

Science-based risk assessment of NNS in Belgium

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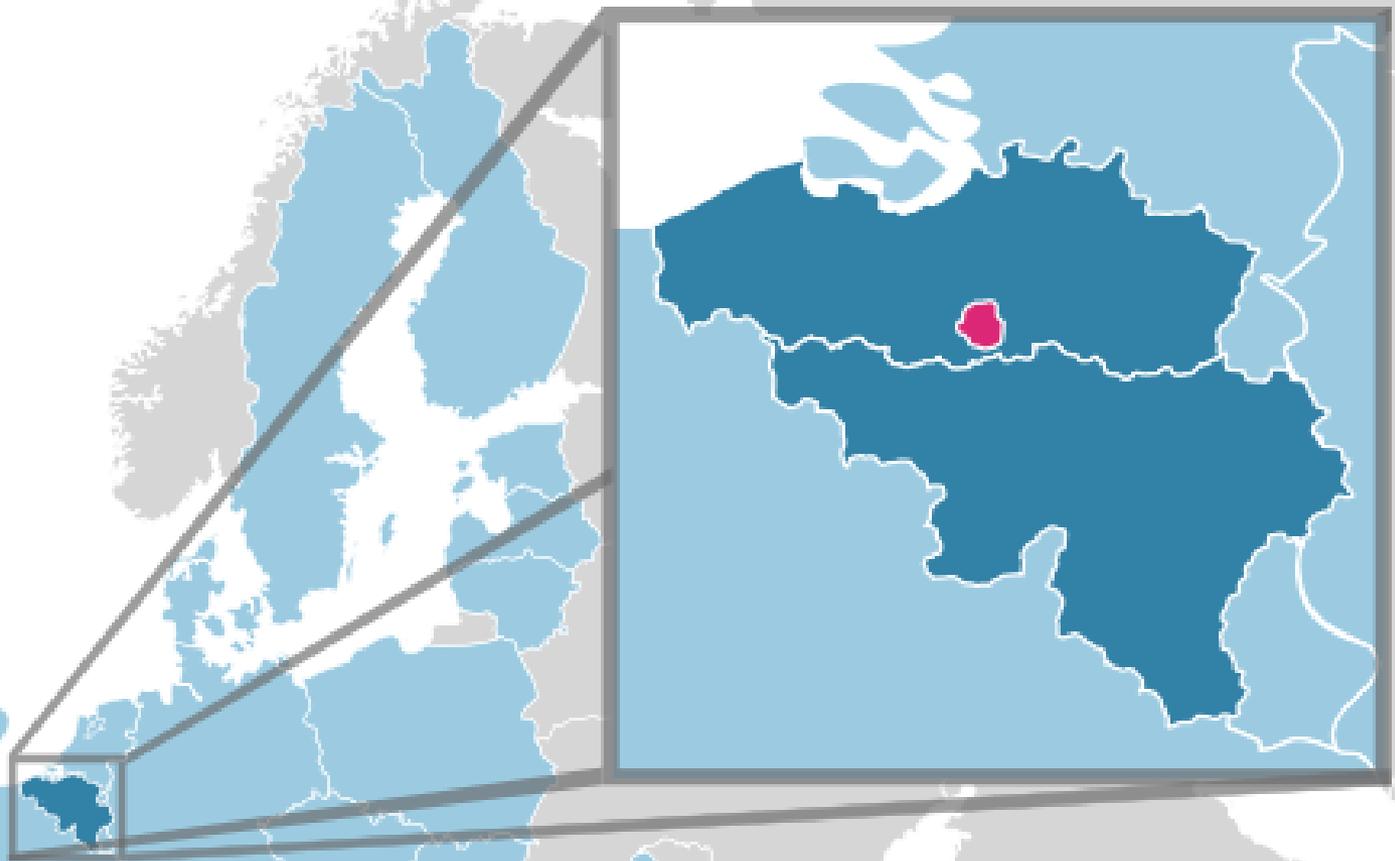


SOS invasions !

Invasive alien species in Belgium
Les espèces exotiques invasives en Belgique
Uitheimse invasieve soorten in België

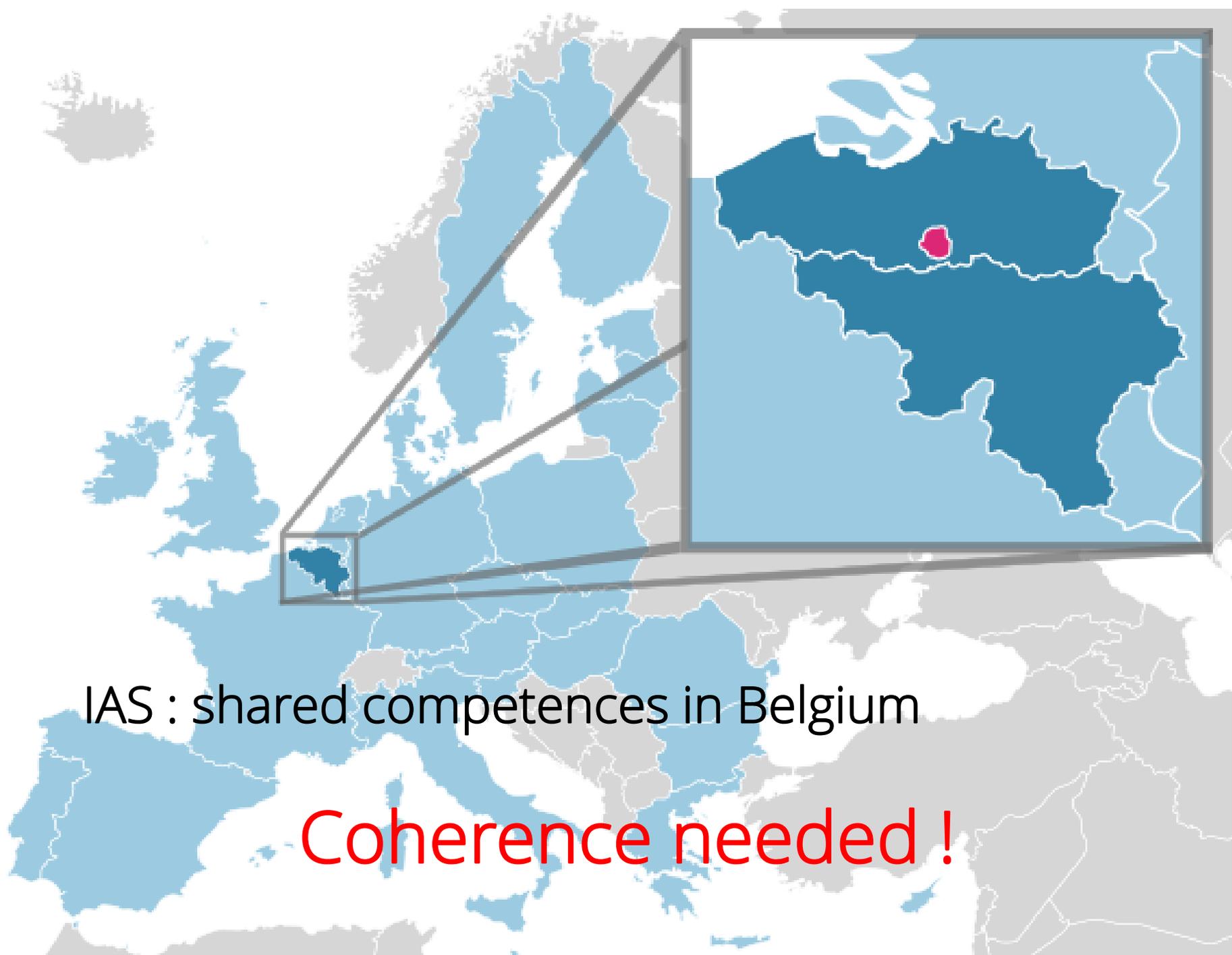
9 & 10.03.2006





IAS : shared competences in Belgium

- Federal government: import, export & transit;
- Regional governments: trade, holding, release into the wild, monitoring, control and and mitigation



IAS : shared competences in Belgium

Coherence needed !

The Belgian Biodiversity Platform

Belgian Biodiversity Platform



Give wings to your research



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Publish your data



Fund your research



Meet other experts



Think with us

The Belgian Biodiversity Platform is a science-policy interface.

We offer a privileged access to primary biodiversity data and research information.

We encourage interdisciplinary cooperation among scientists and serve as an interface between researchers and science policy organisations.

We advise on the designation of biodiversity research priorities.

We promote Belgian biodiversity research at international fora.

[Read more](#)



Biodiversity.be

The Belgian Forum on Invasive Species



Natural scientists - Social scientists

Policy makers

Practitioners - NGO's

Private sector



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Invasive species in Belgium



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About BFIS

- [The Belgian Forum on Invasive Species](#)
- [The invasion process](#)
- [The *Harmonia* information system](#)
- [Alert, black and watch list of invasive species in Belgium](#)
- [Legal notice and citation](#)

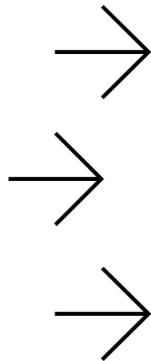
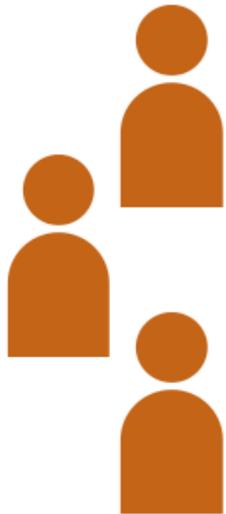


The Belgian Forum on Invasive Species

The Belgian Forum on Invasive Species

Facilitating the knowledge flow

Scientists



Harmonia+

PART 1. Biological identification

Q 1.1 The hazard is plant an animal.

Q 1.2 Provide the name of the hazard. Kik hier als u best wilt invoeren.

Q 1.2 Classification. Kik hier als u best wilt invoeren.

PART 2. Geographic identification

Q 2.3 Define the area under assessment. Kik hier als u best wilt invoeren.

PART 3. Establishment

Q 3.1 How likely is the hazard to become established in the area under assessment?
highly unlikely unlikely moderately likely likely

PART 4. Spread

Q 4.1 How strong is the hazard's capacity to spread?
very slow slow intermediate rapid

Q 4.2 Please provide a score for certainty

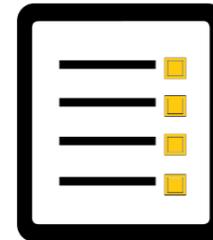
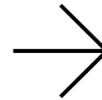
Q 4.3 If possible, provide references. Kik hier als u best wilt invoeren.

PART 5. Impacts

Q 5.1 The targets are within the human animal plant, ecological and/or crop

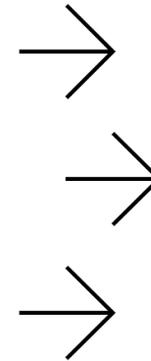
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Risk
assessment



Information
system

Decision makers

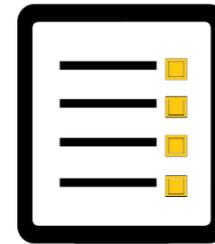
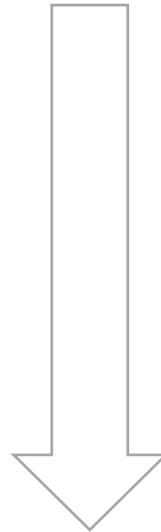




Development of decision support tools



Risk assessment protocols



Information system

Science-based approach needed

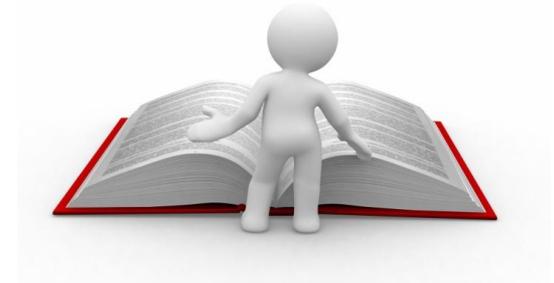


WTO – SPA standards

Risk analyses



+ Risk assessment



+ Risk management



+ Risk communication

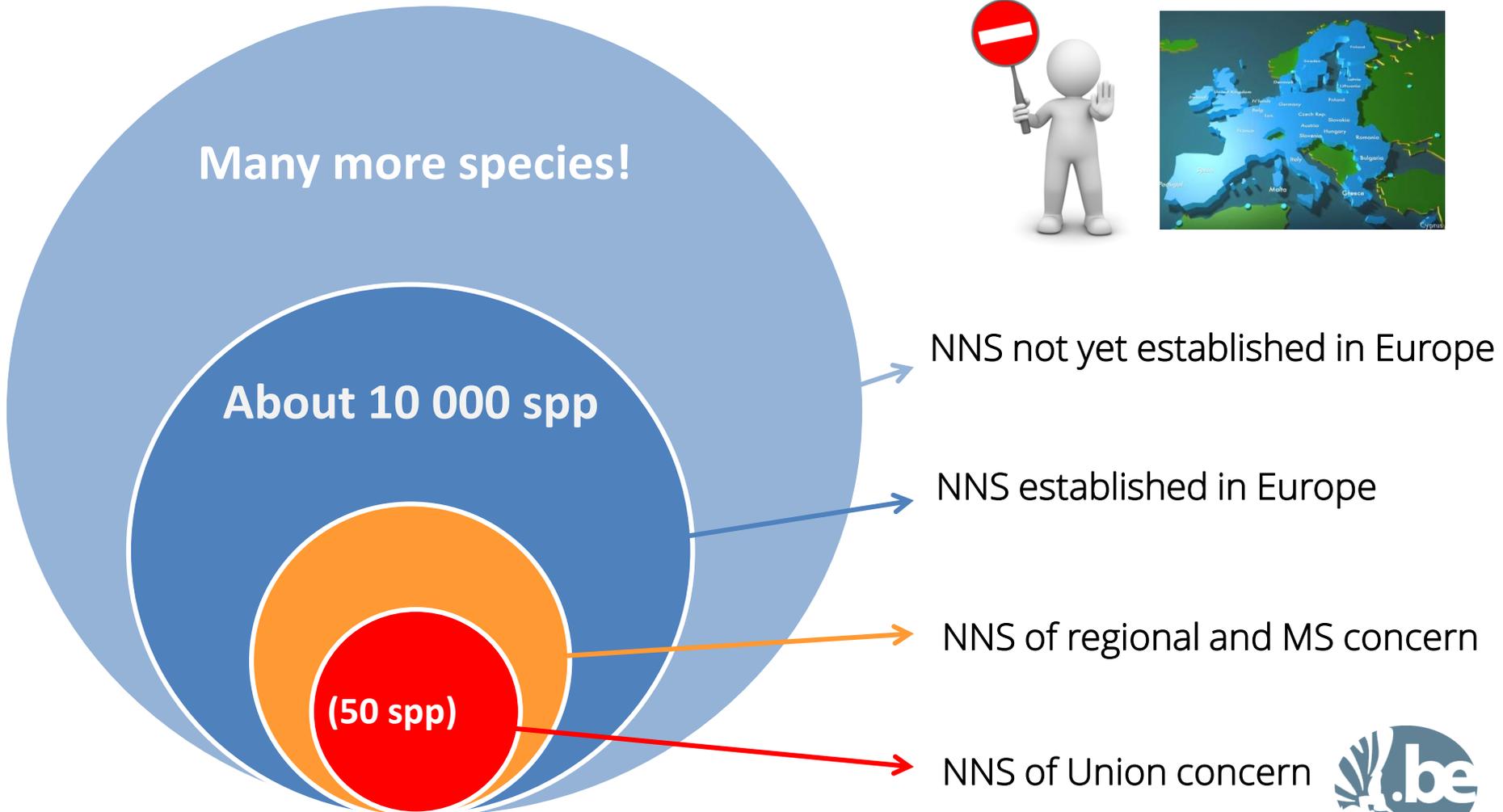


Risk analysis standards

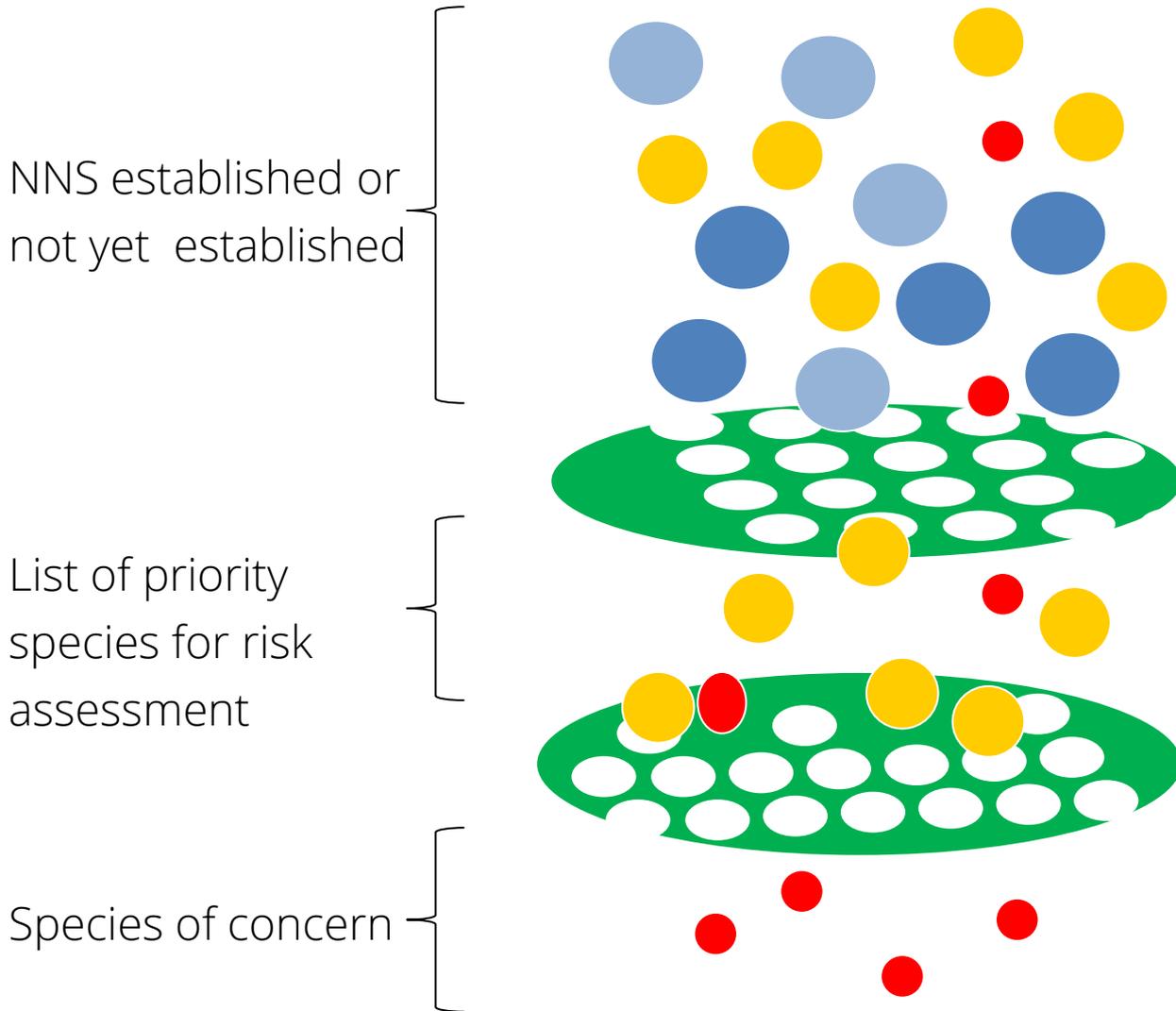
Framework



The Belgian two-steps approach



The Belgian two-steps approach



Horizon scanning and
prioritisation tools



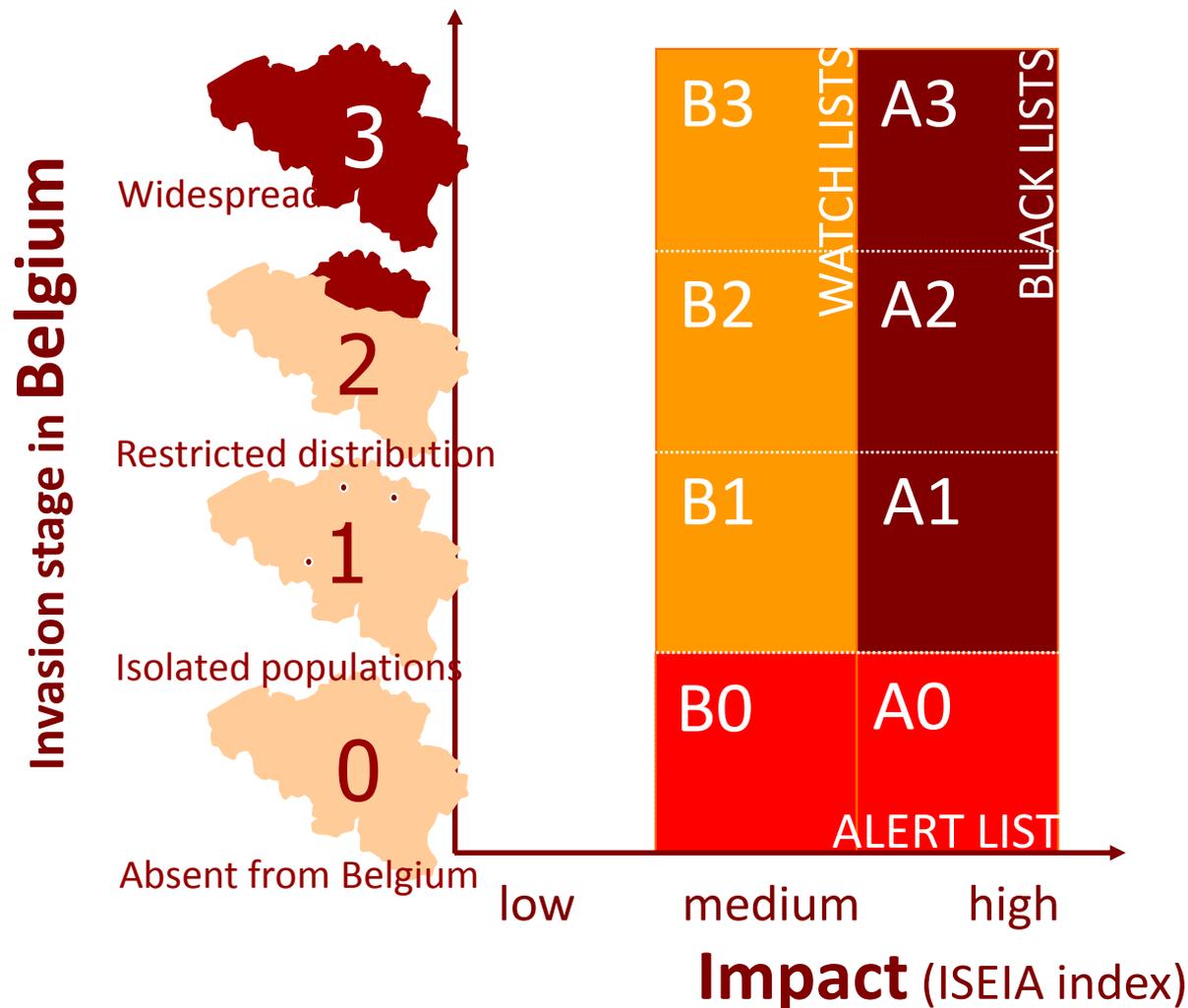
Detailed
risk assessment



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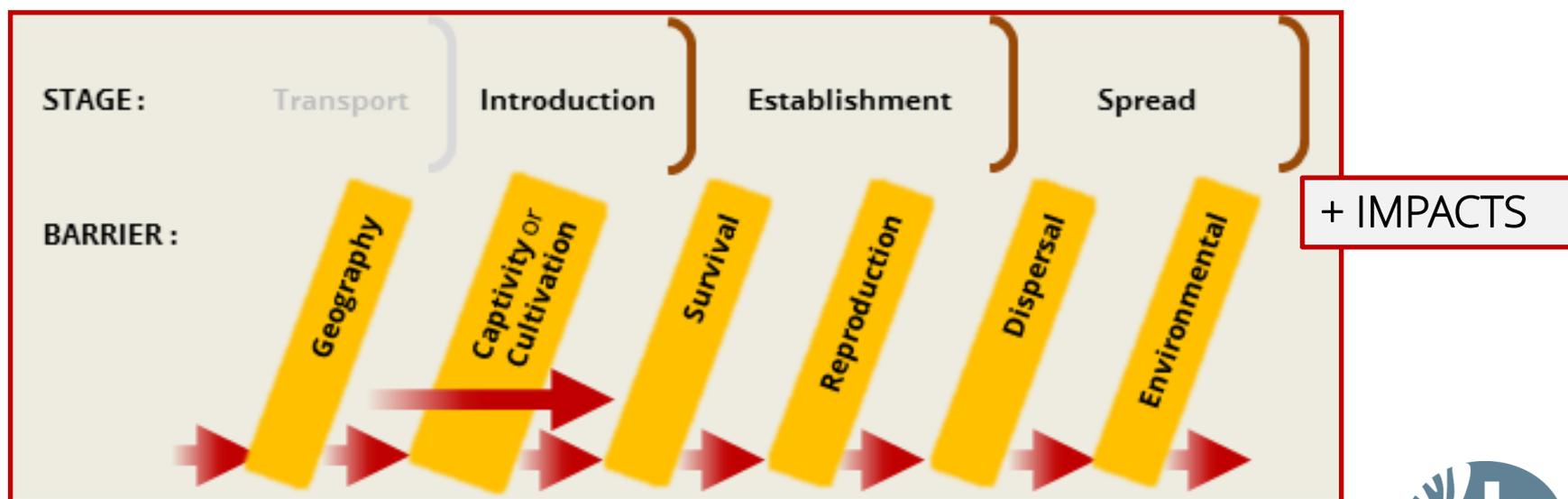
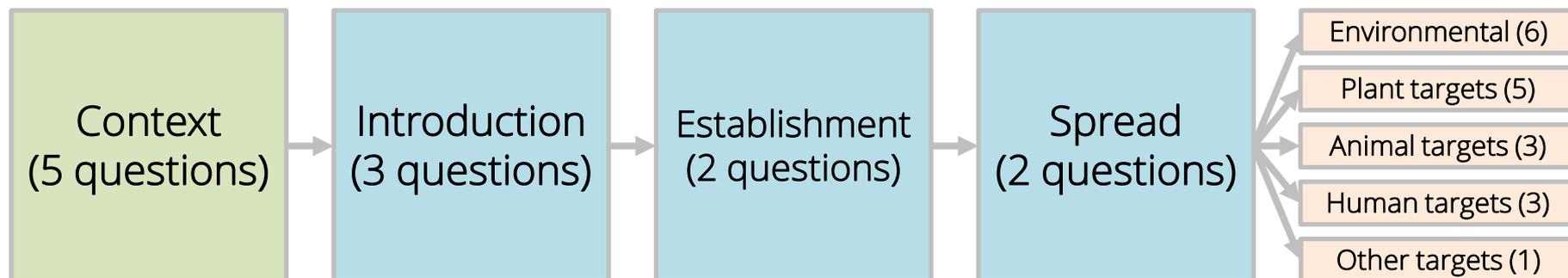
The Belgian prioritisation tools

ISEIA : Invasive Species Environmental Assessment



The Belgian prioritisation tools

The new *Harmonia+* protocols



Based on : Blackburn et al. (2011) A proposed unified framework for biological invasions. *Trends in Ecology and Evolution* 26 (7): 333-339.



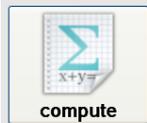
The Belgian prioritisation tools

The new *Harmonia+* protocols



Harmonia+

Harmonia+ is a first-line risk assessment scheme for potentially invasive species. It present a series of questions concerning an organism, the answers of which need to be provided by one or more assessors. Harmonia+ is described in full here <http://ias.biodiversity.be/harmoniaplus>. Additional information is described by D'hondt et al. (manuscript).



context introduction establishment spread environmental impacts plant impacts animal impacts human impacts other impacts **agg** **weights**



Section A0 - Context *

Questions from this module identify the assessor and the biological, geographical & social context of the assessment.

→ **a01. Provide the name(s) of the assessors:** *

Comments:

Provide a (the) name(s) for the person(s) performing the assessment.

→ **a02. Provide the name of the organism under assessment:** *



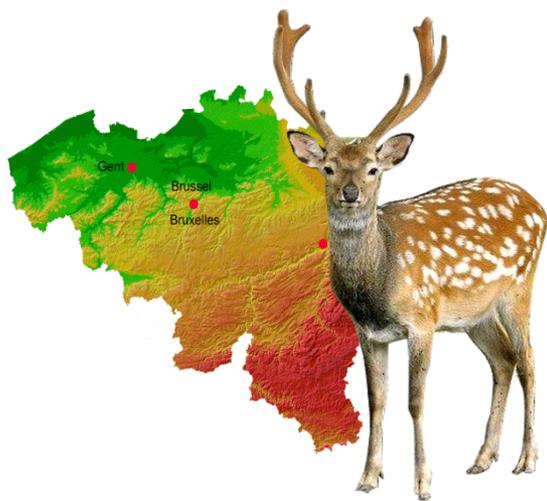
The Belgian risk analysis scheme

Support for the development of regulatory tools

Adoption of the “prevention is better than cure” principle

Preparation of detailed risk analysis reports to justify risk management measures:

- > import limitations (federal)
- > trade restrictions (regions)
- > holding conditions (regions)



Result of a joint effort provided by numerous scientists and policy makers in Belgium.



The Belgian risk analysis scheme

A large partnership between scientific institutes



The Belgian risk analysis scheme

STAGE 1: INITIATION

- Organism identity
- Organism distribution

STAGE 2: RISK ASSESSMENT

- Introduction in Belgium
- Establishment capacity
- Spread capacity
- Consequences of establishment



STAGE 3: RISK MANAGEMENT

- Relative importance of introduction pathways
- Effect of preventive actions (incl. trade restriction)
- Effects of control and eradication actions



The risk assessment exercise

Example derived from 5 test species

- Pre-identification of 23 non-native plant and animal species
- Trade restriction identified as an adequate risk management option for at least 19 organisms (80%)



N. Borel

Water primrose
(*Ludwigia grandiflora*)



R. Mutch

American bullfrog
(*Lithobates catesbeianus*)



J.C. Schou

Raccoon dog
(*Nyctereutes procyonoides*)



wikipedia

Louisiana crayfish
(*Procambarus clarkii*)



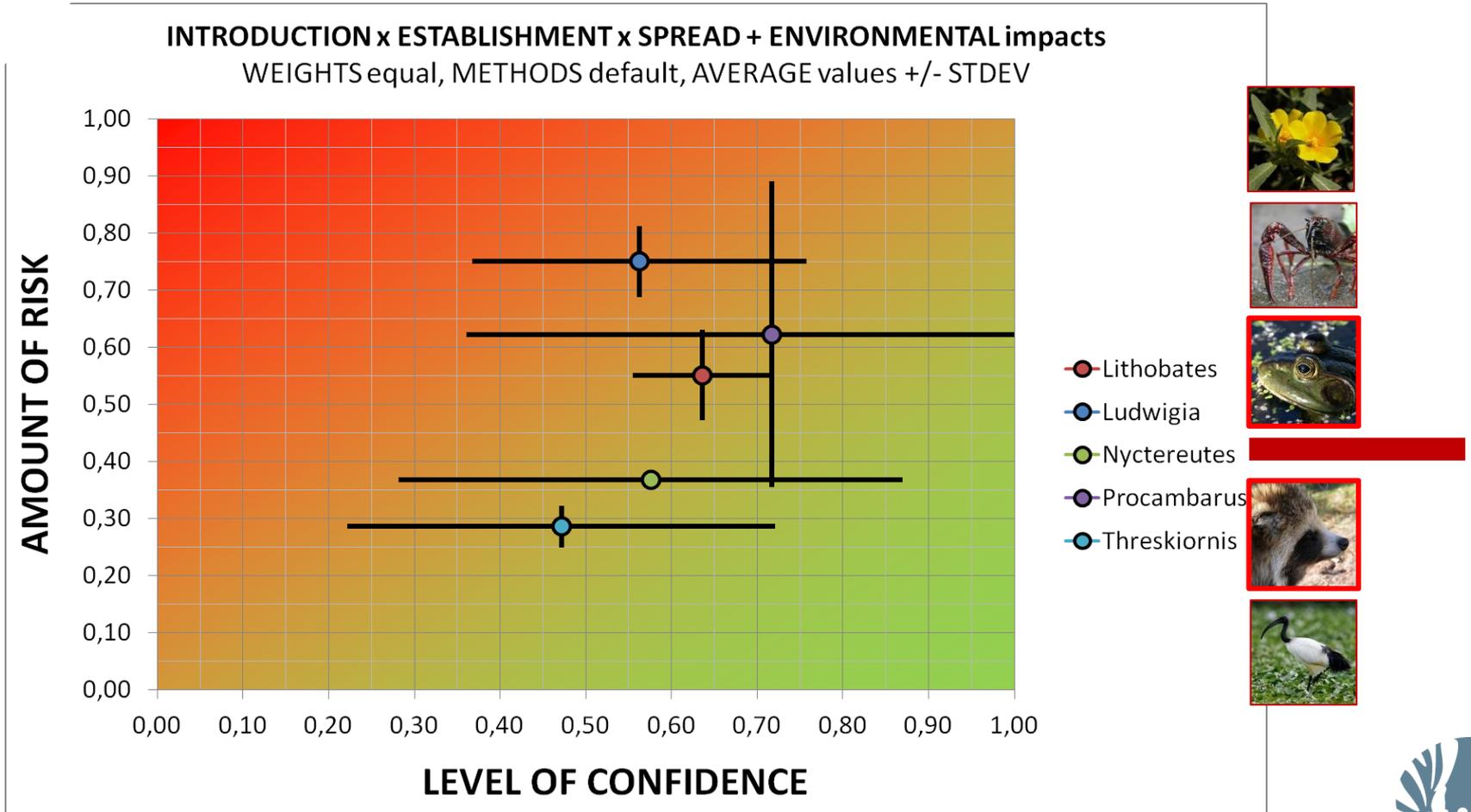
V. Onishchenko

Sacred ibis
(*Threskiornis aethiopica*)



The risk assessment exercise

Scoring environmental risks with *Harmonia+*





Species List

Welcome to **Harmonia**, an information system dedicated to alien species threatening native biodiversity in Belgium and in neighbour areas.

The species list presented hereafter can be sorted or filtered through different criteria including taxonomy, habitat, introduction date or hazard categories (black and watch lists). It gives access to detailed ecological information and references which have been used for assessing the environmental impact of the different species (see also the [ISEIA protocol](#)). Find more information about definitions, list categories, copyright and citation from [here](#).

Note that the species list is far to be complete and is updated on a regular basis. Today, only vascular plants and vertebrates have been subjected to risk assessment.

Harmonia includes **101 species** (44 on the **black list**, 37 on the **watch list** and 14 on the **alert list**).

Display: Mammals terrestrial Alert list species (A0)

Scientific Name	Common Name <input type="button" value="NL"/> <input type="button" value="v"/>	Taxonomic Group	Habitat	Since	Range	Category
<i>Callosciurus finlaysonii</i>	Thaise eekhoorn	Mammals	terrestrial			A0
<i>Cervus nippon</i>	Sikahert	Mammals	terrestrial			A0
<i>Muntiacus reevesi</i>	Chinese muntjak	Mammals	terrestrial			A0
<i>Mustela vison</i>	Amerikaanse nerts	Mammals	terrestrial			A0
<i>Castor carolinensis</i>	Grijze eekhoorn	Mammals	terrestrial			A0



Applications

Code of Conduct on ornamental plant species



Applications

Early warning and rapid response

Project Invasieve Exoten

inbo
natuurpunt

Nieuw waarschuwingssysteem

Probleemsoorten

Invasieve exoten vormen steeds vaker een probleem, in natuurgebieden, maar ook daarbuiten. Hoe langer het duurt voor een vestiging wordt opgemerkt, hoe groter de problemen, of hoe moeilijker en duurder de eventuele bestrijding wordt. Hoe sneller soorten worden opgemerkt, hoe sneller een beheerder zich kan informeren over te nemen maatregelen.

In Opdracht van ANB en INBO ontwikkelde Natuurpunt Studie een waarschuwingssysteem om meldingen van probleemsoorten sneller tot bij de terreinbeheerders te laten stromen. Dit gebeurde via een uitbreiding op www.waarnemingen.be. Terreinbeheerders kunnen zich er gratis inschrijven op een automatische melding via e-mail wanneer er in hun gebied een soort van de lijst met Invasieve exoten werd ingevoerd.

Niet alle Invasieve exoten zijn opgenomen. Er werd gekozen voor een beperkte lijst van goed herkenbare soorten, met een duidelijke impact op biodiversiteit, en die bovendien nog niet of nog maar beperkt aanwezig zijn in Vlaanderen, of al gevestigd zijn maar nog steeds sterk uitbreiden. Het is ook een pilootproject waarvan de ervaringen worden gebruikt om het hele proces van observatie en melding tot ingrijpen en opvolgen beter te stroomlijnen.

Waarnemingen doorgeven

Belangrijk en nuttig dus om jouw waarnemingen van exoten zo precies mogelijk in te voeren op [waarnemingen.be](http://www.waarnemingen.be). Voeg indien mogelijk ook een foto toe. De admins kijken deze waarnemingen extra aandachtig na. Als hulp bij de herkenning werden in het project herkenningsschetsen uitgewerkt met meer informatie over kenmerken, gelijkende soorten en problematiek. Deze zijn te vinden op <http://waarnemingen.be/exoten>.

Inschrijven op het alertstelsel doe je via http://waarnemingen.be/invasive_alert_invoeren.php

Trommelvlieg is groter dan oog bij mannetje Stierkikker

Kuilmeisa

Ondergedoken bladeren zijn fijn verdeeld

3 tot 5 cm lang

1 tot 3 cm lang

Bladen in paren (niet in kransen)

Waterwaaijer

Damshert

- Species selection;
- Volunteers involvement in monitoring;
- Fact sheets;
- Allows managers and decision makers to follow observations locally and regionally.
- www.waarnemingen.be/exoten
- www.observations.be/invasives



Regional cooperation



Belgium
Luxembourg
The Netherlands
Northern France
Western Germany

Need for regional cooperation

Maximise synergies



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Thank you !



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Service Public de Wallonie



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