7.b Identify and consider relevant, specific, and concrete tools, voluntary codes of practice, methodologies, guidance, best-practice examples and instruments, including possible regulatory mechanisms, for addressing the risks associated with the introduction of alien species as pets, aquarium and terrarium species, and as live bait and live food, including for:

i. Controlling, monitoring, and prohibiting, where appropriate, export, import and transit, at local, national, and regional levels, taking into account national legislations, where applicable;

ii. **Controlling internet trade, associated transport, and other relevant pathways;**

PATHWAYS OF INTRODUCTION

Aquaculture

Biological control

Fishery

Horticulture
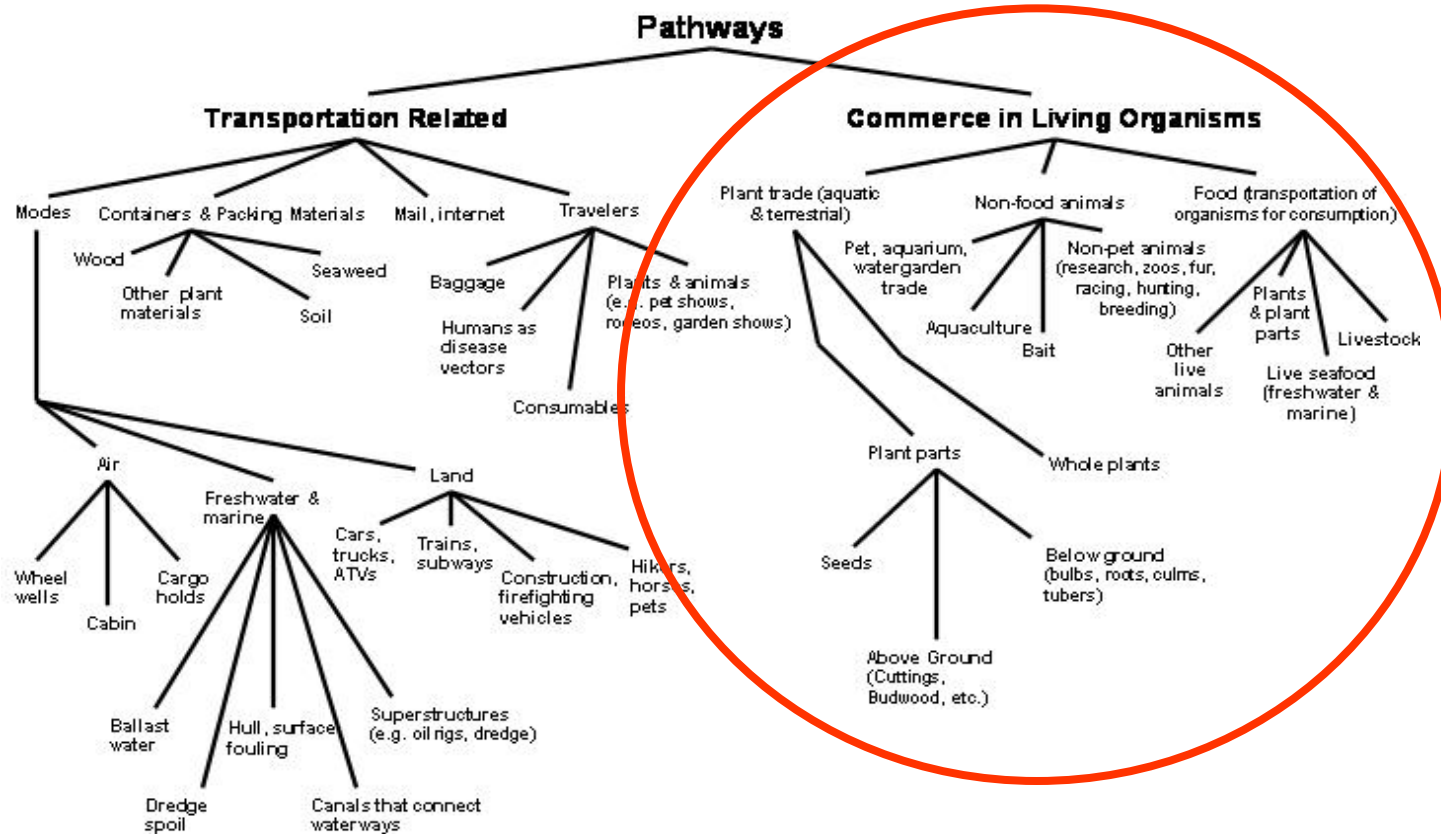
Ballast waters

Hunting

Forestry

Tourism

Pet trade

Nursery

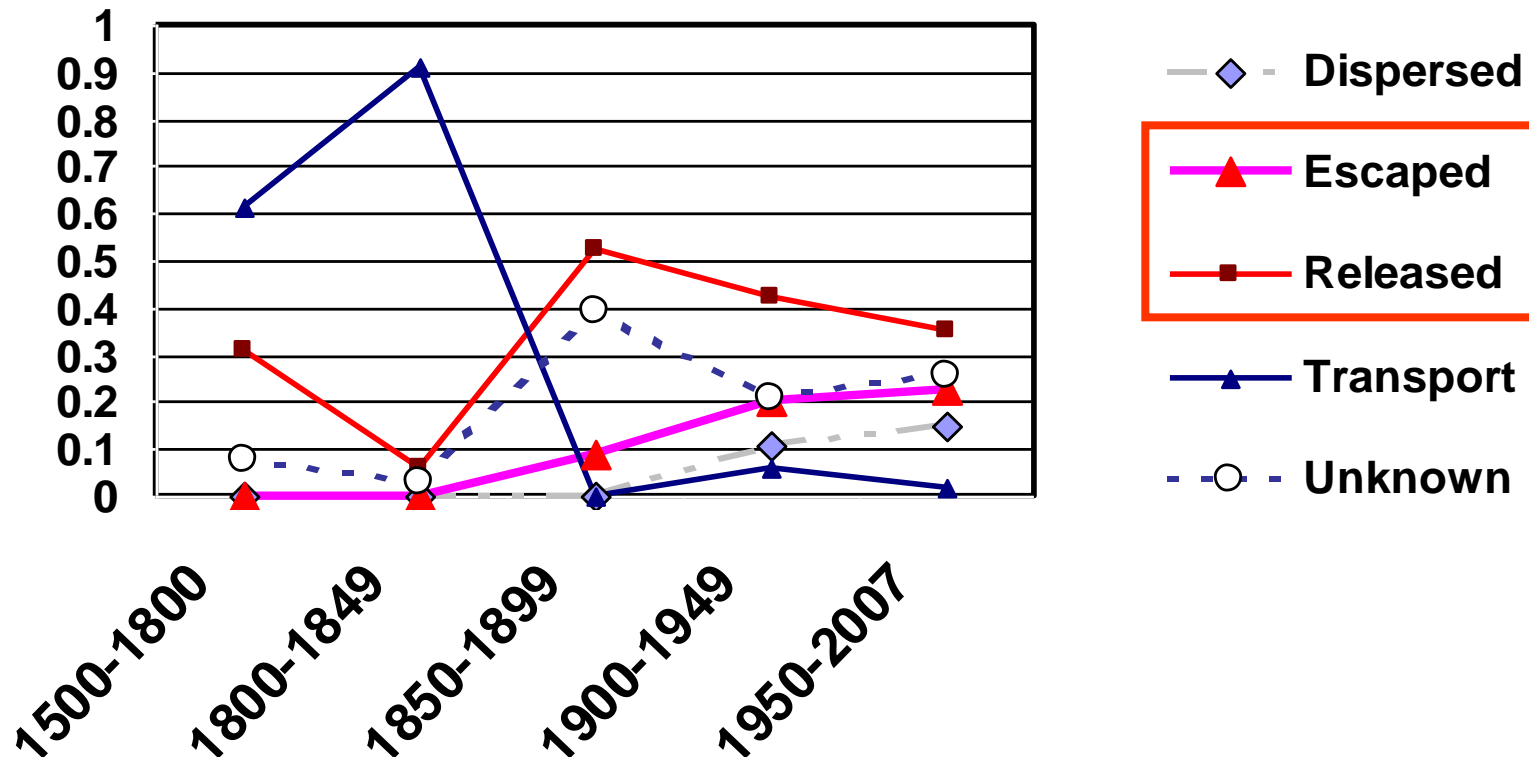Pathways of introduction of alien species (from Lodge et al 2006)

According to data from the Global Invasive Species Database (IUCN ISSG), **66% of the 20,667 are intentional introductions**, 34% unintentional (from Genovesi & Scalera 2007)

MAMMALS IN EUROPE

Intentional introductions = 35%

Escape/release of pets = 10%

Legend:
- Dispersed
- Escaped
- Released
- Transport
- Unknown

X-axis: 1500-1800, 1800-1849, 1850-1899, 1900-1949, 1950-2007

MULTIPLE STAKEHOLDERS

EXPORTER OR PRODUCER COUNTRIES

- Collectors or catchers of wild species;
- Professional and amateur breeders of pets, aquarium …
- Producers, National authorities… ….

INTERMEDIATE PATHWAYS

- trading industries;
- Internet market managers;
- Private market owners;
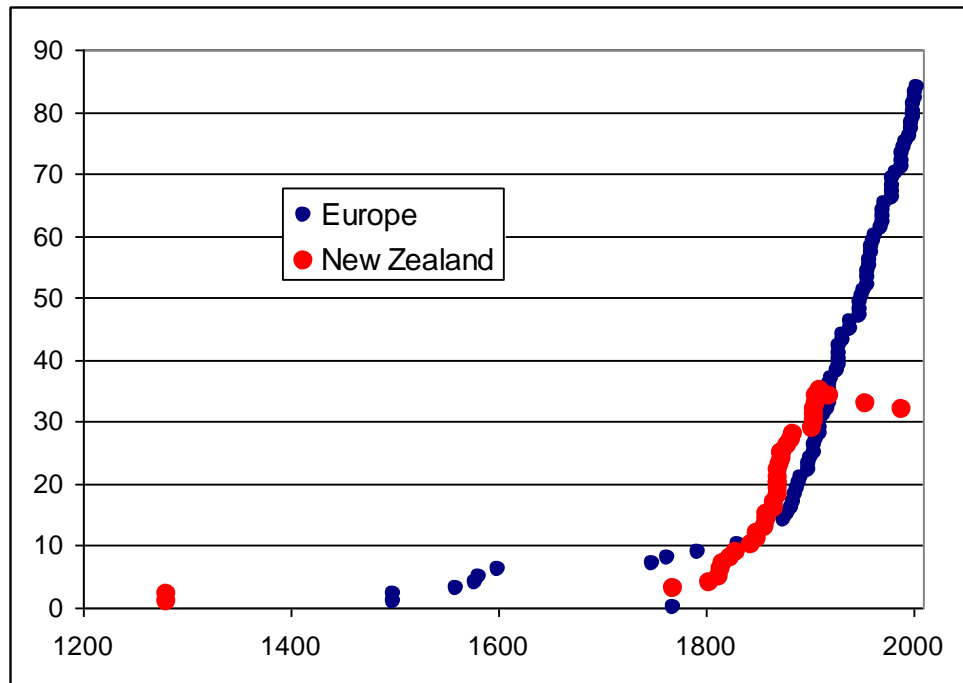- International transporters (i.e. postal service, shipping companies…)

BORDER CONTROLS

IMPORTER COUNTRIES

- Transporters
- Retailers
- End users, such as pet owners;
- …..

PREVENTION

Effective biosecurity approach reduces establishment of alien species

Alien mammals

Genovesi & Clout, unpublished

INTERNET TRADE

INVASION NOTE

Online trade poses a threat to biosecurity in New Zealand

José G. B. Derraik · Simon Phillips