Managing global and country data on invasive alien species

Over- and under-representation in expected naturalized alien flora of the world

National monitoring systems

- Data feedbacks reinforce the system value
- Species occurrence across network of LTN sites
- Increasing spatial resolution of information
- Generation of time series as the system develops


GROUP ON EARTH OBSERVATIONS

Latombe et al. 2016. Biological Conservation
Global Register of Introduced and Invasive Species

- Country Checklists for 196 countries
- Includes information on evidence of impact
- Underway to include: pathways of introduction, EICAT mechanisms and severity categories, checklists for protected areas

Global Register of Introduced and Invasive Species
Value of GRIIS data in assessments of invasion status and trends

Post-2020 Global Biodiversity Framework – Target 6

Headline Indicator: Rate of Spread

Infrastructure, long-term sustainability and people

Policy
CBD

Assessment
IPBES

Governing biodiversity knowledge

Data integration, analysis and delivery
GEO BON

Monitoring
BONs

Scientific/Technical

Regulation
Enforcement
Compliance

Governing biodiversity knowledge

Incentivising strategic behaviour

Collaboration

(Sutherland 2004; Primmer et al. 2015)
1. Taxonomic harmonisation for IAS
2. Helping to communicate the appropriate use and meaning of these data
3. Ecological metadata-finer scale
4. Stable and ongoing support for maintaining and updating IAS occurrence data as the

Backbone for national scale surveillance and prioritization and for tracking global invasions
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Resources and further information:
- Invasion indicators: https://bit.ly/3hUTIoJ
- GRIIS methods: https://go.nature.com/2yYfcFh
- Data workflow: https://bit.ly/3k3HDLI

https://bit.ly/3tfNZd0
Backbone for national scale surveillance and prioritization and for tracking global invasions

1. Taxonomic harmonisation for IAS
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Top 10 invasive alien insects in GRIIS by number of countries in which they occur and have an impact

<table>
<thead>
<tr>
<th>Species</th>
<th>Invasive alien insect</th>
<th>Number of country occurrences</th>
<th>No. countries with impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paratrechina longicornis</td>
<td>Longhorn crazy ant</td>
<td>80</td>
<td>0</td>
</tr>
<tr>
<td>Tapinoma melanocephalum</td>
<td>Ghost ant</td>
<td>72</td>
<td>32</td>
</tr>
<tr>
<td>Aedes albopictus</td>
<td>Asian tiger mosquito</td>
<td>62</td>
<td>24</td>
</tr>
<tr>
<td>Pheidole megacephala</td>
<td>African big-headed ant</td>
<td>52</td>
<td>29</td>
</tr>
<tr>
<td>Aedes aegypti</td>
<td>Yellow fever mosquito</td>
<td>47</td>
<td>0</td>
</tr>
<tr>
<td>Culex quinquefasciatus</td>
<td>Southern house mosquito</td>
<td>46</td>
<td>0</td>
</tr>
<tr>
<td>Monomorium floricola</td>
<td>Flower ant</td>
<td>45</td>
<td>0</td>
</tr>
<tr>
<td>Icerya purchasi</td>
<td>Cottony cushion scale</td>
<td>44</td>
<td>0</td>
</tr>
<tr>
<td>Bemisia tabaci</td>
<td>Silverleaf whitefly</td>
<td>41</td>
<td>14</td>
</tr>
<tr>
<td>Ceratitis capitata</td>
<td>Mediterranean fruit fly</td>
<td>41</td>
<td>14</td>
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<td>...</td>
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