

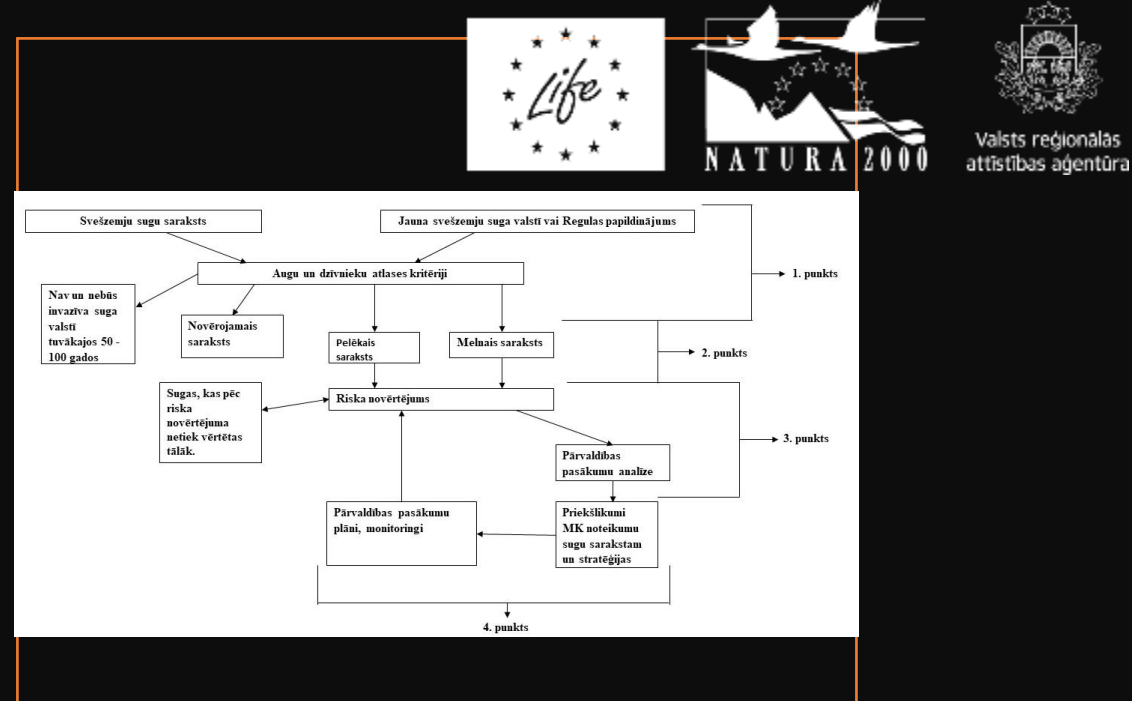
Evaluation of risk assessments for 24 invasive species in Latvia. Main threats and challenges.

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Risk assessments carried out in LIFE Integrated project: Optimising the Governance and Man-
of the Natura 2000 Protected Areas Network in Latvia LIFE19 IPE/LV/000010 C5.2 activity



Few important points

- New guidelines for invasive species inclusion in national invasive species list
- Until this moment only one official invasive species in law - *Heracleum sosnowskyi*



Selecting species

- Overall 84 animal and 73 plant species was evaluated by invasive animal and plant criteries 33 animal and 63 plant species was assessed as invasive in Latvia, from which 12 animal and 12 plant species was chosen for risk assessment evaluation
- To evaluate risk assessment from 24 species 12 was widely distributed in country and 12 was recently or not yet occurring in country



Nyctereutes procyonoides

Photo: V. Skuja



Procyon lotor

Photo M. Gēbers



Pseudorasbora parva

Photo: A. Harka



Perccottus glenni

Photo: R.Kozlovsak



Pelodiscus sinensis

Photo: G. Mazza



Trachamys scripta elegans

Photo: M. Pupiņš



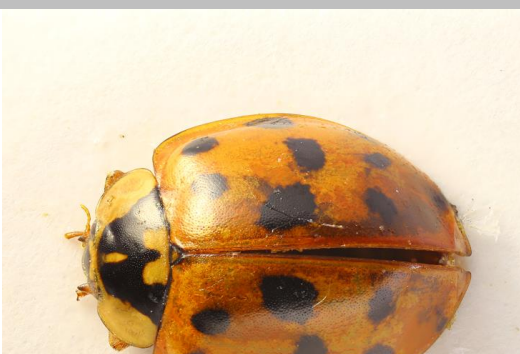
Faxonius limosus

Photo: A. Eglītis



Procambarus clarkii

Photo M. Murphy



Harmonia axyridis

Photo: M. Balalaikins



Agrilus planipennis

Photo: S. Luk



Krynickyllus melanocephalus

Photo: V. Pilāts



Arion vulgaris

photo: D. Pilāte



Acer negundo
Photo: S. Rutkovska



Bidens frondosa
Photo: F. Mayfield



Lactuca tatarica
Photo: E.Andruškeviča-Jonāne



Reynoutria japonica
Photo: O. Girča



Rosa rugosa
Photo: S. Rutkovska



Solidago canadensis
Photo: S. Rutkovska



Pennisetum setaceum
Photo: F & K Starr



Galega orientalis
Photo: A. Salo



Elodea nuttallii
Photo: C. Fischer



Asclepias syriaca
Photo: S. Rutkovska



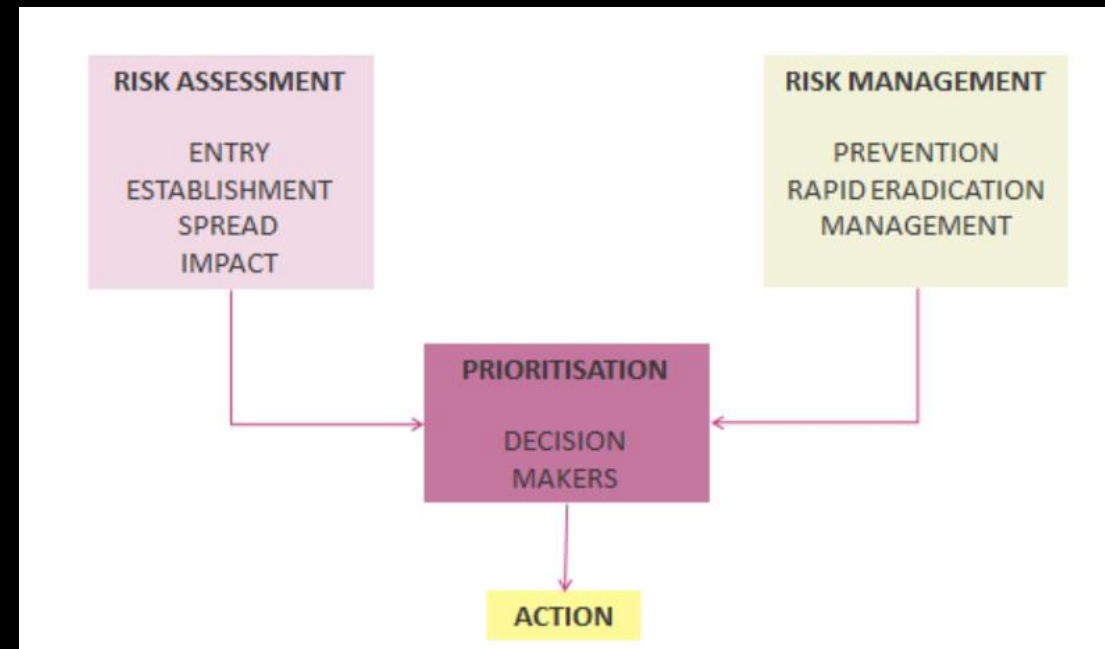
Amelanchier spicata
Photo: S. Rutkovska



Impatiens glandulifera
Photo: S. Rutkovska

Risk assessment

- IMPACT!!
- RISK MANAGEMENT!!



Impact from invasive animal species

Species	Native species	Diseases	Ecosystems	Ecosystem services	Economical losses: impact	Economical losses: management	Human health
<i>Nyctereutes procyonoides</i>	Average	yes	no	low	low	low	High
<i>Procyon lotor</i>	Average	yes	no	low	high	low	high
<i>Pseudorasbora parva</i>	Average	yes	yes	high	low	low	No
<i>Perccottus glenni</i>	High	no	yes	low	low	low	No
<i>Pelodiscus sinensis</i>	High	yes	yes	low	none	low	Low
<i>Trachamys scripta</i>	High	yes	no	low	none	low	Low
<i>Faxonius limosus</i>	High	yes	yes	low	low	low	No
<i>Procambarus clarkii</i>	High	yes	yes	average	average	average	average
<i>Harmonia axyridis</i>	High	yes	no	average	average	average	low
<i>Agrilus planipennis</i>	High	yes	no	average	high	average	No
<i>Krynockillus melanocephalus</i>	High	no	no	low	low	low	No
<i>Arion vulgaris</i>	High	yes	no	low	low	average	Low

Impact from invasive plant species

Species	Native species	Diseases	Ecosystems	Ecosystem services	Economical losses: impact	Economical losses: management	Human health
<i>Elodea nuttalii</i>	average	no	yes	average	low	average	No
<i>Rosa rugosa</i>	High	no	yes	low	average	average	No
<i>Acer negundo</i>	High	No	yes	average	low	average	Low
<i>Asclepias syriaca</i>	High	Yes	yes	low	Unknown	low	Low
<i>Solidago canadensis</i>	High	No	yes	average	low	average	Low
<i>Bidens frondosa</i>	High	No	yes	average	low	low	Low
<i>Amelanchier spicata</i>	High	No	yes	low	low	average	No
<i>Pennisetum setaceum</i>	High	No	yes	average	average	average	No
<i>Lactuca tatarica</i>	Average	No	yes	average	Unknown	low	No
<i>Impatiens glandulifera</i>	High	no	yes	low	low	average	No
<i>Galega orientalis</i>	No	no	no	no	no	low	No
<i>Reynoutria japonica</i>	High	no	yes	low	low	average	No

Overall impact

Native species	High	High
Diseases	No	Yes
Ecosystems	Yes	Partly
Ecosystem services	Average	Low
Economical losses: impact	Low	Low
Economical losses: management	Average	Low
Human health	Low	Low

Risk management – challenges!

Lack of effective management methods

Hard to monitor management effectiveness for hidden lifestyle species

COSTS!!!
Studies with both management costs and economical losses from species are most needed, there are lack of such studies.

Encouraging studies!



- To plan management its most crucial to know its costs and benefits!
- While for most invasive species economical loss from impact and management costs are not known or are unclear!
- We would like to implefy the need and encourage studies about invasive species that are related to management costs and several costs and information need to be divided due to differences in countries:
 - Personal payment per hour
 - Inventory costs per hour
 - Recompense (if there are any)
 - Management costs per hour
 - Permissions
 - eradication cost per m2
 - time neccesary to eradicate m2

Thanks for your attention!

