

LIFE IAP-RISK

LIFE15 PRE FR 001

Mitigating the threat of invasive alien plants to the EU through pest risk analysis to support the Regulation 1143/2014

EUROPEAN AND MEDITERRANEAN PLANT PROTECTION ORGANIZATION

And

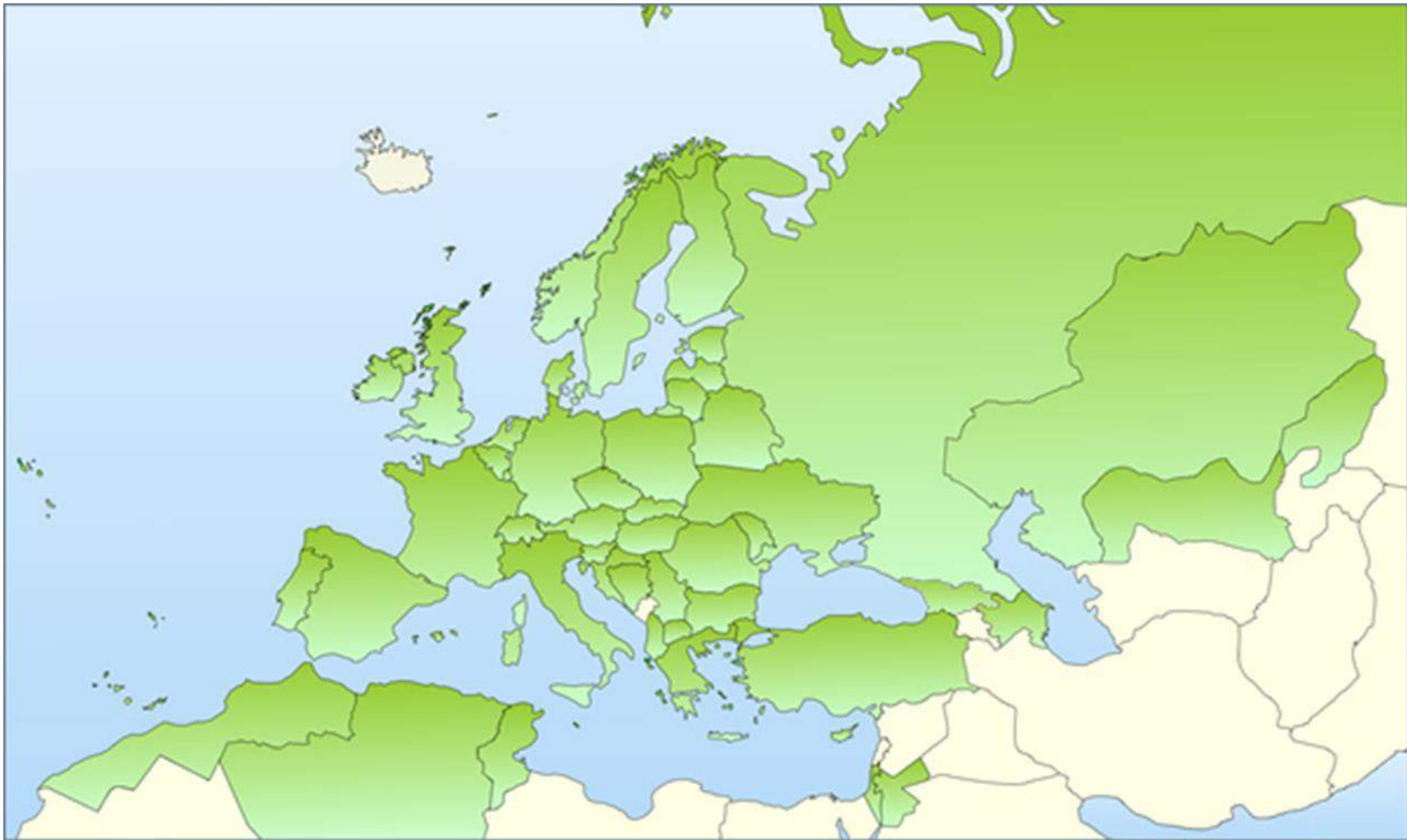
NERC CENTRE FOR ECOLOGY AND HYDROLOGY

Dr. Rob Tanner



1951 EPPPO Convention – 15 countries

Now 51 member countries



The EPPO Panel on Invasive Alien Plants

Missions and functioning

- Created in 2002 under IPPC with the following tasks:
 - to collect **data on invasive alien plants (IAP)** in the EPPO region,
 - to collect information on **official control measures** existing in the EPPO region for invasive alien plants,
 - to conduct pilot studies on **pest risk assessment** and **pest risk management** of specific invasive alien plants.
- About 20 Panel members nominated by the National Plant Protection Organizations (NPPO).



LIFE IAP-RISK

- **To prioritise plant species from the EPPO List of Invasive Alien Plants and the horizon scanning study (ENV.B.2/ETU/2014/0016) for risk assessment,**
- **To risk assess 16 IAPs by performing pest risk analysis compliant with the Regulation (EU) no. 1143/2014,**
- **To facilitate knowledge transfer and capacity building in pest risk analysis within the EU.**

Regulation 1143/2014

- Regulation 1143/2014: on the prevention and management of the introduction and spread of invasive alien species, which came into force on the 1st January 2015
- Centred on three main themes (1) prevention, (2) early warning and rapid response, and (3) management.
- A key feature in the Regulation is: list of IAS of Union concern

4.11.2014

EN

Official Journal of the European Union

L 317/35

**REGULATION (EU) No 1143/2014 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 22 October 2014**

on the prevention and management of the introduction and spread of invasive alien species

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 192(1) thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social Committee ⁽¹⁾,

After consulting the Committee of the Regions,

Acting in accordance with the ordinary legislative procedure ⁽²⁾,

Whereas:

(1) The appearance of alien species, whether of animals, plants, fungi or micro-organisms, in new locations is not always a cause for concern. However, a significant subset of alien species can become invasive and have serious adverse impact on biodiversity and related ecosystem services, as well as have other social and economic impact, which should be prevented. Some 12 000 species in the environment of the Union and in other European



Risk assessment

Stage 1. Initiation

- Reason for performing the PRA
- PRA area

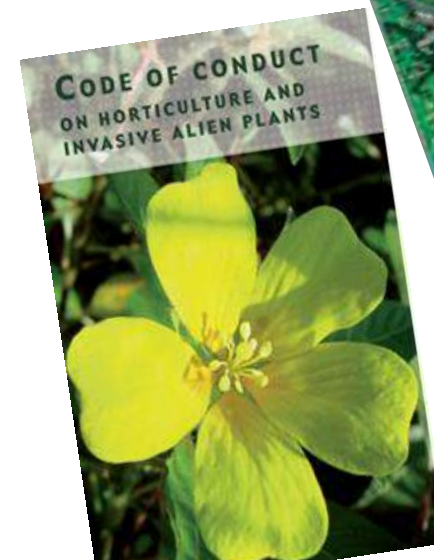
Stage 2. Pest risk assessment

- Taxonomy
- Pest overview
- Host plants
- Need for vector
- Geographical distribution
- Possible pathways for entry
- Likelihood of establishment outdoors/in protected conditions in the PRA area
- Spread in the PRA area
- Impact in the current area of distribution
- Potential impact in the PRA area
- Identification of the endangered area



- Identify phytosanitary measures to lower the risk
- prohibition of import
- Internal measures: publicity, surveillance, emergency and control plans, obligation to report, restriction on sale, holding, movement, planting,...

R I S S K Management



List of 37 species for prioritisation

Species

Acacia dealbata (Fabaceae)
Albizia lebeck (Fabaceae)
Ambrosia confertiflora (Asteraceae)
Ambrosia trifida (Asteraceae)
Andropogon virginicus (Poaceae)
Cardiospermum grandiflorum (Sapindaceae)
Celastrus orbiculatus (Celastraceae)
Chromolaena odorata (Asteraceae)
Cinnamomum camphora (Lauraceae)
Clematis terniflora (Ranunculaceae)
Cornus sericea (Cornaceae)
Cortaderia jubata (Poaceae)
Cryptostegia grandiflora (Apocynaceae)
Egeria densa (Hydrocharitaceae)
Ehrharta calycina (Poaceae)
Euonymus fortunei (Celastraceae)
Euonymus japonicus (Celastraceae)
Fallopia baldschuanica (Polygonaceae)
Gymnocoronis spilanthoides (Asteraceae)

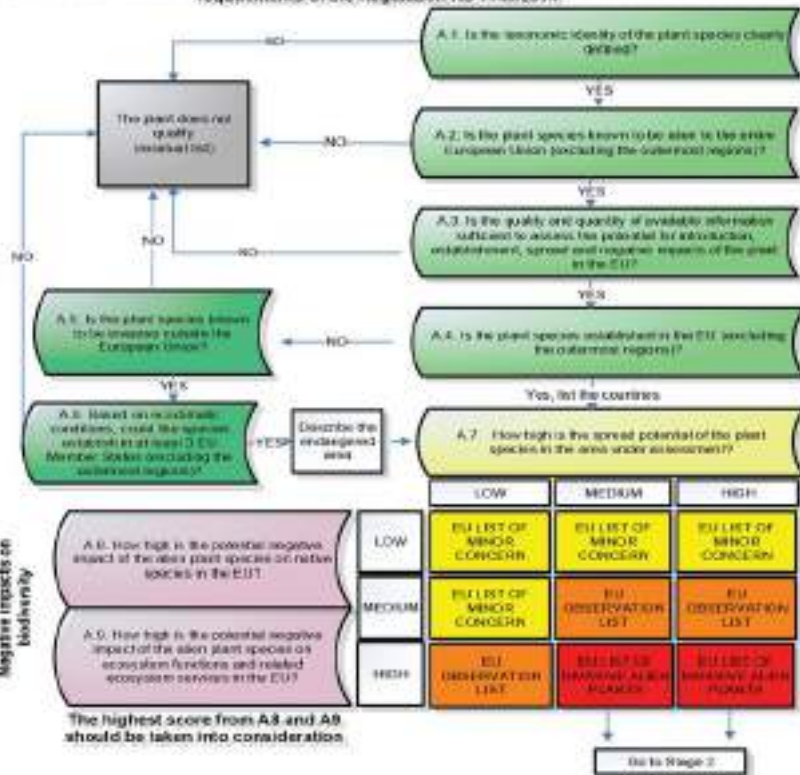
Hakea sericea (Proteaceae)
Humulus scandens (Cannabaceae)
Hydrilla verticillata (Hydrocharitaceae)
Hygrophila polysperma (Acanthaceae)
Lespedeza cuneata (Fabaceae)
Ligustrum sinense (Oleaceae)
Lonicera maackii (Caprifoliaceae)
Lonicera morrowii (Caprifoliaceae)
Lygodium japonicum (Lygodiaceae)
Oxalis pes-caprae (Oxalidaceae)
Pennisetum setaceum
Pistia stratiotes
Prosopis juliflora
Prunus cerasifera
Rubus rosifolius
Salvinia molesta
Sapium sebiferum
Sphagneticola trilobata

**Invasive Alien Species -
 Prioritising prevention efforts
 through horizon scanning**
ENV.B.2/ETU/2014/0016
 Final report

The plants listed below have been identified by the Panel as being absent or present in the EPPO region, as having a high potential for spread, as posing an important threat to plant health and/or the environment, and biodiversity, and overall as having other detrimental social impacts in the EPPO region. Because a large number of invasive alien plants are already present in the EPPO region, priorities were set in order to select those species considered to pose the greatest threat to species and ecosystems in the EPPO region. EPPO therefore strongly recommends countries endangered by these species to take measures to prevent their introduction and spread, or to manage established populations (for example with publicly funded control or eradication programmes). This List is constantly being reviewed by the Panel (new species can be added and others removed). The list is not meant to be exhaustive but to focus on the main risks.

Plant name (link to EPPO Global Database)	Added in	Data sheets	PRA and prioritisation documents
Acacia dealbata	2004	draft 11	
Albizia lebeckii	2003	draft 11	
Ambrosia trifida	2004	draft 11	
Andropogon virginicus	2004	draft 11	introduction
Cardiospermum grandiflorum	2004	draft 11	
Celastrus orbiculatus	2004	draft 11	introduction
Chromolaena odorata	2004	draft 11	
Cinnamomum camphora	2004	draft 11	ESA - RIA rep
Clematis terniflora	2004	draft 11	introduction
Cortaderia jubata	2004	draft 11	
Cryptostegia grandiflora	2004	draft 11	
Egeria densa	2004	draft 11	
Ehrharta calycina	2004	draft 11	
Euonymus fortunei	2004	draft 11	
Euonymus japonicus	2004	draft 11	
Fallopia baldschuanica	2004	draft 11	
Gymnocoronis spilanthoides	2004	draft 11	
Hakea sericea	2004	draft 11	
Humulus scandens	2004	draft 11	
Hydrilla verticillata	2004	draft 11	
Hygrophila polysperma	2004	draft 11	
Lespedeza cuneata	2004	draft 11	
Ligustrum sinense	2004	draft 11	
Lonicera maackii	2004	draft 11	
Lonicera morrowii	2004	draft 11	
Lygodium japonicum	2004	draft 11	
Oxalis pes-caprae	2004	draft 11	
Pennisetum setaceum	2004	draft 11	
Pistia stratiotes	2004	draft 11	
Prosopis juliflora	2004	draft 11	
Prunus cerasifera	2004	draft 11	
Rubus rosifolius	2004	draft 11	
Salvinia molesta	2004	draft 11	
Sapium sebiferum	2004	draft 11	
Sphagneticola trilobata	2004	draft 11	

Decision scheme for the prioritization process for EU invasive alien plants incorporating the requirements of the Regulation No 1143/2014.



Prioritization Process for EU invasive alien plants

Stage 1: preliminary risk assessment - produces lists of plant species for the EU, the most important being the list of invasive alien plants

Stage 2: preliminary risk management - to determine which of these IAP have the highest priority for a risk assessment

Stage 2: Risk management

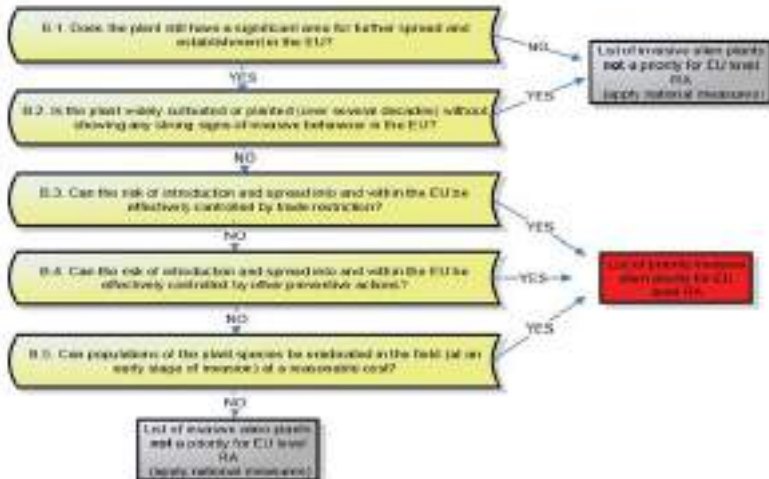


Table 1. Key information sources. Information resources utilised when collecting information on the species.

Scientific area	Relating to question in EU P. process	Key resources
Stage 1		
Taxonomic identity	A1	The Plant List (http://www.theplantlist.org/)
Geographical origin	A2	ARS Grin Taxonomy (http://www.ars-grin.gov/)
Global occurrence	A4	GBIF (http://www.gbif.org), EPPO Global Database (https://gd.eppo.int/), CABI ISC (http://www.cabi.org/isc/), Q-Bank (http://www.q-bank.eu/)
Global invasive behavior	A5	Scientific literature, reports, expert opinion
Spread potential & areas threatened	A6, A7	Scientific literature, reports, expert opinion
Impacts	A8, A9	Scientific literature, reports, expert opinion
Stage 2		
Current occurrence within the EU	B1	GBIF (http://www.gbif.org), EPPO Global Database (https://gd.eppo.int/), CABI ISC (http://www.cabi.org/isc/), Q-Bank (http://www.q-bank.eu/)
Invasive behavior in the EU	B2	Scientific literature, reports, expert opinion
Trade status	B3	Numerous internet suppliers (e.g. https://www.http://www.ebay.com/ ; https://www.amazon.co)
Phytosanitary measures	B4, B5	Scientific literature, reports, expert opinion



Species	A.1. Clear taxonomy	A.2. Alien in EU	A.3. Quality information	A.4. Established in the EU	A.5. Invasive outside the EU	A.6. Potential establishment in the EU	A.7. Spread	A.8. Impact on native plant species	A.9. Impact on ecosystem functions services	Conclusion of stage I
<i>Acacia dealbata</i>	Yes	Yes (Aus.)	High	Yes (ES, FR, IT)	Yes (Afr., Asia, Oce.)	38%	Medium	High (M): forms dense stands displaces native species (Lorenzo et al., 2012)	Medium (L): Nitrogen cycle modifications (Weber, 2003)	List IAP
<i>Albizia lebeck</i>	Yes	Yes (Asia)	Low (STOP)	----	----	----	----	----	----	----
<i>Ambrosia confertiflora</i>	Yes	Yes (N.Am.)	Medium/High	No	Yes (C.Asia, Oce.)	8.80%	High	High (M): forms dense stands displaces native species (EPPO, 2014)	Medium (H): Ecosystem modifier (EPPO, 2014)	List IAP
<i>Ambrosia trifida</i>	Yes	Yes (N.Am.)	Medium/High	Yes (ES, GE, NL, RO, RU, PL, FR, IT, BK, RS)	Yes (Asia, N.Am.)	90%	High	Medium (L): Allelopathic and competes with native spp. for nutrients/light	Low (M): No recorded impacts	Obs List
<i>Andropogon virginicus</i>	Yes	Yes (N.Am.)	High	Yes (FR)	Yes (Asia, N.Am., Oce.)	70.10%	High	High (H): Allelopathic impacts (Stone, 1985)	Medium (H): Promotes fire (Stone, 1985)	List IAP
<i>Cardiospermum grandiflorum</i>	Yes	Yes (Afr., S.Am.)	Medium	Yes (IT)	Yes (Afr.)	5.10%	High	High (M): Smothers native spp. (McKay et al., 2010)	Medium (M): Habitat transformer (Henderson, 2001)	List IAP
<i>Celastrus orbiculatus</i>	Yes	Yes (Asia)	High	Yes (GB)	Yes (N.Am., Oce.)	77%	High	High (H): Suppression native spp. (Fike & Niering, 1999)	Medium (H): Negatively affects aesthetics (CABI, 2016)	List IAP
<i>Chromolaena odorata</i>	Yes	Yes (S.Am.)	High	No	Yes (Afr., N.Am., Oce.)	No (STOP)	----	----	----	----
<i>Cinnamomum camphora</i> (Lauraceae)	Yes	Yes (Asia)	High	Yes (GB, FR, IT)	Yes (N.Am., Oce.)	35.10%	High	High (H): Forms monocultures/ Allelopathic impacts (Firth, 1979)	Medium (H): Ecosystem modifier (CABI, 2016)	List IAP
<i>Clematis terniflora</i> (Ranunculaceae)	Yes	Yes (Asia)	Low (STOP)	----	----	----	----	----	----	----
<i>Cornus sericea</i> (Cornaceae)	No (STOP)	----	----	----	----	----	----	----	----	----
<i>Cortaderia jubata</i> (Poaceae)	Yes	Yes (S. Am.)	High	No	Yes (N.Am., Oce.)	55.80%	High	High (M): Strongly competes for resources (Lambrinos, 2000)	High (M): Alters trophic levels/reduces aesthetics (Bossard et al., 2000)	List IAP
<i>Cryptostegia grandiflora</i> (Apocynaceae)	Yes	Yes (Afr.)	High	No	Yes (Oce., S.Am.)	No (STOP)	----	----	----	----
<i>Egeria densa</i> (Hydrocharitaceae)	Yes	Yes (S. Am.)	High	Yes (FR, BE, IT, NL, UK)	----	80.90%	High	Medium (H): Displaces native spp. (CABI, 2016)	Medium (H): Reduces recreation activities (CABI, 2016)	Obs List
<i>Ehrharta calycina</i> (Poaceae)	Yes	Yes (S. Afr.)	High	Yes (ES, PT)	Yes (N.Am.)	15.30%	High	High (M): Outcompetes native plant spp. (Bossard et al., 2000)	Medium (M): Alter fire regimes (Fisher et al., 2006)	List IAP
<i>Euonymus fortunei</i> (Celastraceae)	Yes	Yes (Asia)	High	Yes (FR, LV)	Yes (N.Am.)	70.10%	High	High (M): Outcompetes native plant spp. (Bauer & Reynolds, 2016)	Medium (H): Ecosystem modifier (Bauer & Reynolds, 2016)	List IAP
<i>Euonymus japonicus</i> (Celastraceae)	Yes	Yes (Asia)	Low (STOP)	----	----	----	----	----	----	----
<i>Fallopia baldschuanica</i> (Polygonaceae)	Yes	Yes (Asia)	High	Yes (widespread)	Yes (N.Am.)	67.90%	Medium	Medium (M): Smothers native spp. (EPPO, 2012)	Medium (M): Ecosystem modifier (EPPO, 2012)	Obs List

High priority species for PRA

Ambrosia confertiflora
Andropogon virginicus
Cardiospermum grandiflorum
Cinnamomum camphora
Cortaderia jubata
Ehrharta calycina
Gymnocoronis spilanthoides
Hakea sericea

Humulus scandens
Hygrophila polysperma
Lespedeza cuneata
Lygodium japonicum
Pistia stratiotes
Prosopis juliflora
Salvinia molesta
Sapium sebiferum

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RESEARCH ARTICLE

NeoBiota
An international journal of biodiversity and conservation science

The prioritisation of a short list of alien plants for risk analysis within the framework of the Regulation (EU) No. 1143/2014

Rob Tanner¹, Etienne Branquart¹, Giuseppe Brundu¹, Serge Buhobzi⁴,
Daniel Chapman⁵, Pierre Ehret⁶, Guillaume Fried⁷,
Uwe Starfinger⁸, Johan van Valkenburg⁹

Output of the PRAs

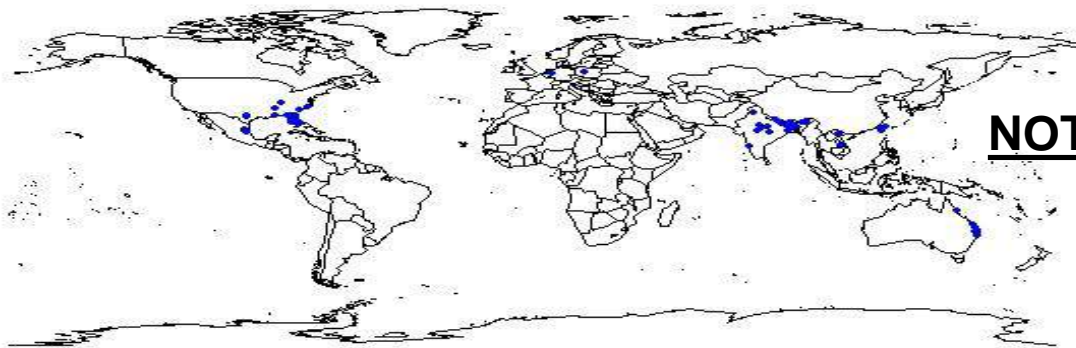
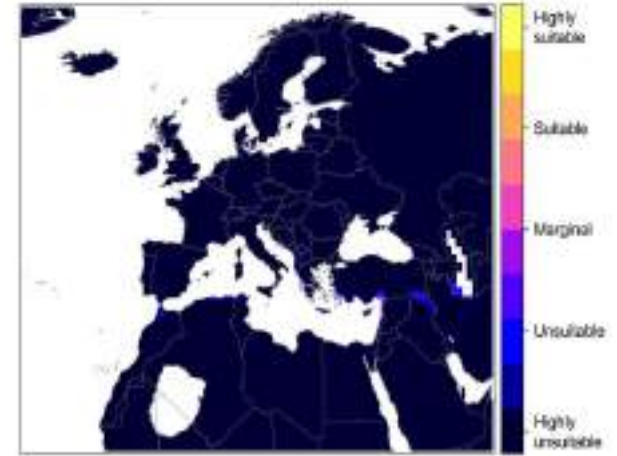
Species	Form	Establishment	Pathway	Spread	Impact	Overall Risk	Uncertainty
<i>Ambrosia confertiflora</i>	P. herb	Med, Anatolian	Contaminant	High	High	High	High
<i>Andropogon virginicus</i>	Grass	Med	PP/Contaminant	High	Moderate	High	Moderate
<i>Cardiospermum grandiflorum</i>	Vine	Med	PP	Moderate	Moderate	Moderate	Moderate
<i>Cinnamomum camphora</i>	Tree		PP	Moderate	Low	Low	Moderate
<i>Cortaderia jubata</i>	Grass	Med, Atl, Con, BSea	PP	High	Moderate	Moderate	Moderate
<i>Ehrharta calycina</i>	Grass	Med	PP/Contaminant	High	Moderate	Moderate	Moderate
<i>Gymnocoronis spilanthoides</i>	Aquatic	Med	PP/Contaminant	Moderate	High	High	High
<i>Hakea sericea</i>	Shrub	Med, Con, Bsea	PP	High	High	High	Low
<i>Humulus scandens</i>	Vine	Med, Atl, Mac, Bsea	PP	High	High	High	Low
<i>Hygrophila polysperma</i>	Aquatic		PP	High	Moderate	Low	Moderate
<i>Lespedeza cuneata</i>	P. herb	Med, Con, Pan	PP/Contaminant	High	Moderate	Moderate	Moderate
<i>Lygodium japonicum</i>	Vine	Mac, Bsea	PP/Contaminant	High	High	Moderate	High
<i>Prosopis juliflora</i>	Tree/shrub	Med, Mac	PP	High	High	Moderate	Moderate
<i>Triadica sebifera</i>	Tree	Med	PP	High	High	High	High
<i>Pistia stratiotes</i>	Aquatic	Med	PP/Contaminant	Moderate	High	High	Moderate
<i>Salvinia molesta</i>	Aquatic	Med	PP/Contaminant	Moderate	High	High	Moderate

Output of the PRAs

Species	Form	Establishment	Pathway	Spread	Impact	Overall Risk	Uncertainty
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<i>Andropogon virginicus</i>	Grass	Med	PP/Contaminant	High	Moderate	High	Moderate
<i>Cardiospermum grandiflorum</i>	Vine	Med	PP	Moderate	Moderate	Moderate	Moderate
<i>Cinnamomum camphora</i>	Tree		PP	Moderate	Low	Low	Moderate
<i>Cortaderia jubata</i>	Grass	Med, Atl, Con, BSea	PP	High	Moderate	Moderate	Moderate
<i>Ehrharta calycina</i>	Grass	Med	PP/Contaminant	High	Moderate	Moderate	Moderate
<i>Gymnocoronis spilanthoides</i>	Aquatic	Med	PP/Contaminant	Moderate	High	High	High
<i>Hakea sericea</i>	Shrub	Med, Con, Bsea	PP	High	High	High	Low
<i>Humulus scandens</i>	Vine	Med, Atl, Mac, Bsea	PP	High	High	High	Low
<i>Hygrophila polysperma</i>	Aquatic		PP	High	Moderate	Low	Moderate
<i>Lespedeza cuneata</i>	P. herb	Med, Con, Pan	PP/Contaminant	High	Moderate	Moderate	Moderate
<i>Lygodium japonicum</i>	Vine	Mac, Bsea	PP/Contaminant	High	High	Moderate	High
<i>Prosopis juliflora</i>	Tree/shrub	Med, Mac	PP	High	High	Moderate	Moderate
<i>Triadica sebifera</i>	Tree	Med	PP	High	High	High	High
<i>Pistia stratiotes</i>	Aquatic	Med	PP/Contaminant	Moderate	High	High	Moderate
<i>Salvinia molesta</i>	Aquatic	Med	PP/Contaminant	Moderate	High	High	Moderate

Hygrophila polysperma (Roxb.) T. Anderson

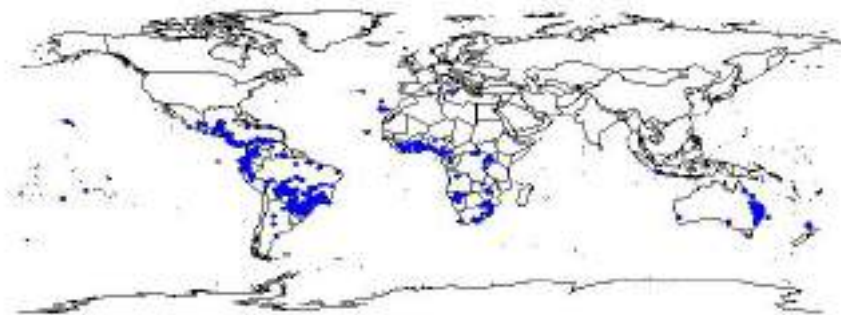
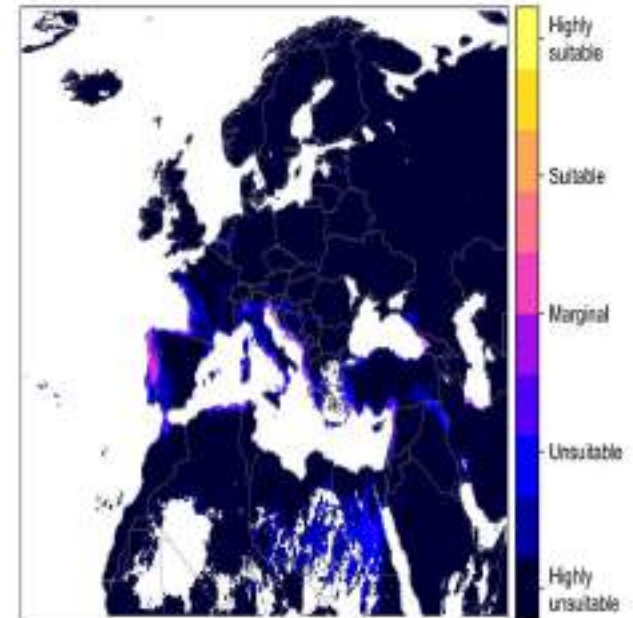
- Native: Asia
- Introduced: North America (Florida), Australia
- EPPO: Austria, Germany, Poland, Hungary (thermally heated waters, introduced)
- Pathways: Plants for planting
- Impacts: Outcompete native spp.



NOT recommended for regulation
Phytosanitary risk: Low
Uncertainty: Moderate

Cinnamomum camphora L. J. Presl.

- Native: Asia
- Introduced: Africa, S. America
- EPPO: France, (Netherlands, Italy and Germany as a planted species in botanical gardens)
- Pathways: plants for planting
- Impacts: Ecosystem



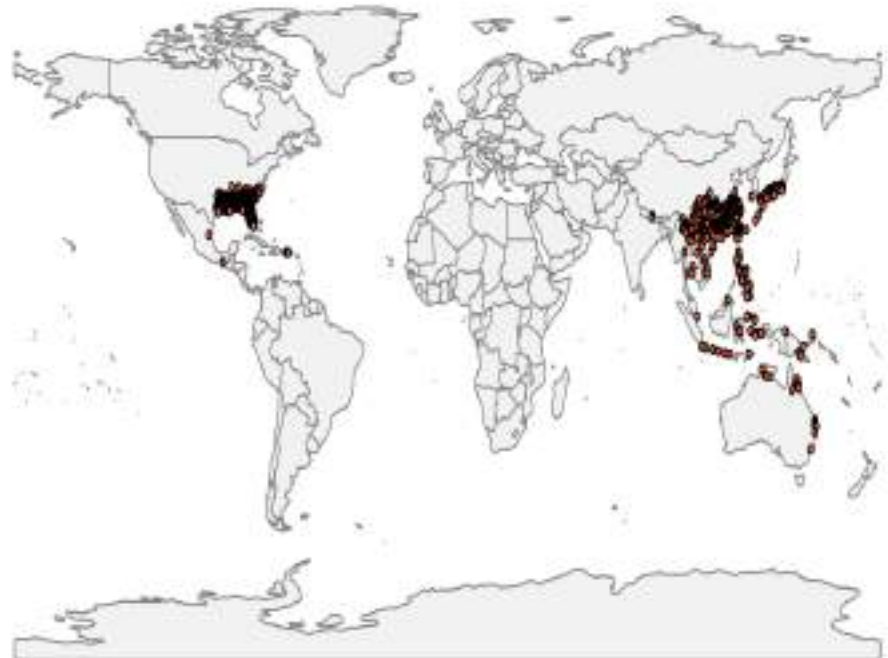
NOT recommended for regulation
Phytosanitary risk: Low
Uncertainty: Moderate

Output of the PRAs

Species	Form	Establishment	Pathway	Spread	Impact	Overall Risk	Uncertainty
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<i>Andropogon virginicus</i>	Grass	Med	PP/Contaminant	High	Moderate	High	Moderate
<i>Cardiospermum grandiflorum</i>	Vine	Med	PP	Moderate	Moderate	Moderate	Moderate
<i>Cinnamomum camphora</i>	Tree		PP	Moderate	Low	Low	Moderate
<i>Cortaderia jubata</i>	Grass	Med, Atl, Con, BSea	PP	High	Moderate	Moderate	Moderate
<i>Ehrharta calycina</i>	Grass	Med	PP/Contaminant	High	Moderate	Moderate	Moderate
<i>Gymnocoronis spilanthoides</i>	Aquatic	Med	PP/Contaminant	Moderate	High	High	High
<i>Hakea sericea</i>	Shrub	Med, Con, Bsea	PP	High	High	High	Low
<i>Humulus scandens</i>	Vine	Med, Atl, Mac, Bsea	PP	High	High	High	Low
<i>Hygrophila polysperma</i>	Aquatic		PP	High	Moderate	Low	Moderate
<i>Lespedeza cuneata</i>	P. herb	Med, Con, Pan	PP/Contaminant	High	Moderate	Moderate	Moderate
<i>Lygodium japonicum</i>	Vine	Mac, Bsea	PP/Contaminant	High	High	Moderate	High
<i>Prosopis juliflora</i>	Tree/shrub	Med, Mac	PP	High	High	Moderate	Moderate
<i>Triadica sebifera</i>	Tree	Med	PP	High	High	High	High
<i>Pistia stratiotes</i>	Aquatic	Med	PP/Contaminant	Moderate	High	High	Moderate
<i>Salvinia molesta</i>	Aquatic	Med	PP/Contaminant	Moderate	High	High	Moderate

Lygodium japonicum (Thunb.) Sw.

- Native: Asia
- Introduced: Australia, North America (invasive south-eastern States).
- EPPO: Absent.
- Pathways: Plants for planting.
- Impacts: Alters fire regime in managed plantations,



Output of the PRAs

Species	Form	Establishment	Pathway	Spread	Impact	Overall Risk	Uncertainty
<i>Ambrosia confertiflora</i>	P. herb	Med, Anatolian	Contaminant	High	High	High	High
<i>Andropogon virginicus</i>	Grass	Med	PP/Contaminant	High	Moderate	High	Moderate
<i>Cardiospermum grandiflorum</i>	Vine	Med	PP	Moderate	Moderate	Moderate	Moderate
<i>Cinnamomum camphora</i>	Tree		PP	Moderate	Low	Low	Moderate
<i>Cortaderia jubata</i>	Grass	Med, Atl, Con, BSea	PP	High	Moderate	Moderate	Moderate
<i>Ehrharta calycina</i>	Grass	Med	PP/Contaminant	High	Moderate	Moderate	Moderate
<i>Gymnocoronis spilanthoides</i>	Aquatic	Med	PP/Contaminant	Moderate	High	High	High
<i>Hakea sericea</i>	Shrub	Med, Con, Bsea	PP	High	High	High	Low
<i>Humulus scandens</i>	Vine	Med, Atl, Mac, Bsea	PP	High	High	High	Low
<i>Hygrophila polysperma</i>	Aquatic		PP	High	Moderate	Low	Moderate
<i>Lespedeza cuneata</i>	P. herb	Med, Con, Pan	PP/Contaminant	High	Moderate	Moderate	Moderate
<i>Lygodium japonicum</i>	Vine	Mac, Bsea	PP/Contaminant	High	High	Moderate	High
<i>Prosopis juliflora</i>	Tree/shrub	Med, Mac	PP	High	High	Moderate	Moderate
<i>Triadica sebifera</i>	Tree	Med	PP	High	High	High	High
<i>Pistia stratiotes</i>	Aquatic	Med	PP/Contaminant	Moderate	High	High	Moderate
<i>Salvinia molesta</i>	Aquatic	Med	PP/Contaminant	Moderate	High	High	Moderate

Biodiversity x ecosystem services x socioeconomic impacts

Provisioning services - Fresh water, Genetic resources, Food and Commodity production,



Regulating services - Soil formation, Pollination, Water regulation, Air quality



Cultural services - Aesthetic experiences, Cultural heritage, Tourism, Recreation

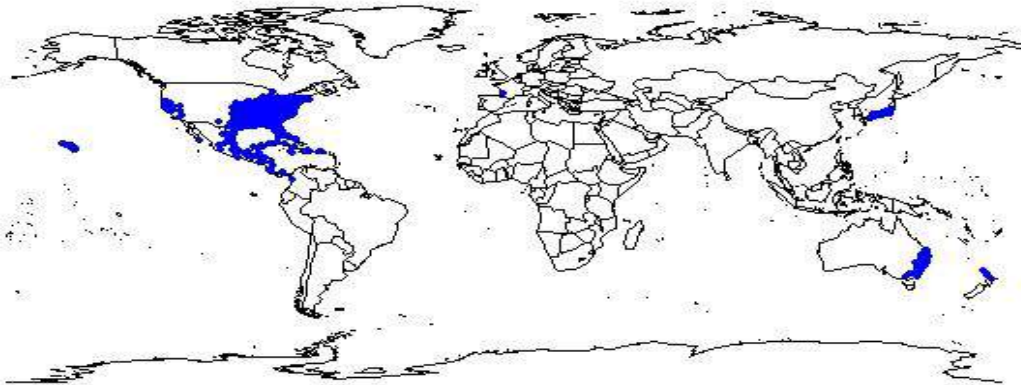


Supporting services, Nutrient cycling, Primary production, Habitat stability



Pistia stratiotes L.

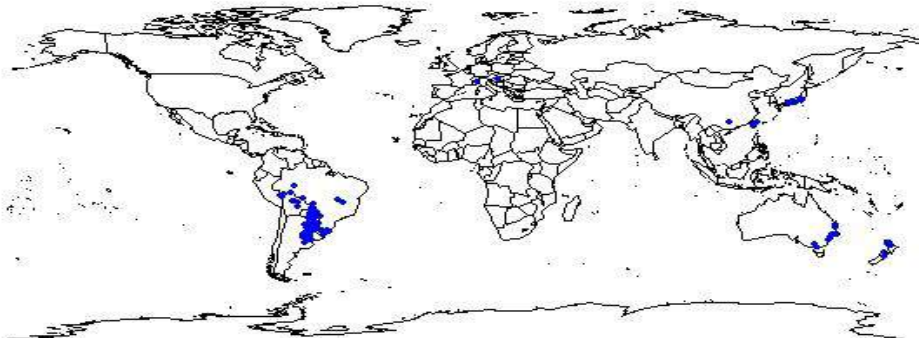
- Native: S. America
- Introduced: Africa, Asia, North America,
- EPPO: Austria, Belgium, Czech Republic, France, Germany, Hungary, Italy, Netherlands, Norway, Portugal, Romania, Russia, Slovenia, Spain, United Kingdom, and Ukraine
- Pathways: Plants for planting, contaminant of plants for planting and leisure equipment
- Impacts: ecosystem service impacts



Recommended for regulation
Phytosanitary risk: High
Uncertainty: Moderate

Gymnocoronis spilanthoides (D. Don ex Hook. & Arn.) DC.

- Native: South America
- Introduced: Asia, Australia and New Zealand.
- EPPO: Italy, Hungary
- Pathways: Plants for planting, contaminant machinery and leisure equipment
- Impacts: ecosystem services



Recommended for regulation
Phytosanitary risk: High
Uncertainty: High

Thanks for listening

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