Mobilizing evidence to improve IAS decision-making: the Belgian TrIAS workflow

Funded by the Belgian Science Policy Office – Brain call
When policy needs evidence …

Information system

Early warning systems

Risk assessment protocol
When policy needs evidence …

Information system

Early warning systems

Risk assessment protocol
Cycle

Empowering Citizens to Inform Decision-Making as a Way Forward to Support Invasive Alien Species Policy

Quentin Groom, Diederik Strubbe, Tim Adriaens, Amy J.S. Davis, Peter Desmet, Damiano Oldoni, Lien Reyserhove, Helen E. Roy, Sonia Vanderhoeven

Citizen Science: Theory and Practice, 4(1), 33. DOI: http://doi.org/10.5334/cstp.238
For each expert checklist and each occurrence data source
FAIR Open Data


Filip Verloove, Quentin Groom, Dimitris Brosens, Peter Desmet, Lien Reyserhove

Botanic Garden Meise. Checklist dataset
https://doi.org/10.15468/wtda1m
accessed via GBIF.org on 2020-06-27.
Belgian unified checklist
Belgian unified checklist

Global Register of Introduced and Invasive Species - Belgium

Occurrences
Belgian unified checklist

Global Register of Introduced and Invasive Species - Belgium

GBIF - Global Biodiversity Information Facility

Occurrence cube
Occurrence cubes: a new paradigm for aggregating species occurrence data

Damiano Oldoni, Quentin Groom, Tim Adriaens, Amy J.S. Davis, Lien Reyserhove, Diederik Strubbe, Sonia Vanderhoeven, Peter Desmet

bioRxiv 2020.03.23.983601; doi: https://doi.org/10.1101/2020.03.23.983601
Occurrence cube

1. checklist sources
2. occurrence sources
3. dynamic indicators
4. list of species

volunteers, citizen scientists, conservationists, ...

TrIAS
Tracking Invasive Alien Species
Occurrence cube

Checklist-based policy indicators

List of PRA candidates based on emergence ranking
List of PRA candidates based on emergence ranking

Species dropdown
Select a species from the dropdown. All graphs, maps, and tables will be rendered for the selected species.

Impatiens glandulifera Royce

Emergence evaluation period
The emergence status for the species will be assessed for this period.

TriAS
Tracking Invasive Alien Species
Checklist-based policy indicators

Nb of new introductions/year
Checklist-based policy indicators

Cumulative number of alien species introductions

Cumulative number of alien species

- Animalia
- Plantae
Checklist-based policy indicators

Pathways analysis

Number of introduced taxa

- **release**
- **escape**
- **contaminant**
- **stowaway**
- **corridor**
- **unaided**
- **unknown**

Plants

- release
- escape
- contaminant
- stowaway
- corridor
- unaided
- unknown

Number of introduced taxa

- release
- escape
- contaminant
- stowaway
- corridor
- unaided
- unknown

No Chordata

- release
- escape
- contaminant
- stowaway
- corridor
- unaided
- unknown

Number of introduced taxa

- release
- escape
- contaminant
- stowaway
- corridor
- unaided
- unknown

Chordata

- release
- escape
- contaminant
- stowaway
- corridor
- unaided
- unknown

Number of introduced taxa

- release
- escape
- contaminant
- stowaway
- corridor
- unaided
- unknown

TrIASS Tracking Invasive Alien Species
Checklist-based policy indicators

Pathways analysis

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<table>
<thead>
<tr>
<th>Pathways</th>
<th>Number of introduced taxa</th>
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<td>stowaway</td>
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<tr>
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</table>
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TrIAS
Tracking Invasive Alien Species
Risk maps

Occurrence

Current risk map

Risk map confidence

Risk map - Climate change increase
Risk maps

Harmonia+ Risk assessment

Occurrence

Current risk map

Risk map confidence

Risk map - Climate change increase
Thank you!