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INVASIVE ALIEN SPECIES (IAS) AND THE RELATED EU REGULATION 1143/2014



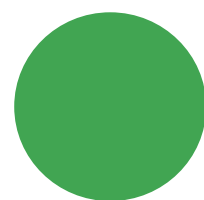
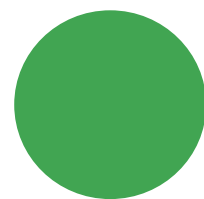
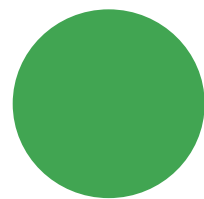
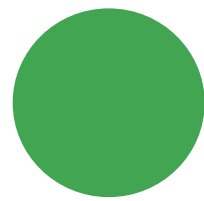
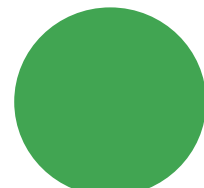
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08/04/2026

Implementing partners:



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GENERAL PROVISIONS OF THE EU REGULATION

<https://eur-lex.europa.eu/eli/reg/2014/1143/oj>

Article 1

This Regulation sets out **rules to prevent, minimize and mitigate the adverse impact on biodiversity** of the introduction and spread within the Union, both intentional and unintentional, of invasive alien species

Applying to all invasive species

- The Regulation does not apply to:
 - (a) – (g), e.g. genetically modified organisms

Article 2

In Ukraine: 'Procedure for classifying species of flora and fauna as invasive alien species'

DEFINITIONS

Article 3

- (1) 'alien species' means any live specimen of a species, subspecies or lower taxon of animals, plants, fungi or micro-organisms **introduced outside its natural range**; it includes any part, gametes, seeds, eggs or propagules of such species, as well as any hybrids, varieties or breeds that might survive and subsequently reproduce;
- (2) 'invasive alien species' means an alien species whose **introduction or spread has been found to threaten or adversely impact upon biodiversity and related ecosystem services**;
- (3) 'invasive alien species **of Union concern**' means an invasive alien species whose adverse impact has been deemed such as to **require concerted action at Union level** pursuant to Article 4(3);
- (4) 'invasive alien species **of Member State concern**' means an invasive alien species other than an invasive alien species of Union concern, for which a Member State considers on the basis of scientific evidence that the adverse impact of its release and spread, even where not fully ascertained, is of significance for its territory, or part of it, and **requires action at the level of that Member State**.

DEFINITIONS

According to the
Ukrainian Law

Article 53

Alien species is a taxon of the rank of a species or intraspecific unit (subspecies) or a hybrid of plant (including fungi) or fauna or other species of living organisms (microorganisms) originating from other biogeographical territorial units in relation to a certain territory

Invasive alien species is an alien species that has naturalized outside the natural (primary) range due to direct or indirect human participation, actively multiplies and independently, spontaneously spreads through the territory forming a secondary area, causes a negative impact on local (autochthonous, aboriginal) species and/or biodiversity, ecosystem services, economy, human health

Partly also covered in 'Order classification of species of flora and fauna'

Also definitions in other laws, e.g. 'Plant World', 'Animal World', etc.

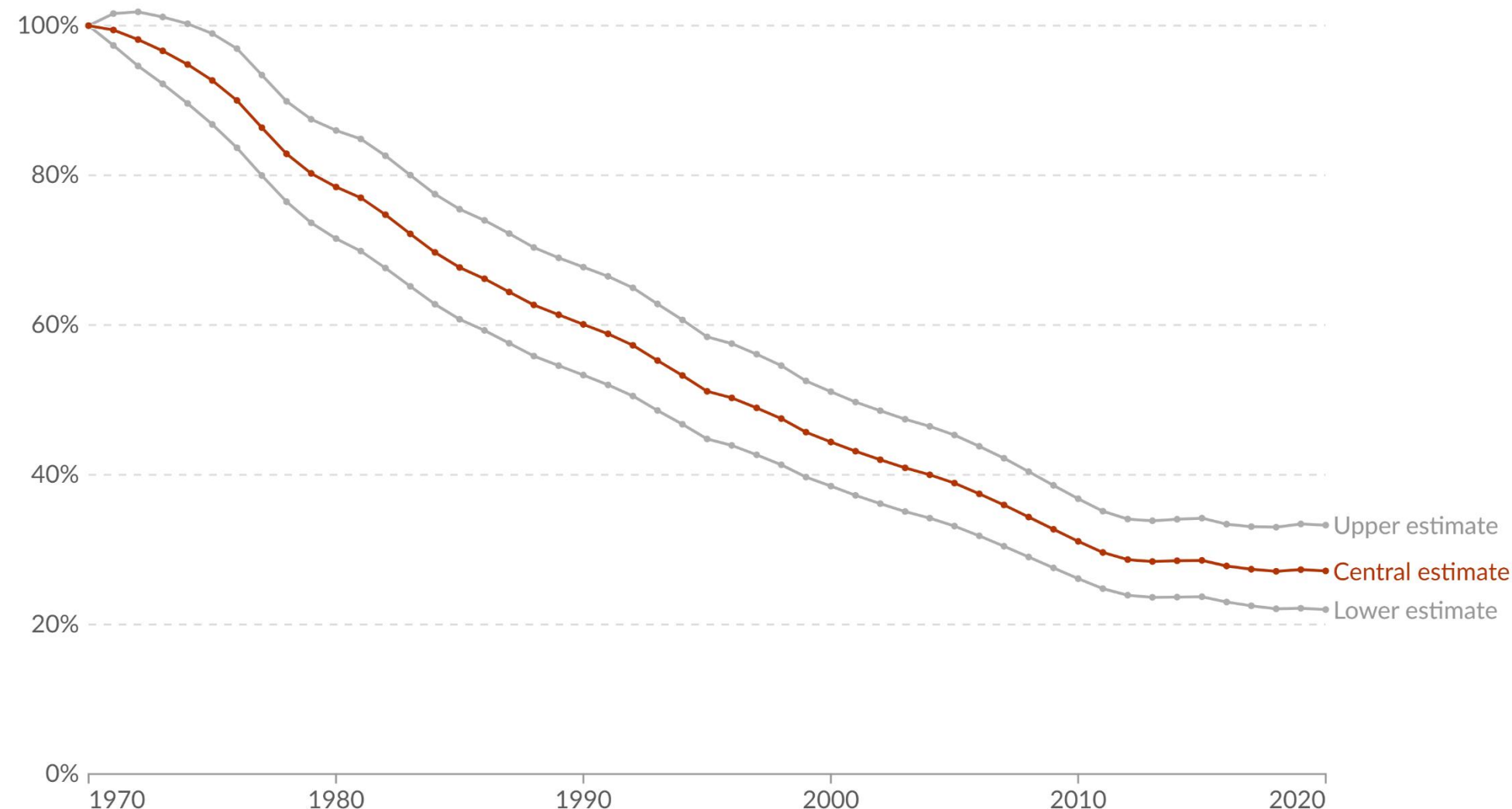
Partly also covered in 'Methodological recommendations for assessing the current and potential impact (risks) of invasive alien species'

THE INVASION

- Introduced as a result of human activities – globalization has increased – individual or commercial long-distance travel and trade
- IAS are one of the five most important direct **drivers for biodiversity loss**

Living Planet Index, World

The Living Planet Index (LPI) measures the average decline in monitored wildlife populations¹. The index value measures the change in abundance in 34,836 populations across 5,495 native species relative to the year 1970 (i.e. 1970 = 100%).



Data source: World Wildlife Fund and Zoological Society of London (2024)

OurWorldinData.org/biodiversity | CC BY

1. **Population** A population is a group of individuals of the same species that live in the same geographic area. A species will often have multiple or many populations, each living in a different area.

THE INVASION

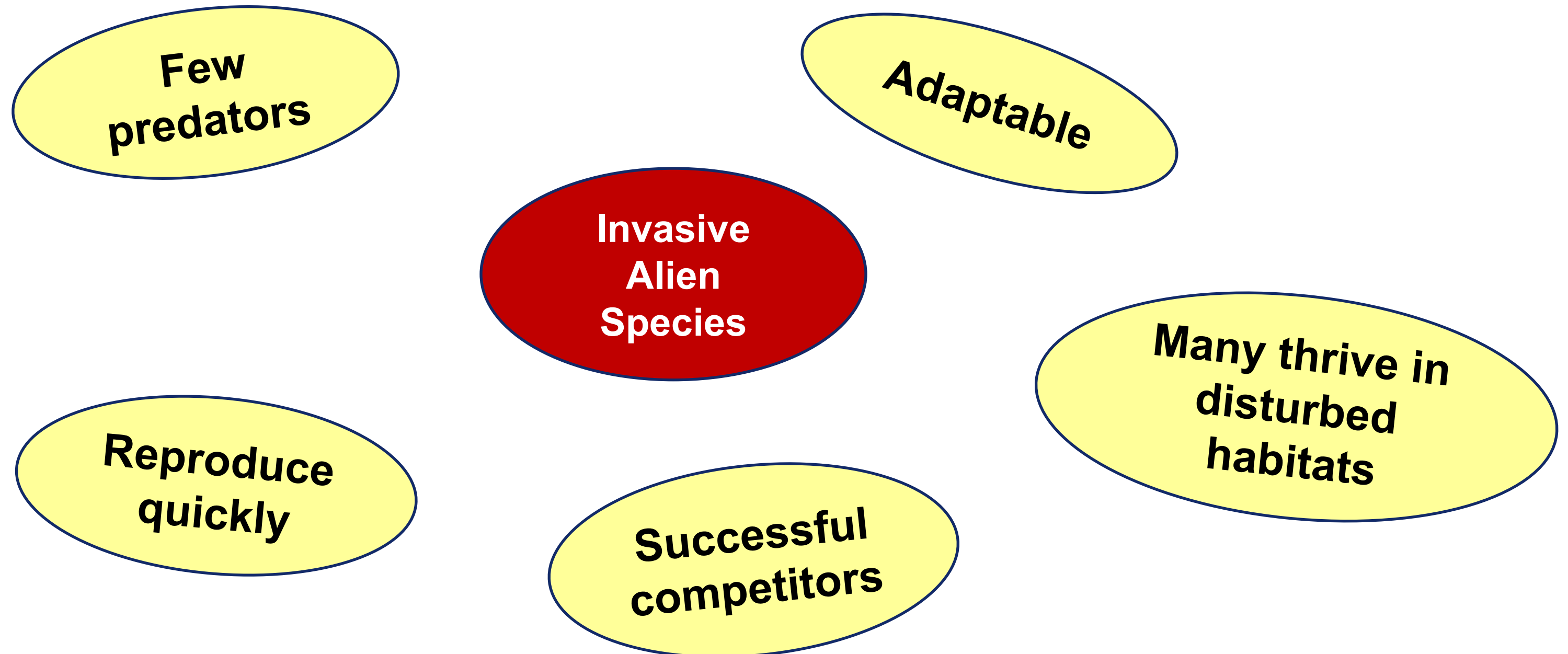
- Studies estimate a 64 % increase in bioinvaders between 2005 and 2050, or a total of 2,543 species (University of Vienna); numbers are growing, e.g. impact of climate change
- Not all alien species cause trouble in their new environment, but many have serious negative consequences for their new surroundings
- The economic impact in the EU was estimated at around EUR 12 billion per year and the figure is growing



© Reinhold Möller



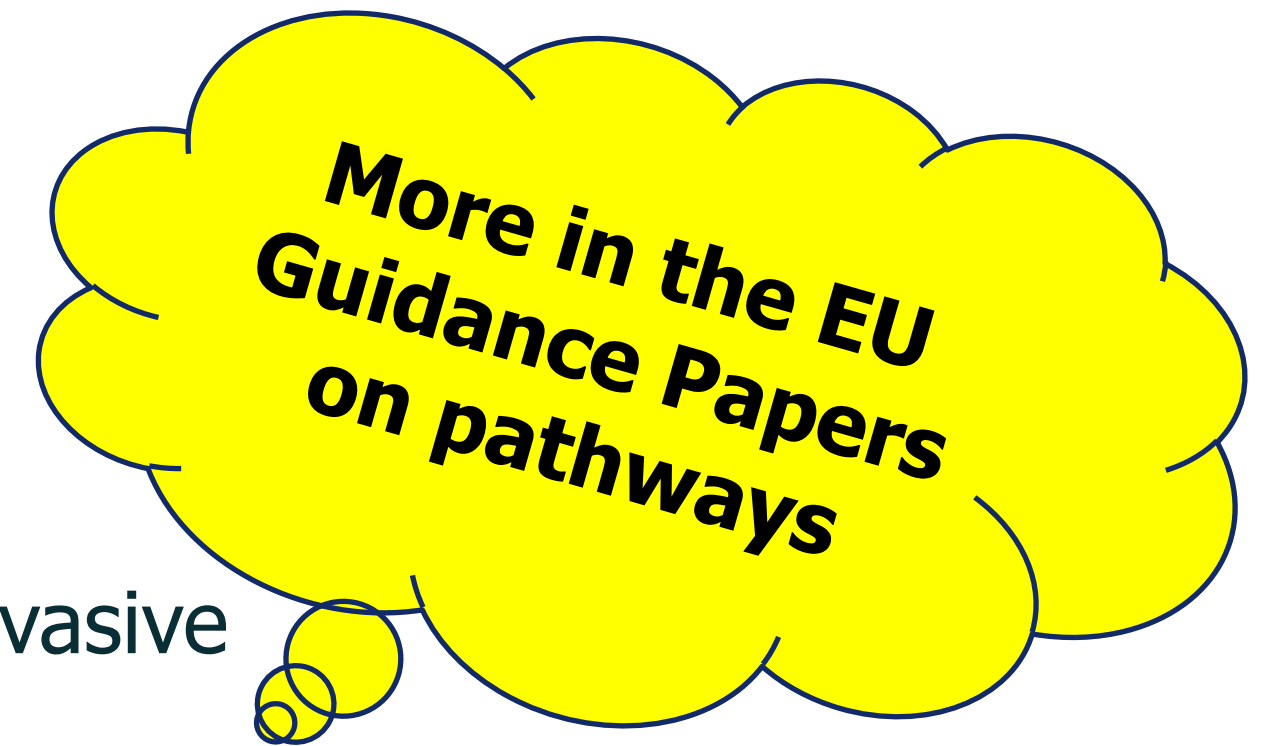
Characteristics



CAUSES OF INVASION

Intentional Release – Examples

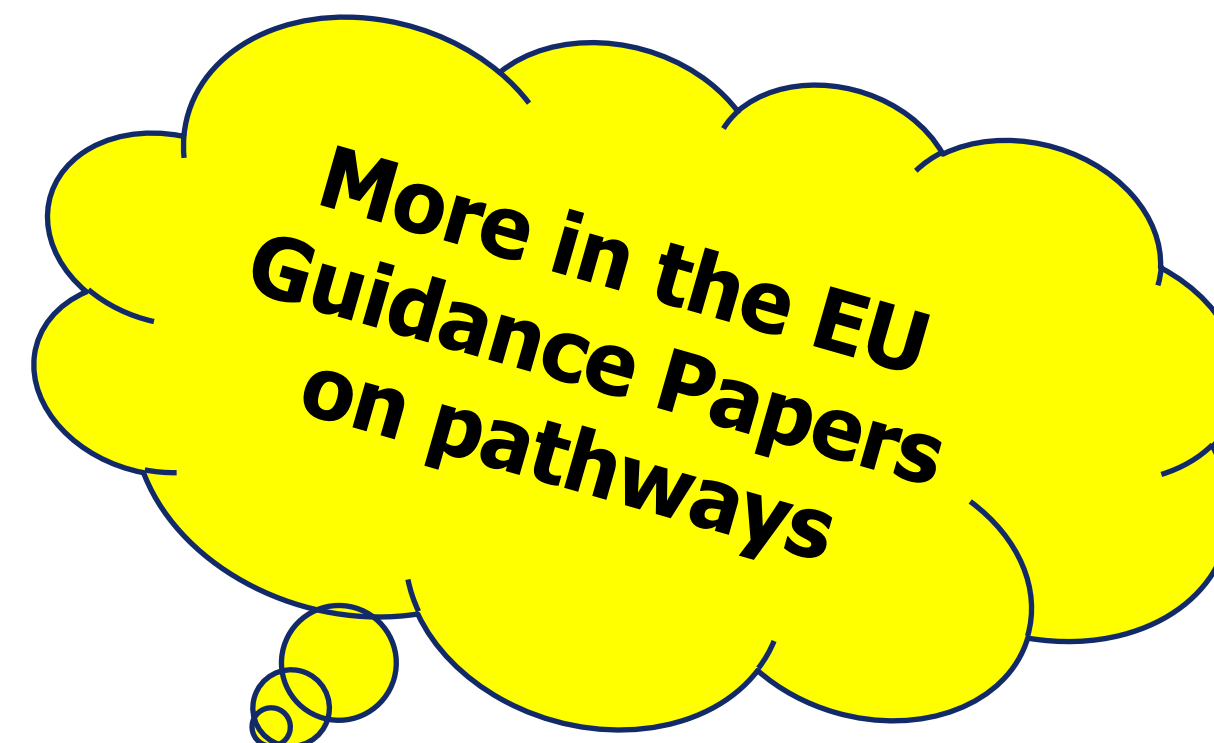
- Plants for agriculture and soil improvement
- Plants for forestry
- Ornamental plants
- Birds and mammals for hunting
- Biological control – species intended as controls become invasive
- Released pets and pet trade
- Domestic animals
- Release of lab animals or plants – by science teachers and researchers



CAUSES OF INVASION

Accidental Release – Examples

- Ballast water in ships
- Timber – unprocessed wood
- Accident release of organisms
- Contaminants of seed stock
- Fruit shipments
- Transfer in packing
- Cars and planes
- Tourists, luggage
- As hitchhikers with packing material, cargo



EFFECTS ON THE ECOSYSTEM

- Direct competition with native species (food, habitat, etc.)
- Loss of species diversity – may cause native species to become endangered
- Affect entire ecosystem functions as water availability and nutrient cycle, e.g. *Elodia nuttallii*



© Native Plant Trust, *Elodea nuttallii*



© FloraVeg EU, *Elodea nuttallii*

ECONOMIC EFFECTS

- Damage to commercial crops, leading to significant losses in yield (e.g. agriculture, forestry, aquaculture)
- Damage to infrastructure (clogging of water pipes, erosion of dams, bridges, river banks, etc.)
- Disruption of recreational activities (blocking of water ways, damage to fishing nets, damage to landscape leading to loss in tourism)

EFFECTS ON HUMAN HEALTH

- Vector of disease
- Source of allergies and asthma
- Source of dermatitis and other skin problems

Example:

The Asian tiger mosquito, *Aedes albopictus*, is native to South-East Asia; it entered Europe by accident

The mosquito is known to carry over 20 highly dangerous human pathogens, including dengue fever and yellow fever



© Shutterstock.com, *Aedes albopictus*



© iStock.com

- Giant hogweed, *Heracleum mantegazzianum* was introduced to Europe as an ornamental plant
- Its high toxicity can cause severe burns and dermatitis when in contact with skin that is exposed to sunlight, and may even cause blindness when in contact with eyes

- The economic cost of eradication and medical treatment in Germany alone have been estimated at between €6 to €21 million a year
- Major impact on biodiversity reducing the composition and diversity of native plant species by up to 90%



© Alaska Beacon

- The zebra mussel, *Dreissena polymorpha*, is native to the drainage basins of the Black, Caspian and Aral Seas
- Accidentally introduced to other parts of Europe along inland waterways
- Serious damage to infrastructure, clogging up the water-intake/supply of industrial and drinking water plants

- The zebra mussel also fouls recreational boats, jetties, fishing nets and aquaculture cages
- However, it is worth noting that the species is a powerful water filter, which can play a positive role in purifying and improving water quality in certain aquatic systems

CONTROL MECHANISMS

- Prevention
- Eradicating potential invaders soon after invasion
- Physical (manual & mechanical)
- Cultural – ecosystem management
- Biological – natural enemies
- Chemical – pesticides
- Integrated Pest Management – uses a combination of methods – **often the most effective**



EU REGULATION 1143/2024 ON INVASIVE ALIEN SPECIES

Entered into
force 1 January
2015

- The IAS Regulation contributes to the EU 2030 Biodiversity Strategy as well as to the Aichi Target
- The Regulation contains 33 Provisions (mentioning 4 Annexes referring to other Directives)
- The core of the IAS Regulation is the list of Invasive Alien Species of Union concern – **'EU List'**

114

invasive alien species are
strictly regulated

65

animal species of Union
concern

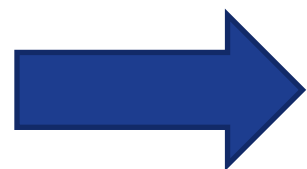
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plant species of Union
concern

States may have
their own list

MEMBER STATES ARE REQUIRED TO:

- Take **action on pathways of unintentional introduction** (i.e. prevention)
- Take **measures for the early detection and rapid eradication** of these species
- **Manage species** that are already widely spread in their territory
- Information documents:



https://environment.ec.europa.eu/topics/nature-and-biodiversity/invasive-alien-species_en

PROVISIONS

Article 4

- The species included in '**EU List**' are subject to restrictions and measures set out in the Regulation. These include **restrictions on keeping, importing, selling, breeding, growing and releasing into the environment**
 - Defining

Article 5

- A **risk assessment** has to be carried out

Ukrainian Order 'On approval of methodological recommendations for evaluation of existing and potential impact (risks) of invasive foreign species'

OTHER PROVISIONS

- **PREVENTION** – several Articles (7 – 13)
- Important: **Action Plans on the pathways** of IAS

Article 13

Guidance Papers

- Categories of pathways of introduction and spread of IAS
- Prioritizing pathways of introduction and pathway Action Plans

OTHER PROVISIONS

- **EARLY DETECTION and RAPID ERADICATION** – several Articles (14 – 18)
- Important: **Surveillance system** **Article 14**

Guidance Papers

- Surveillance of Invasive Alien Species of Union concern
- Identification guide for customs on invasive alien species of Union concern
- Identification guide for surveillance on invasive alien species of Union concern

OTHER PROVISIONS

- **MANAGEMENT** of IAS that are widely spread – several Articles (19 – 20)
- Important: **Management measures** **Article 19**

Guidance Papers

- Management of Invasive Alien Species of Union concern
- Notes on measures and costs per (potential) IAS of Union concern

LEGAL ISSUES

- **EU Regulations** are legal acts that apply automatically and uniformly to all EU Member States – as soon as they enter into force – **without needing to be transposed** into national law
- **EU Regulations** have binding legal force
- **EU Directives** lay down certain results that must be achieved by Member States, but each country is free to decide how to transpose the Directive into national law



IMPLEMENTATION

Secondary law – Implementation Regulations

- Updating the EU list https://eur-lex.europa.eu/eli/reg_impl/2025/1422/oj/eng
- Technical format for reporting https://eur-lex.europa.eu/eli/reg_impl/2024/574/oj
- Regarding risk assessments https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2018.174.01.0005.01.ENG&toc=OJ:L:2018:174:FULL

IMPLEMENTATION

https://environment.ec.europa.eu/topics/nature-and-biodiversity/invasive-alien-species_en

- The **Committee on IAS** assists in the preparation of implementing acts foreseen by the IAS Regulation, mainly the adoption and updates of the list of invasive alien species of Union concern; it consists of representatives from all Member States
- The **Invasive Alien Species Expert Group (IASEG)** supports the implementation of the IAS Regulation beyond the Commission's implementation powers; it consists of representatives from all Member States
- The **Scientific Forum on IAS** provides advice on scientific questions related to the implementation of the IAS Regulation; it consists of representatives of the scientific community appointed by the Member States
- The **Working Group on IAS** assists the Commission and facilitates coordination; it consists of interested stakeholders and Member State representatives



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