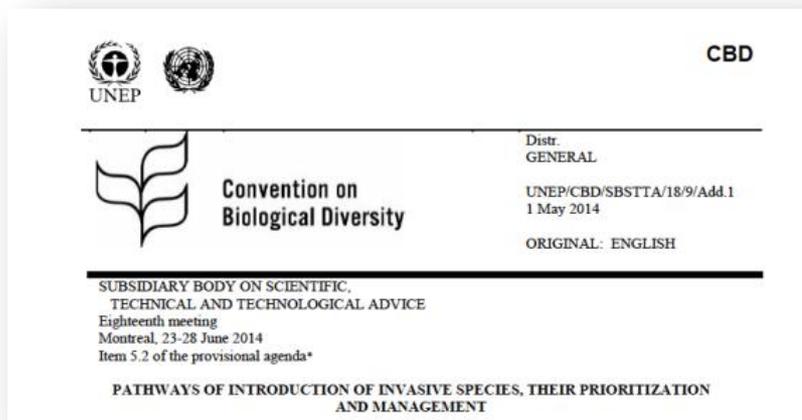


Table 1: Categorization of pathways for the introduction of alien species

	Category	Subcategory	COP decision
MOVEMENT OF COMMODITY	RELEASE IN NATURE (1)	Biological control Erosion control/dune stabilization (windbreaks, hedges, ...) Fishery in the wild (including game fishing) Hunting in the wild Landscape/flora/fauna "improvement" in the wild Introduction for conservation purposes Release in nature for use (other than above, e.g., fur, transport, medical use) Other intentional release	VIII/27 VIII/27, X/98 X/98
	ESCAPE FROM CONFINEMENT (2)	Agriculture (including Biofuel feedstocks) Aquaculture / mariculture Botanical garden/zoo/aquaria (excluding domestic aquaria) Pet/aquarium/terrarium species (including live food for such species) Farmed animals (including animals left under limited control) Forestry (including reforestation) Fur farms Horticulture Ornamental purpose other than horticulture Research and ex-situ breeding (in facilities) Live food and live bait Other escape from confinement	X/98 VIII/27, IX/4 XI/28 VIII/27, X/98, XI/28 VIII/27 VIII/27
	TRANSPORT - CONTAMINANT (3)	Contaminant nursery material Contaminated bait Food contaminant (including of live food) Contaminant on animals (except parasites, species transported by host/vector) Parasites on animals (including species transported by host and vector) Contaminant on plants (except parasites, species transported by host/vector) Parasites on plants (including species transported by host and vector) Seed contaminant Timber trade Transportation of habitat material (soil, vegetation, ...)	VIII/27, XI/28 XI/28 XI/28 XI/28 XI/28 VIII/27
VECTOR	TRANSPORT - STOWAWAY (4)	Angling/fishing equipment Container/bulk Hitchhikers in or on airplane Hitchhikers on ship/boat (excluding ballast water and hull fouling) Machinery/equipment People and their luggage/equipment (in particular tourism) Organic packing material, in particular wood packaging Ship/boat ballast water Ship/boat hull fouling Vehicles (car, train, ...) Other means of transport	VIII/27 VIII/27 VIII/27, IX/4 VIII/27 VIII/27 VIII/27 VIII/27, IX/4
	CORRIDOR (5)	Interconnected waterways/basins/leas Tunnels and land bridges	VIII/27
SPREAD	UNAIDED (6)	Natural dispersal across borders of invasive alien species that have been introduced through pathways 1 to 5	

Definizione classificazione standard dei vettori (2)

Gradiente di volontarietà

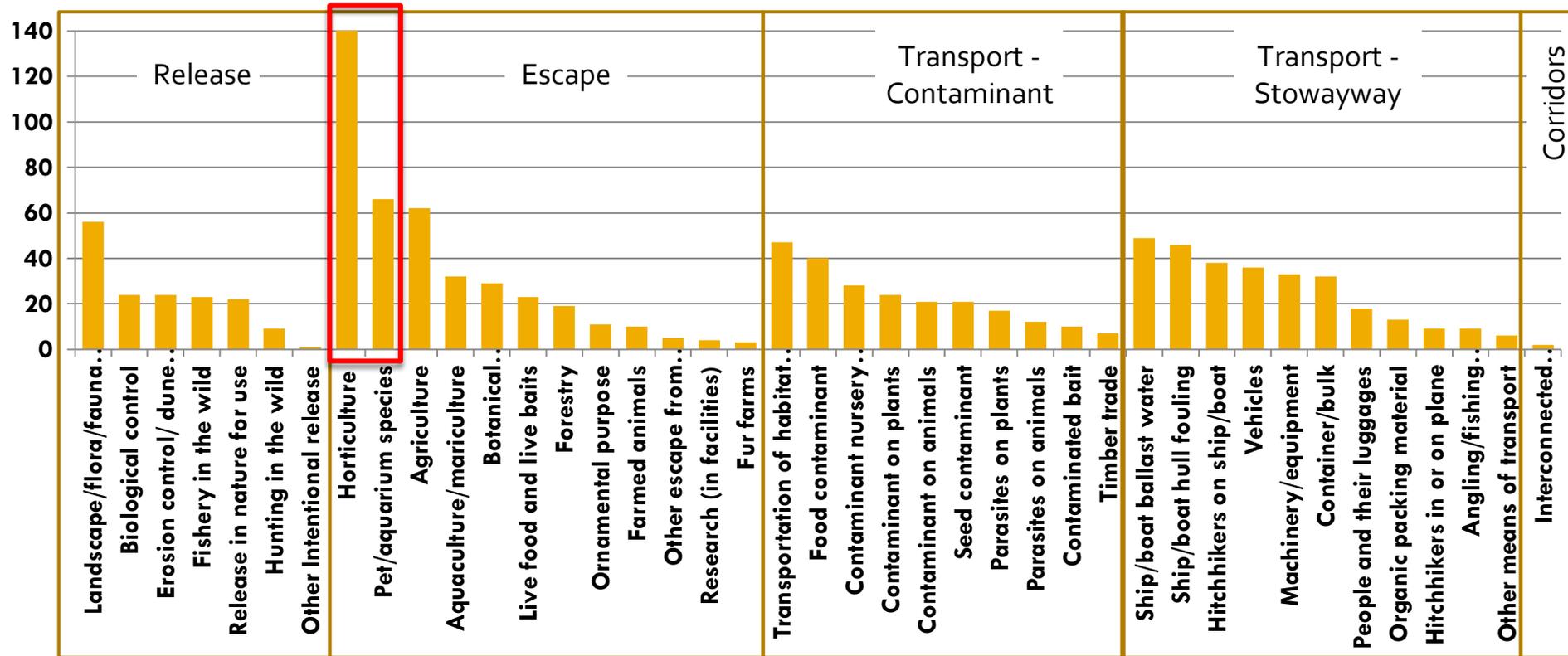
Categoria	Sottocategorie
Rilascio in natura	Caccia, erosione suolo, società di acclimatazione
Fuga da ambiente confinato	Acquacoltura, Allevamenti per pellicce, vivai
Trasporto come contaminante	Invertebrati su trasporto di legnami, piante, cibo....
Trasporto come "autostoppista"	Acque di zavorra,
Spostamento su corridoio artificiale	Canale di Suez
Dispersione naturale secondaria	

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	Category	Subcategory
MOVEMENT OF COMMODITY	RELEASE IN NATURE (1)	Biological control Erosion control/dune stabilization (windbreaks, hedges, ...) Fishery in the wild (including game fishing) Hunting in the wild Landscape/flora/fauna "improvement" in the wild Introduction for conservation purposes Release in nature for use (other than above, e.g., fur, transport, medical use) Other intentional release
	ESCAPE FROM CONFINEMENT (2)	Agriculture (including Biofuel feedstocks) Aquaculture / mariculture Botanical garden/zoo/aquaria (excluding domestic aquaria) Pet/aquarium/terrarium species (including live food for such species) Farmed animals (including animals left under limited control) Forestry (including reforestation) Fur farms Horticulture Ornamental purpose other than horticulture Research and ex-situ breeding (in facilities) Live food and live bait Other escape from confinement
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SPREAD	CORRIDOR (5)	Interconnected waterway/basins/sea Tunnels and land bridges
	UNAIDED (6)	Natural dispersal across borders of invasive alien species that have been introduced through pathways 1 to 5

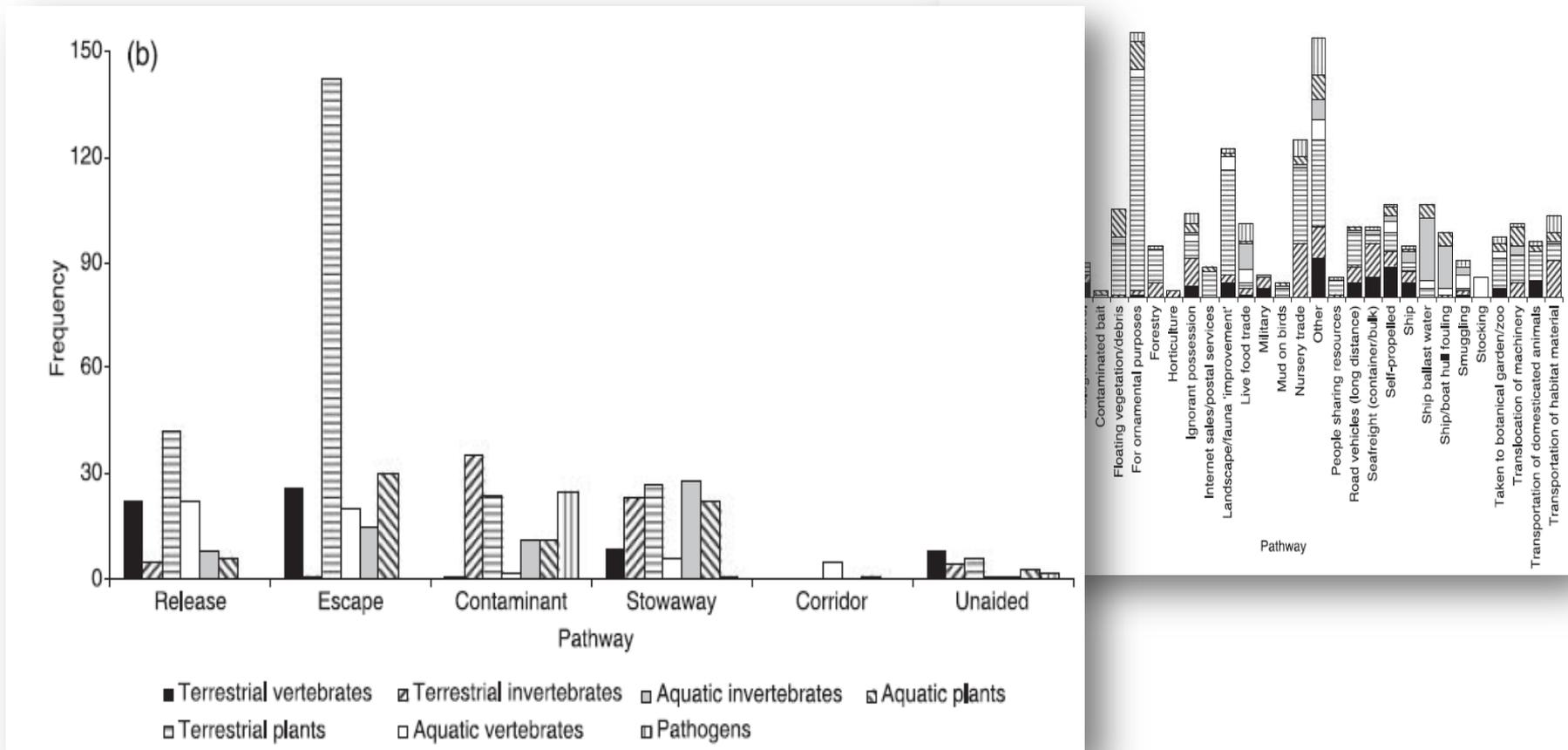
Definizione classificazione standard dei vettori (3)

Permette di identificare i vettori prioritari



Identificare i vettori prioritari dei vettori (1)

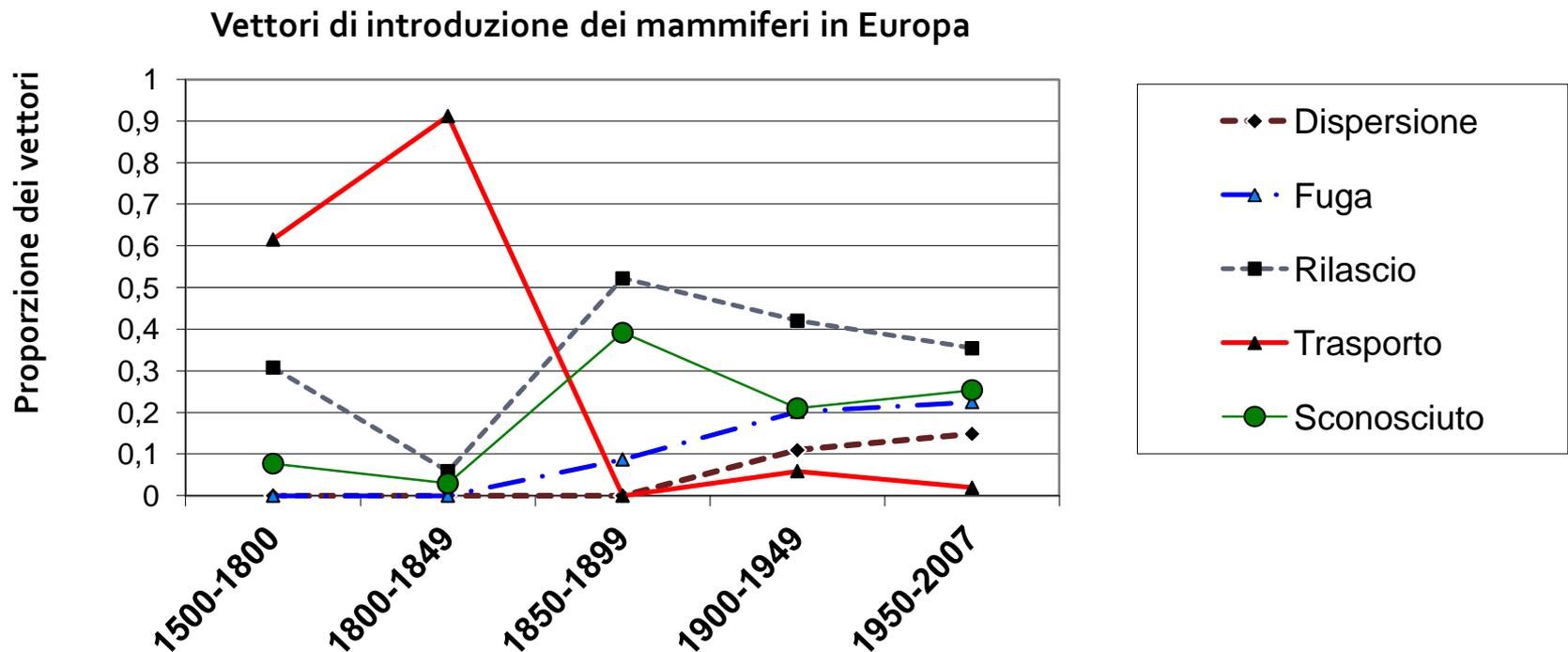
Conoscenze molto aumentate negli ultimi anni



Hulme, P. E., Bacher, S.,... & Pyšek, P. (2008). Grasping at the routes of biological invasions: a framework for integrating pathways into policy. *Journal of Applied Ecology*, 45(2), 403-414.

Identificare i vettori prioritari (2)

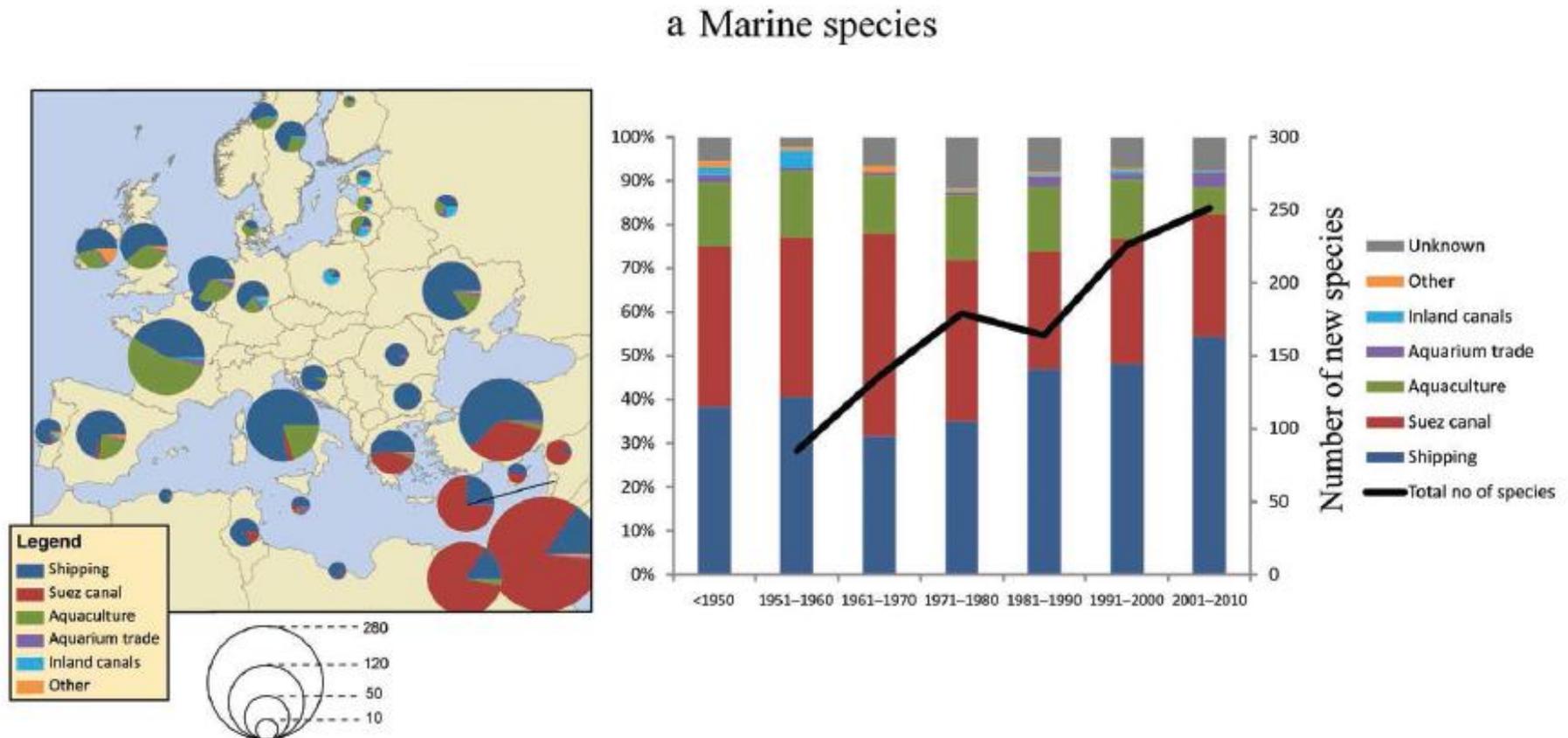
I vettori variano nel tempo.



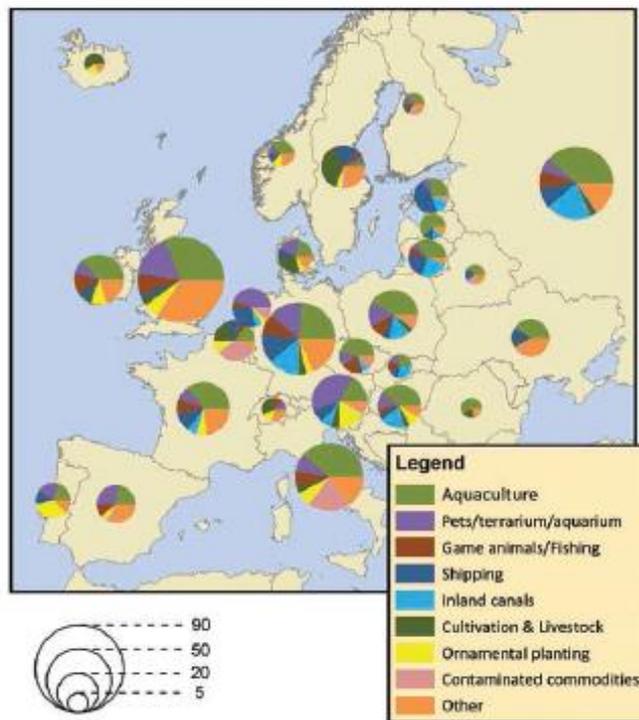
Genovesi et al. (2009). Alien mammals in Europe. *DAISIE*.

Identificare i vettori prioritari (3)

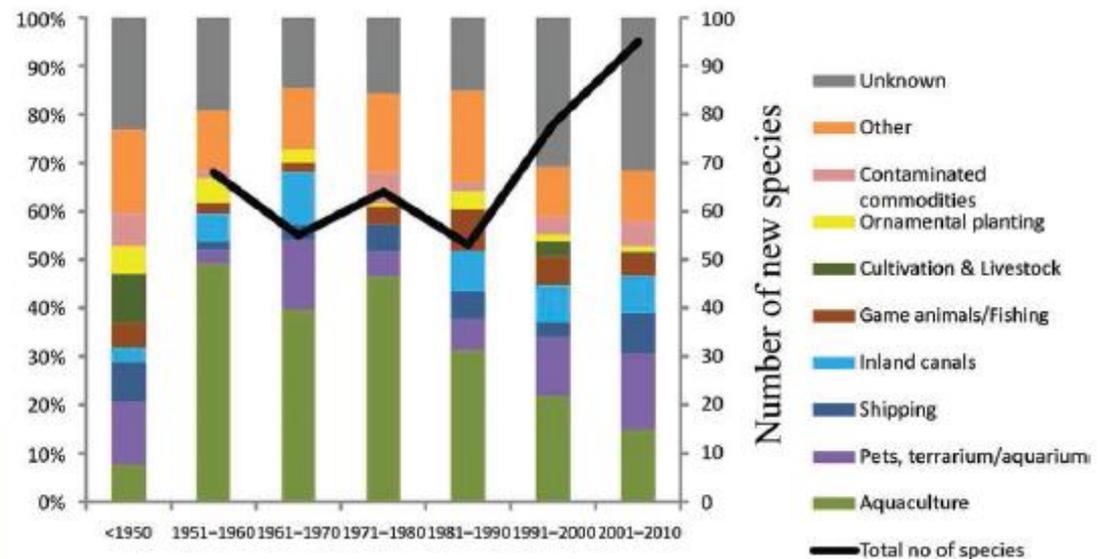
I vettori variano nel **tempo** e nello **spazio** e a seconda del **gruppo tassonomico**.



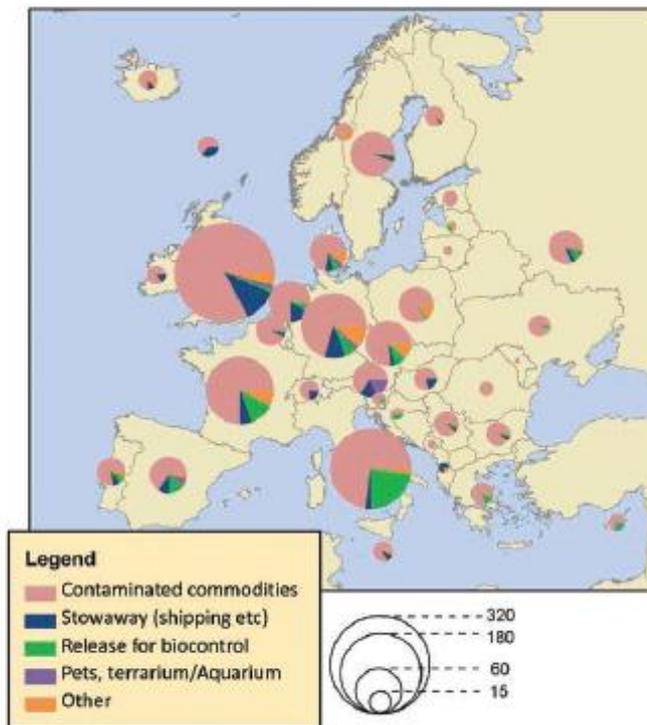
Identificare i vettori prioritari (4)



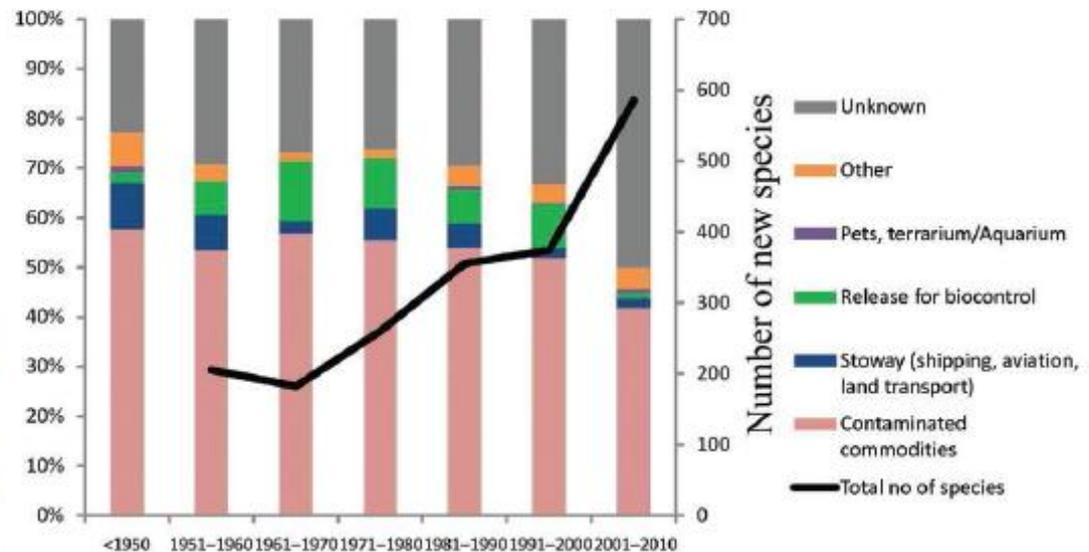
b Freshwater species



Identificare i vettori prioritari (5)

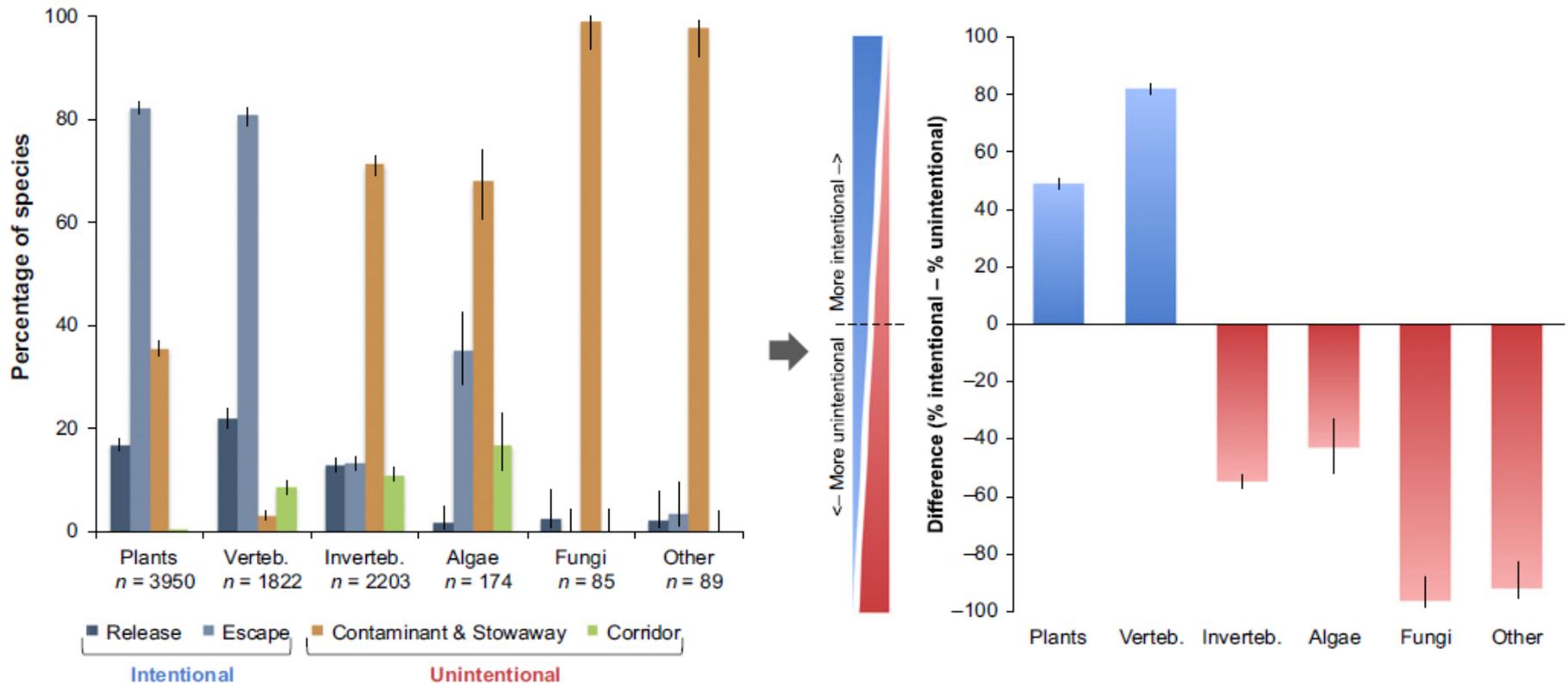


c Terrestrial arthropods



Identificare i vettori prioritari (6)

(a) Combined data set



Identificare i vettori prioritari (7)

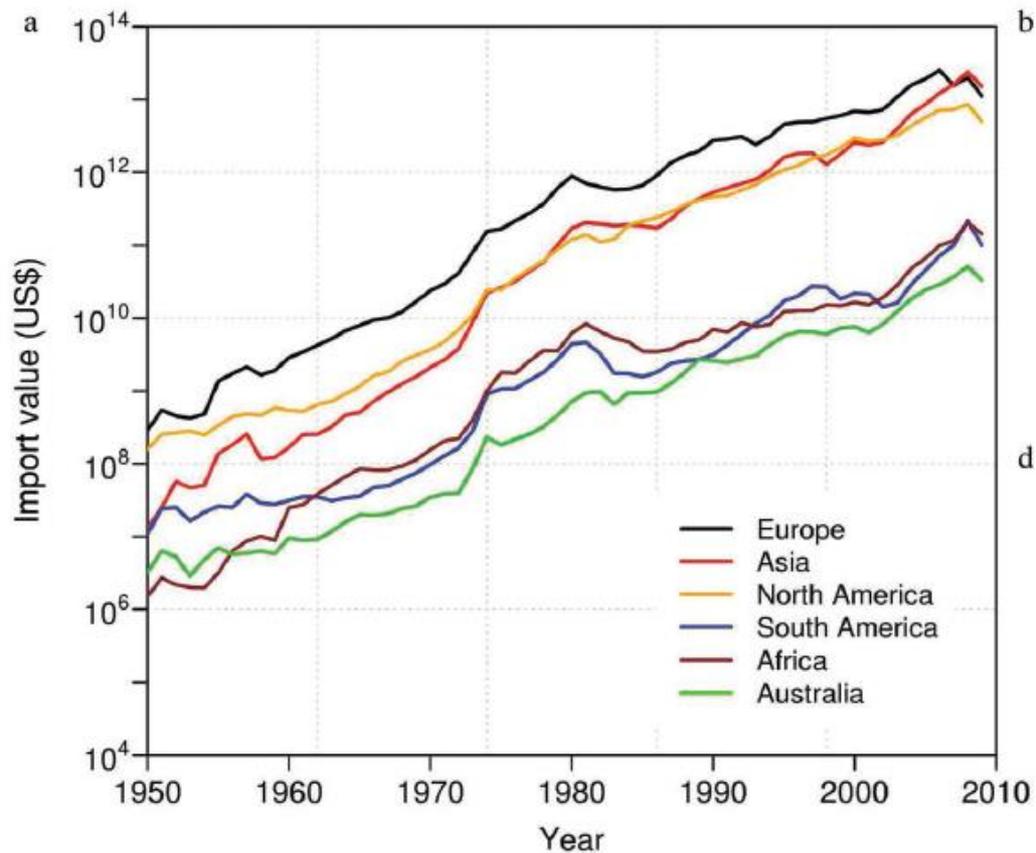
Ruolo del commercio internazionale 1/3

- ✓ 82.1% delle specie invasive introdotte con commercio (direttamente o indirettamente)
- ✓ 20.2% introdotte intenzionalmente, spesso per essere rilasciate in natura
- ✓ alcune delle più gravi invasioni pervenute con regolamentazioni del commercio o con regolamentazioni delle strutture di contenimento



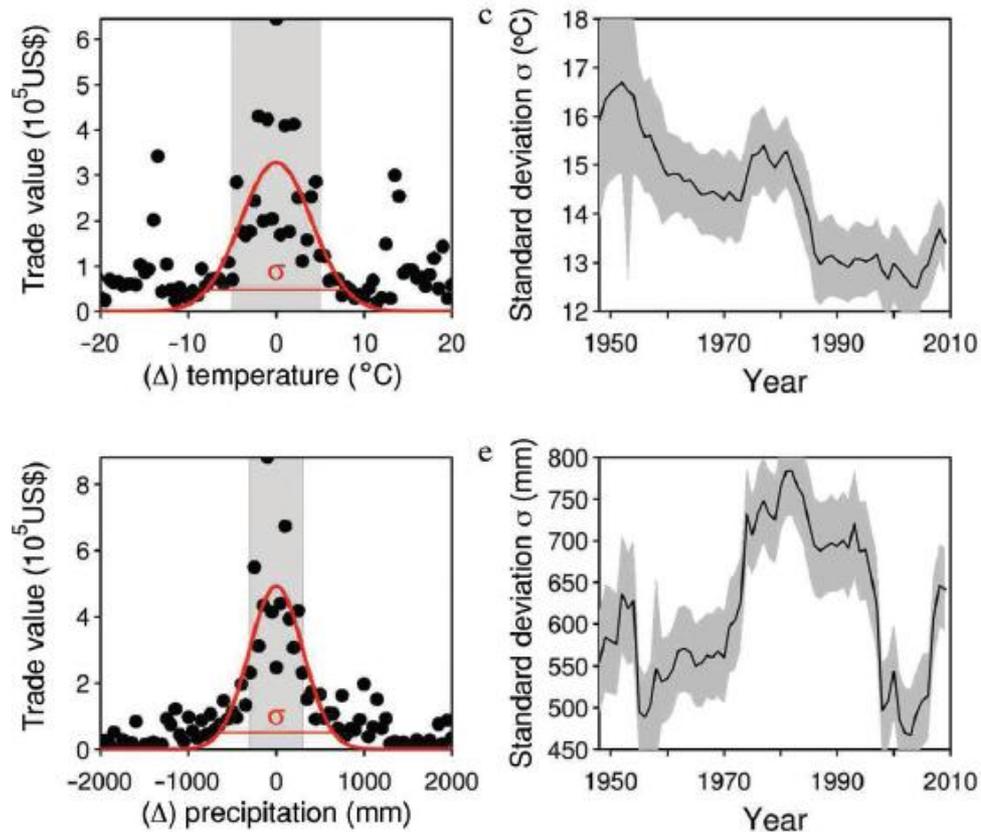
Identificare i vettori prioritari (8)

Ruolo del commercio internazionale 2/3



Identificare i vettori prioritari (9)

Ruolo del commercio internazionale 3/3



Piano di azione sui vettori (1)

Art .13 del Regolamento UE 1143/2014 e Art. 7 del d.lgs. 230/2017

Gli Stati membri hanno l'obbligo di identificare i più rilevanti vettori di **introduzione accidentale** di specie aliene invasive di rilevanza Unionale (art. 13 Reg.1143/14; art. 7 d.l.230/2017).

Entro 3 anni dall'adozione della lista, il MATTM adotta, con 1 o più decreti, 1 o più piani d'azione elaborati dall'ISPRA, per trattare i vettori identificati.



Piano di azione sui vettori (2)

Dovrà contenere:

- Descrizione del vettore target
- Contesto legale nazionale
- Obiettivi e strategie
- Identificazione dei gruppi di interesse chiave
- Misure previste
- Tempistica
- Pianificazione finanziaria

