

Is it really there or not?

Updating the common ragweed (*Ambrosia artemisiifolia* L.) distribution in Southern Belgium

Ragweed Symposium—14thSeptember 2020

Arnaud Monty; Sylvain Mahieu; Adrien Delforge

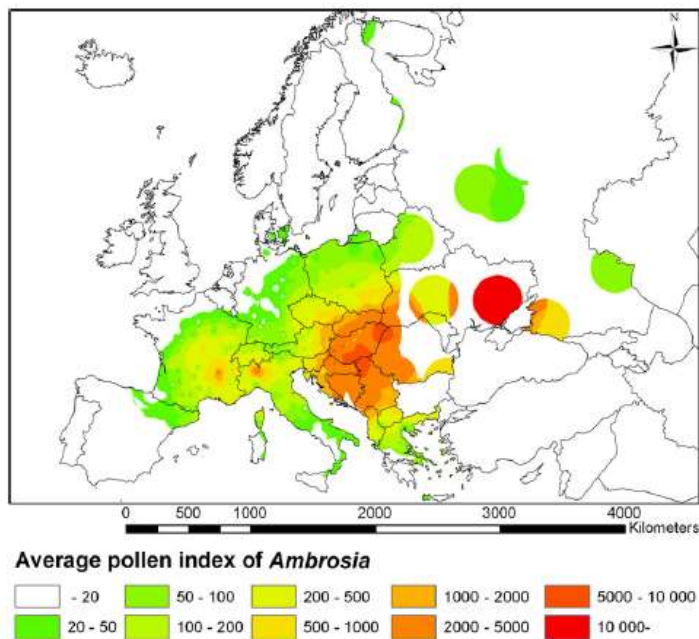


**Observatoire wallon des
Ambroisies**

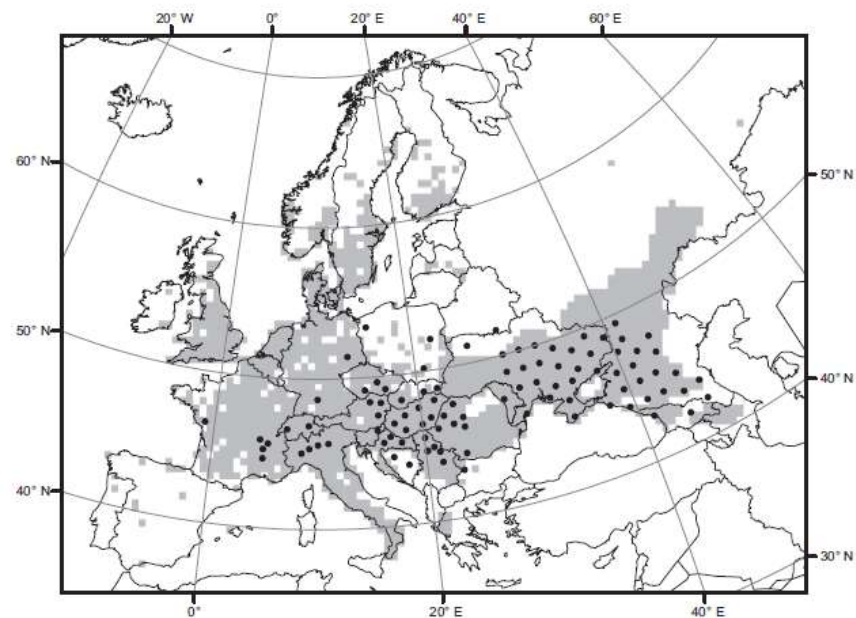
Southern Belgium: meeting the invasion front

Ragweed species, in particular *Ambrosia artemisiifolia*, are expected to expand northwards

The species is already present, but the level of invasion is poorly documented...



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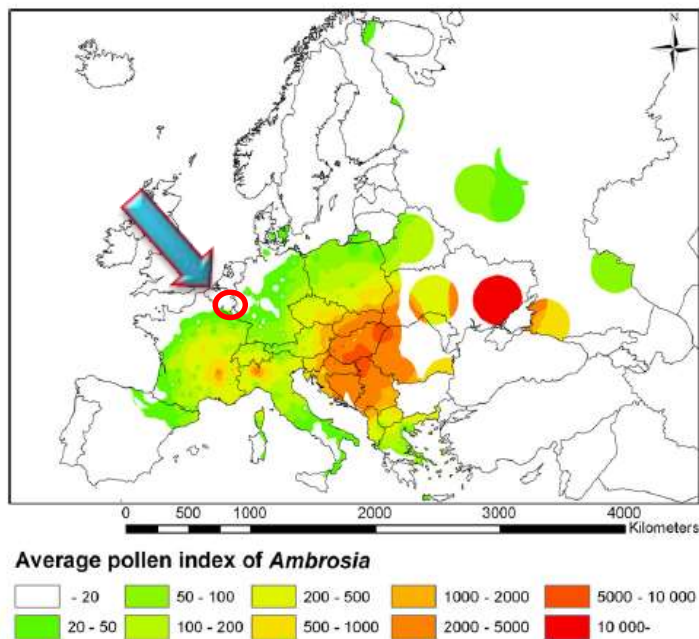


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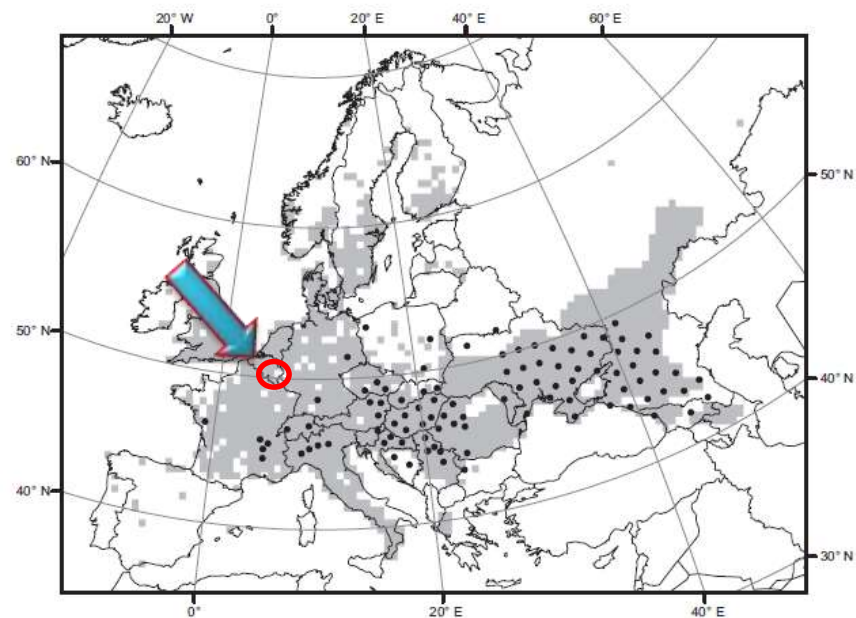
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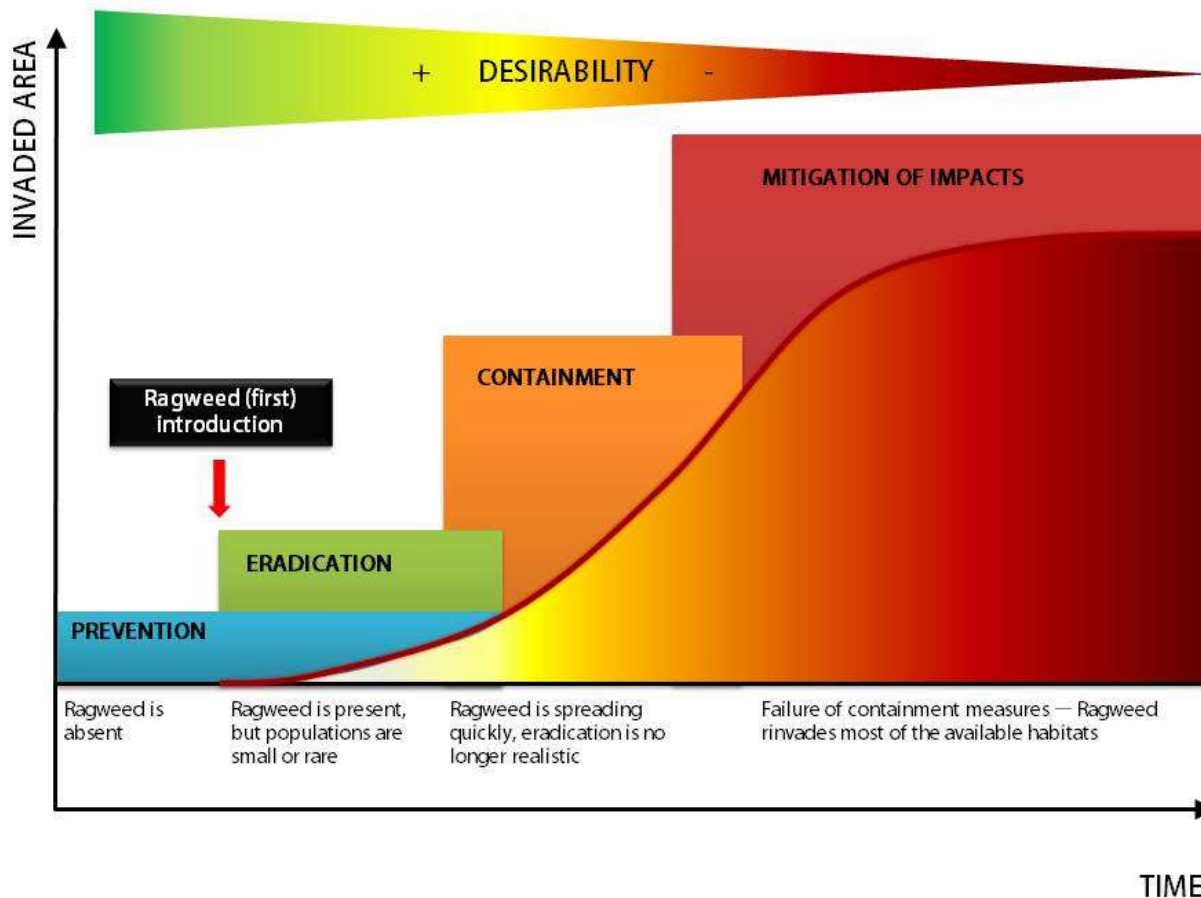


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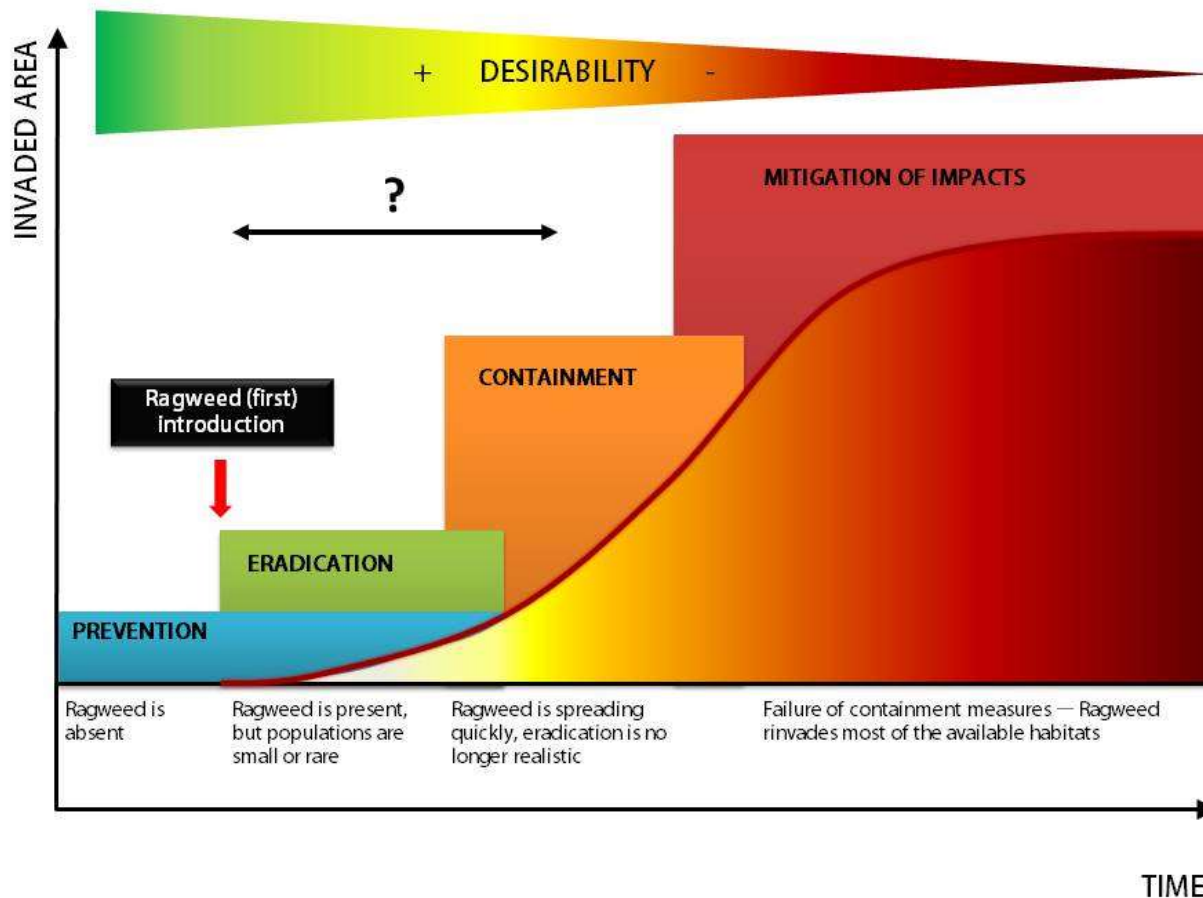


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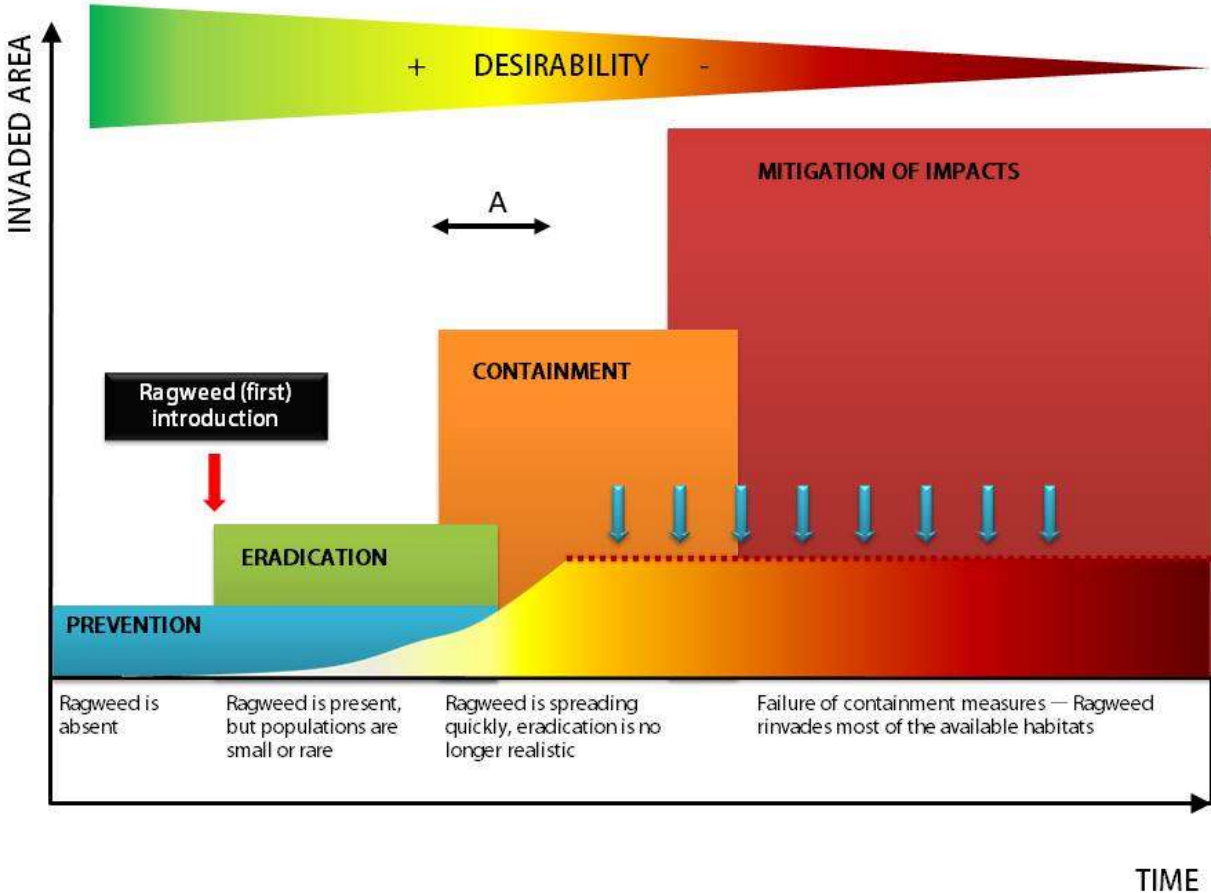
Southern Belgium: what strategy?



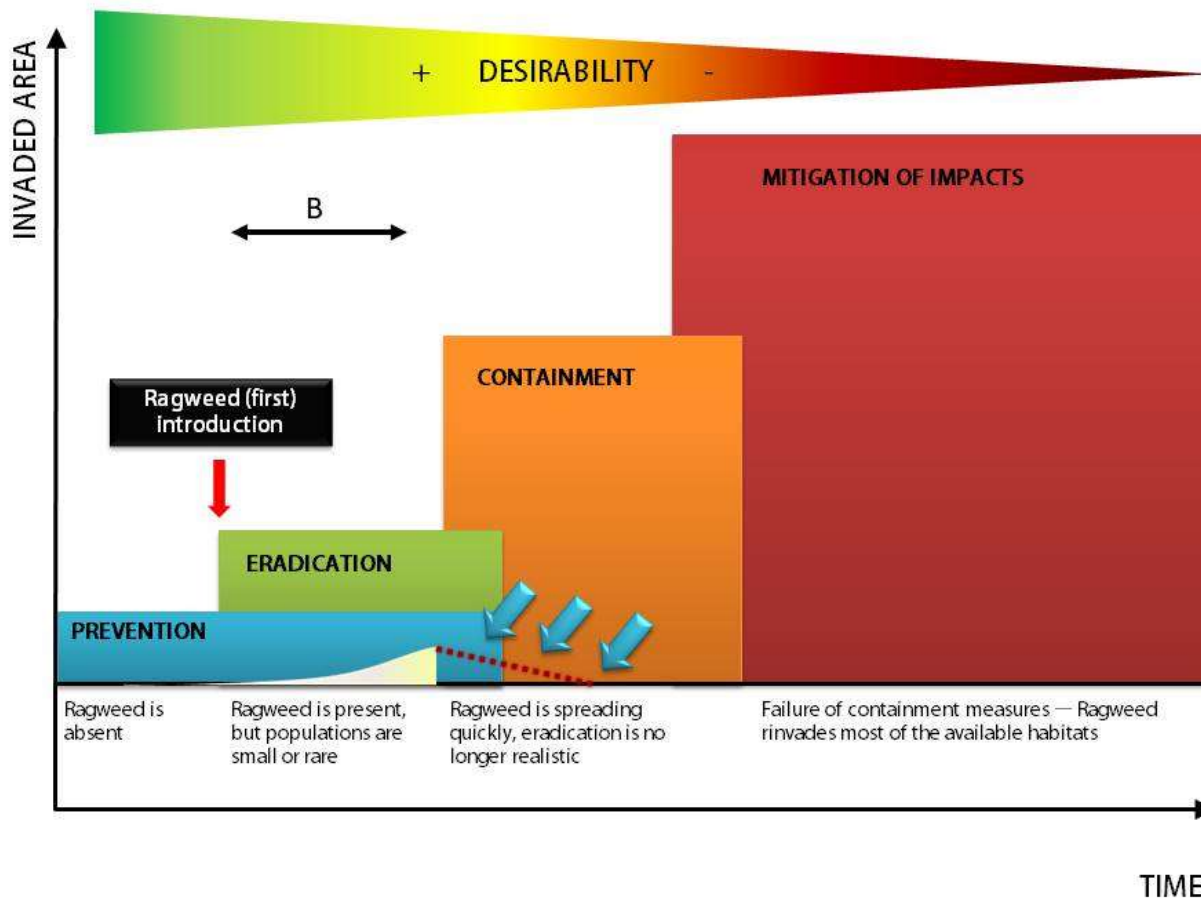
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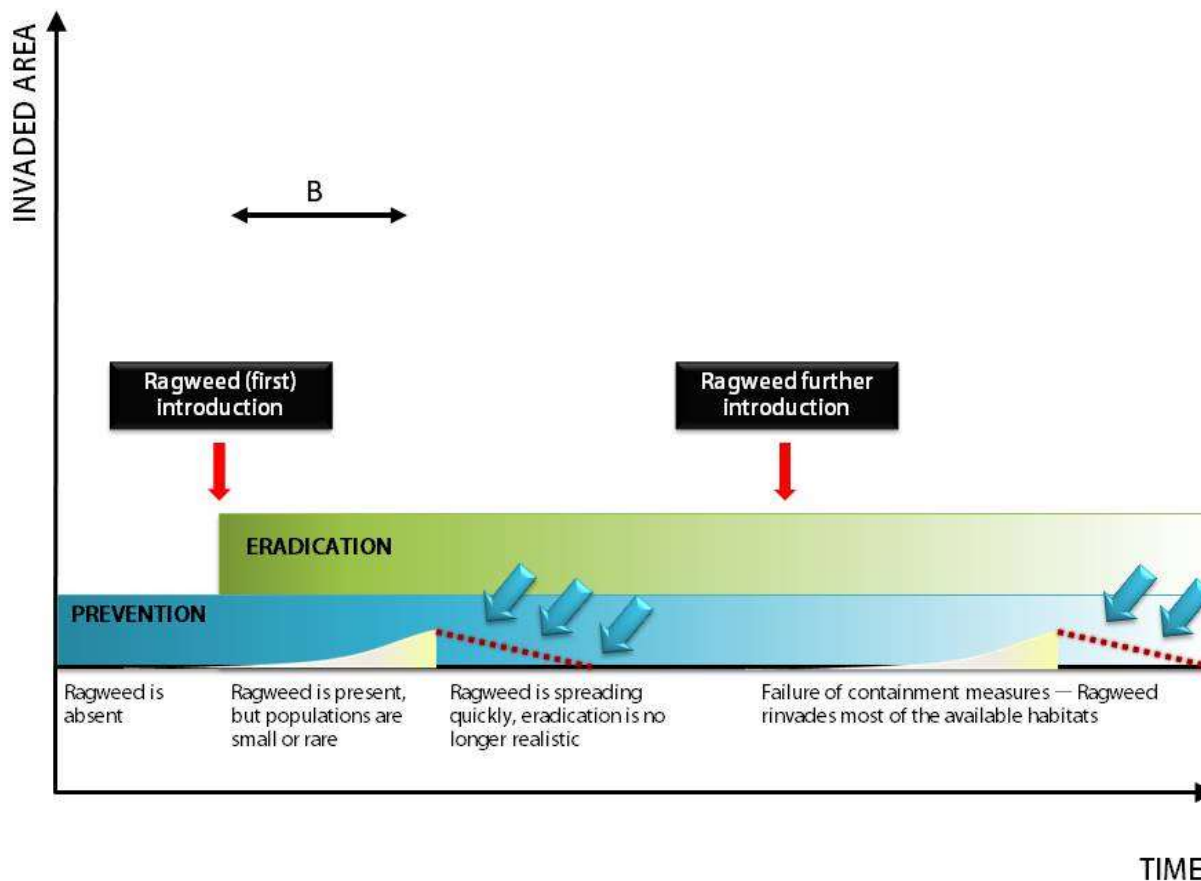
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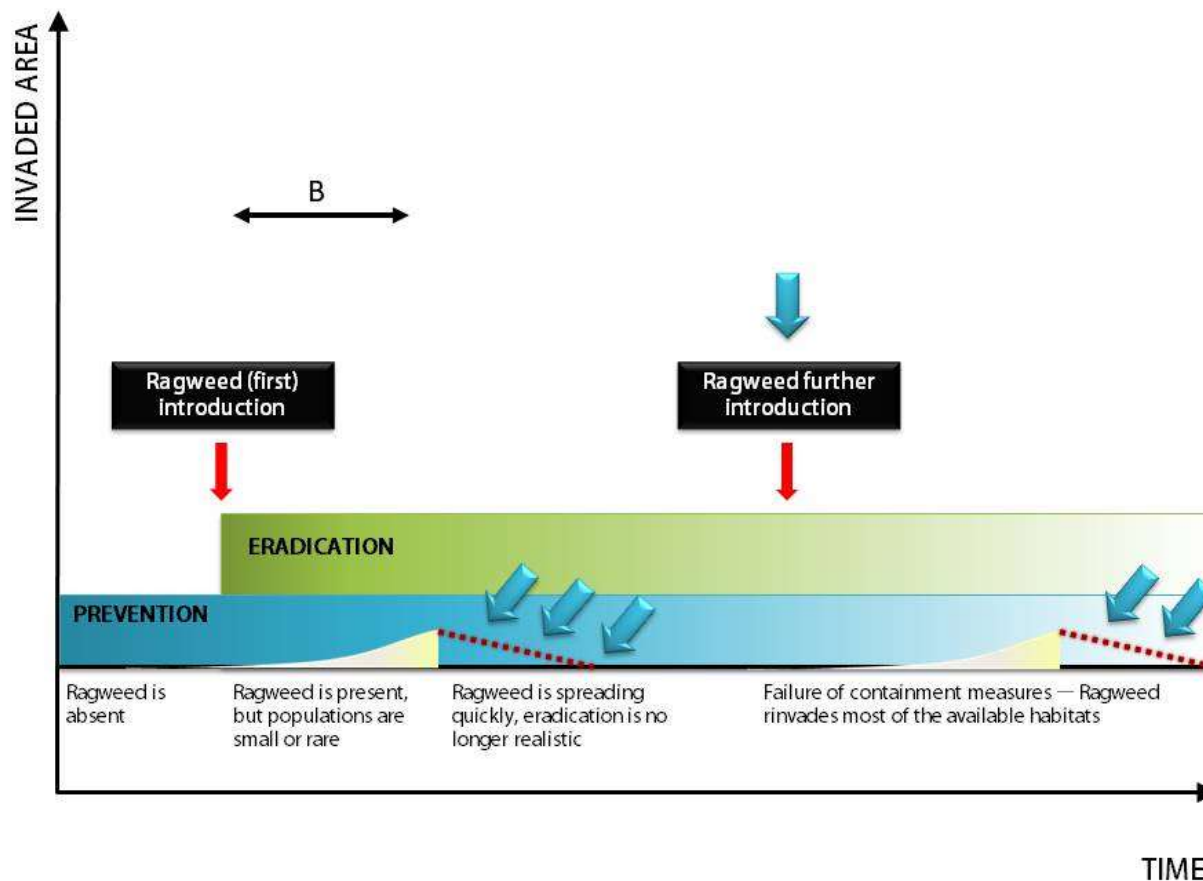
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The Walloon Ragweed Observatory



Observatoire wallon des
Ambrosies

- ✓ Communication and awareness raising
- ✓ Update of the invasion level and definition of management strategies

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Objectives

To have a clearer and up-to-date picture of the situation in terms of number, size and location of the populations

To highlight the areas most suitable for the species

Method

- All existing occurrence (2000 -2020) data gathered from different databases (Walloon Atlas of the Flora; iNaturalist; Observation.org)
- Communication actions to have more recording of ragweed occurrence
- Elimination of doublons

➔ Map of populations that were once recorded

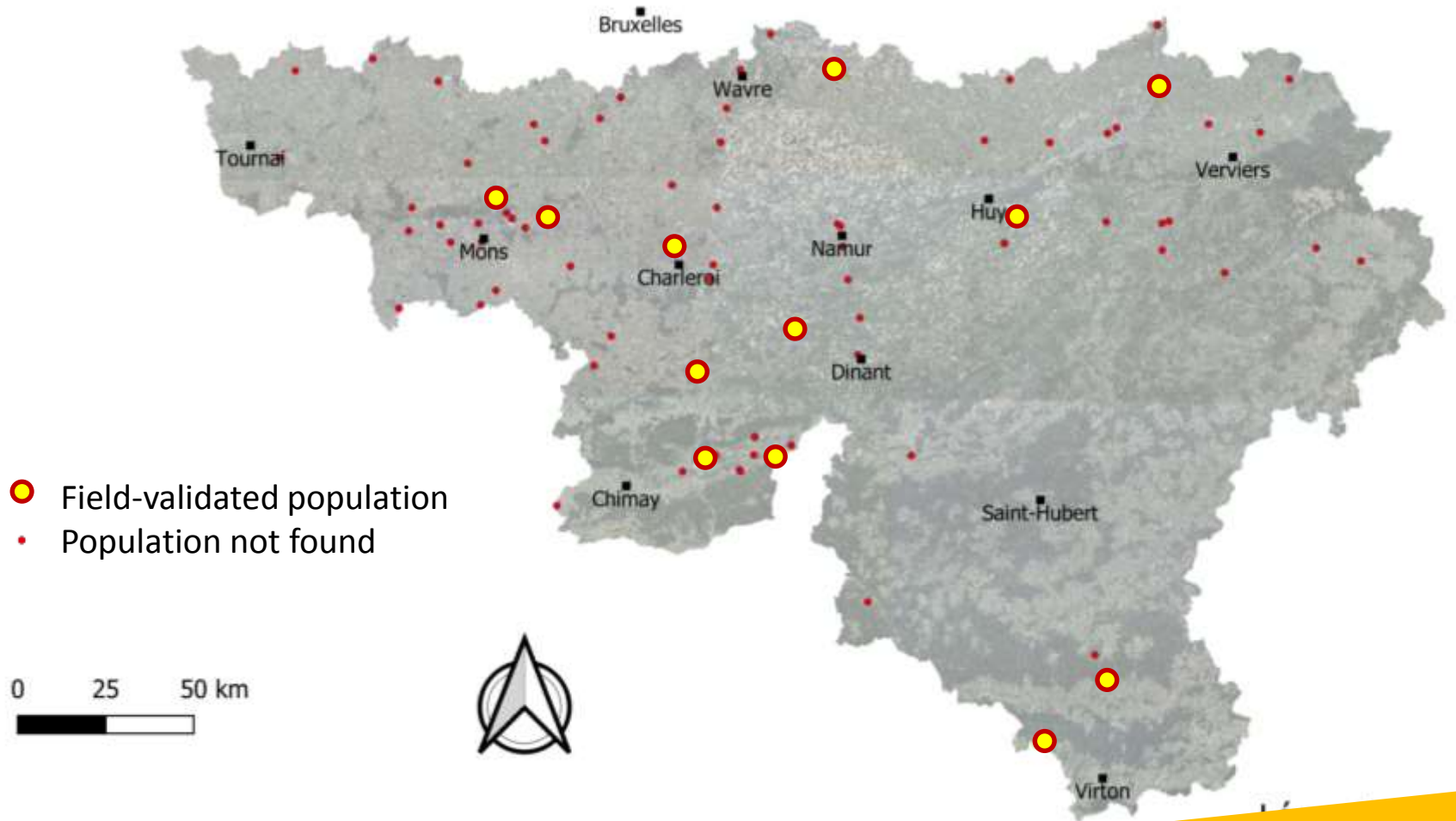
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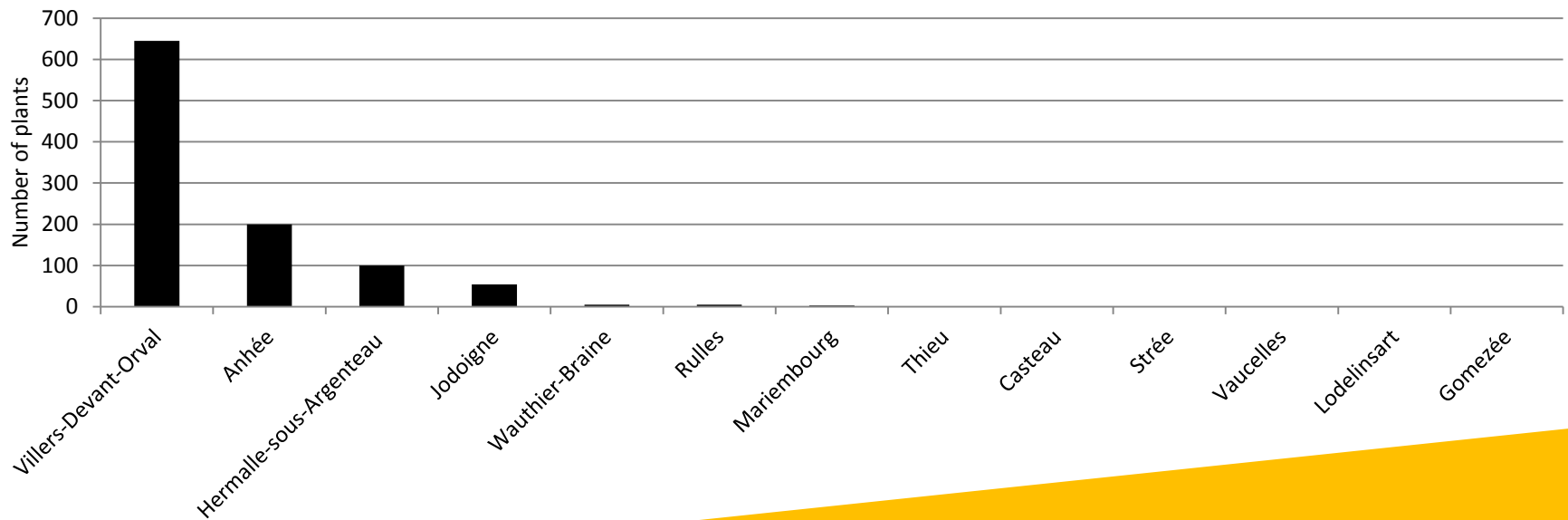
- Field observation: Number of individuals and likely introduction pathways
 - ➔ minimum 4 hours.man per population
- Maxent modelling:
 - ➔ Climatic envelope
 - ➔ Environmental niche

Results



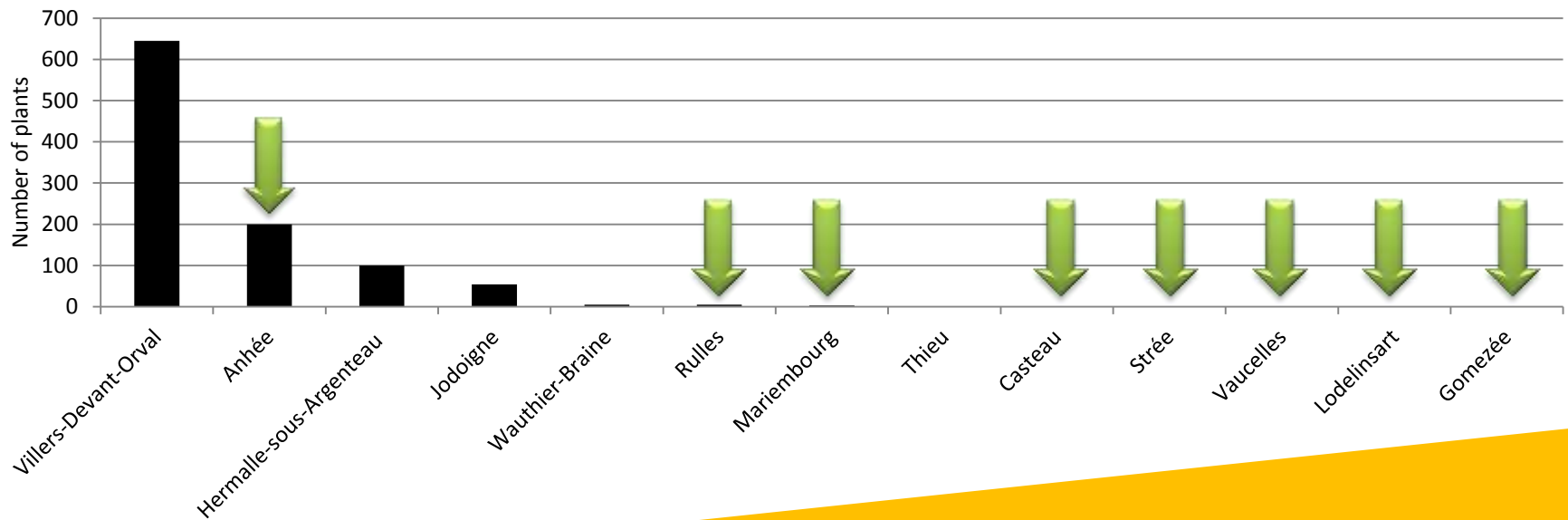
Results

- 80 populations recorded over the last 20 years
- 69 visited so far...
... but only 13 still present in the field (~19%)
- Many small populations (➔ managed)

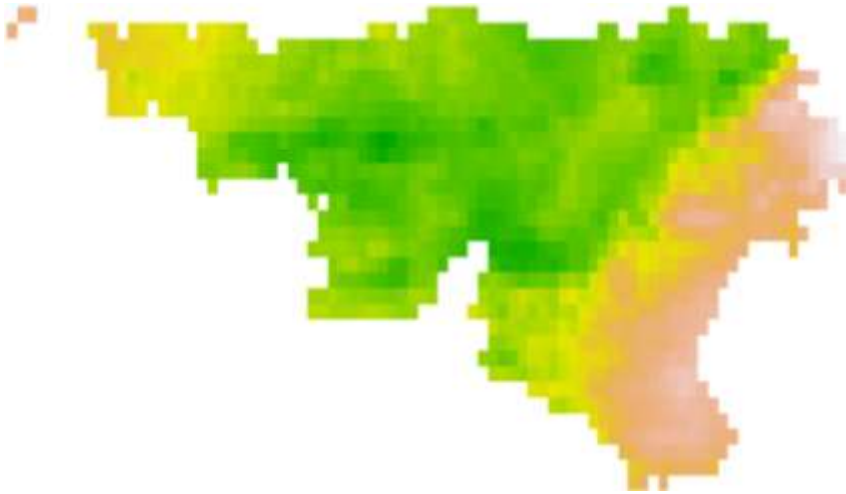


Results

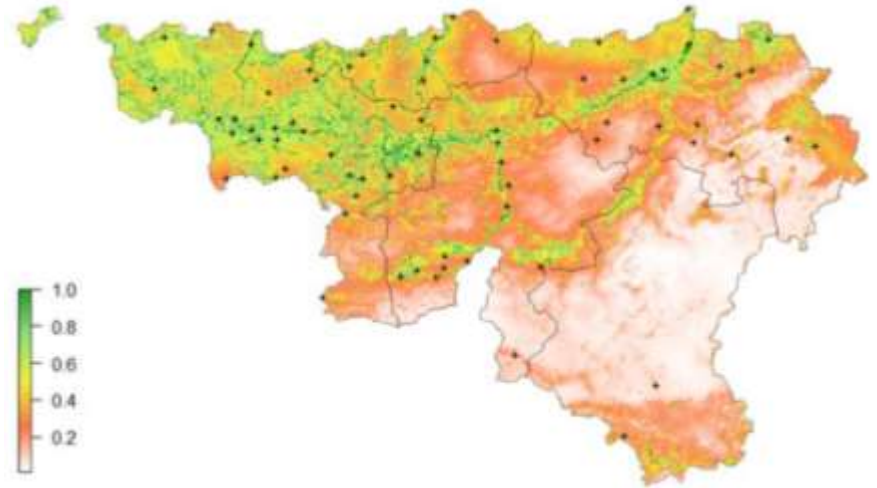
- Among the « populations not found», several (small) ones had been managed BEFORE our visit
- Among the 13 « field-validated populations», 8 had a clear link with bird seeds



Results

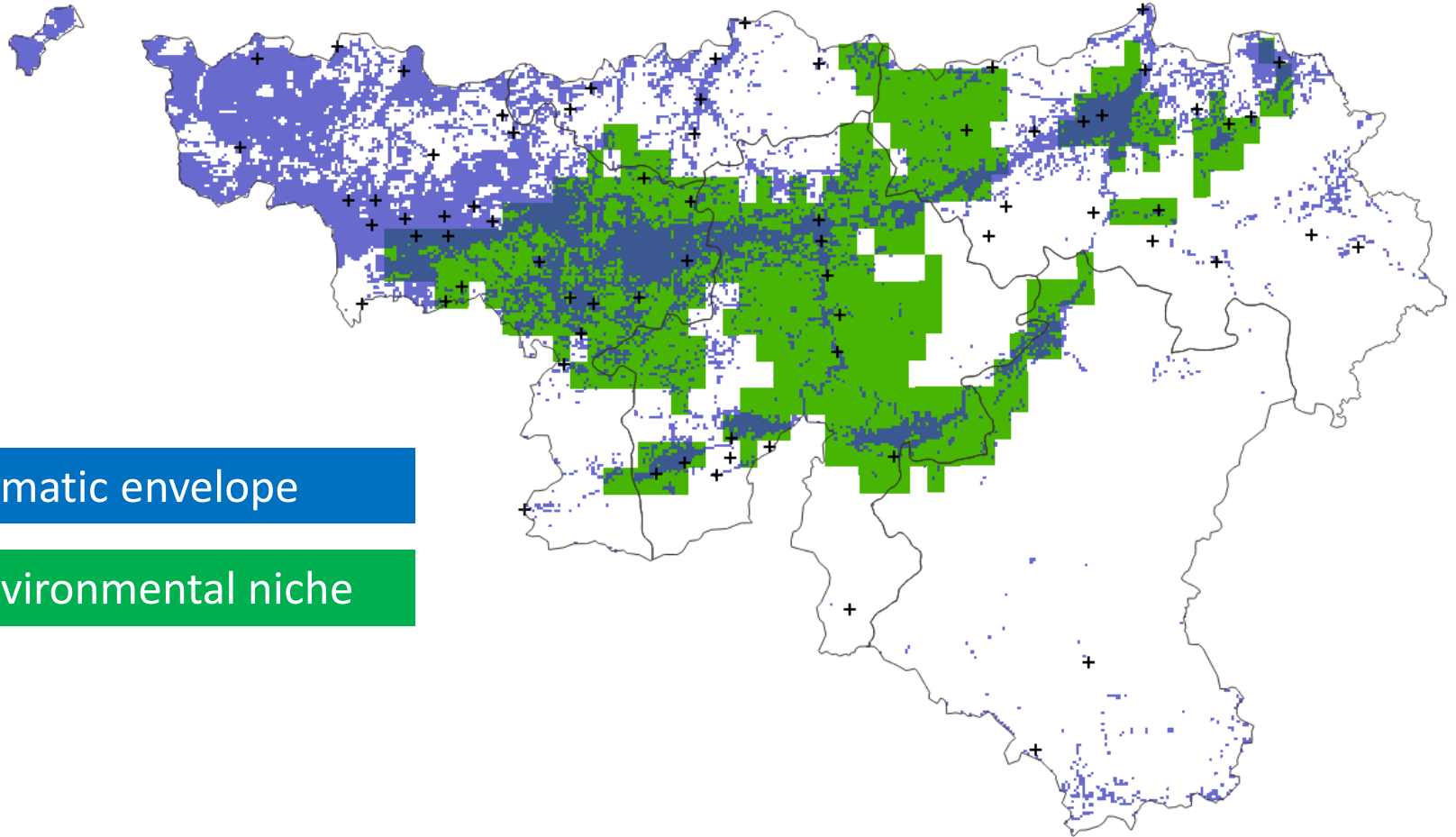


→ Climatic envelope



→ Environmental niche

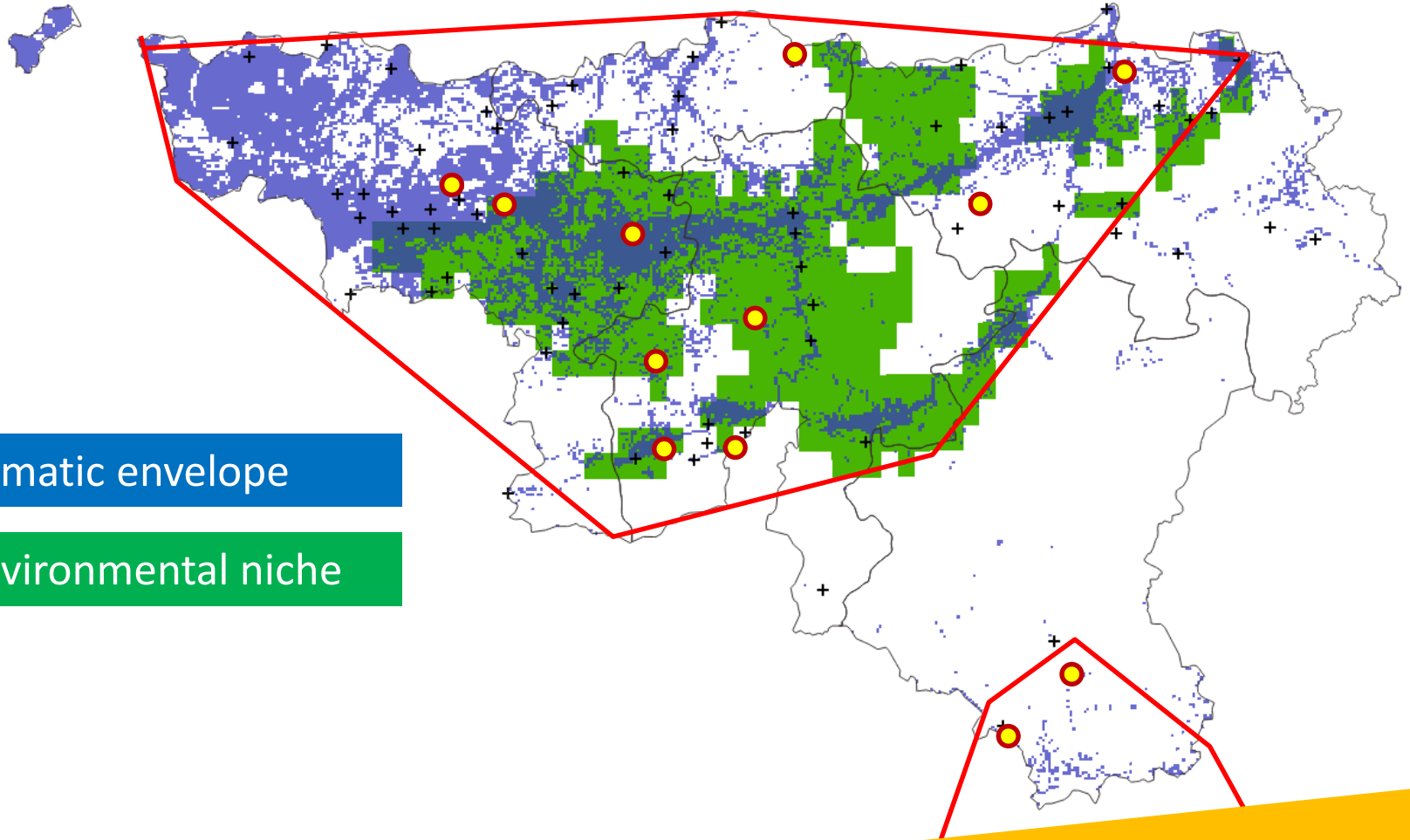
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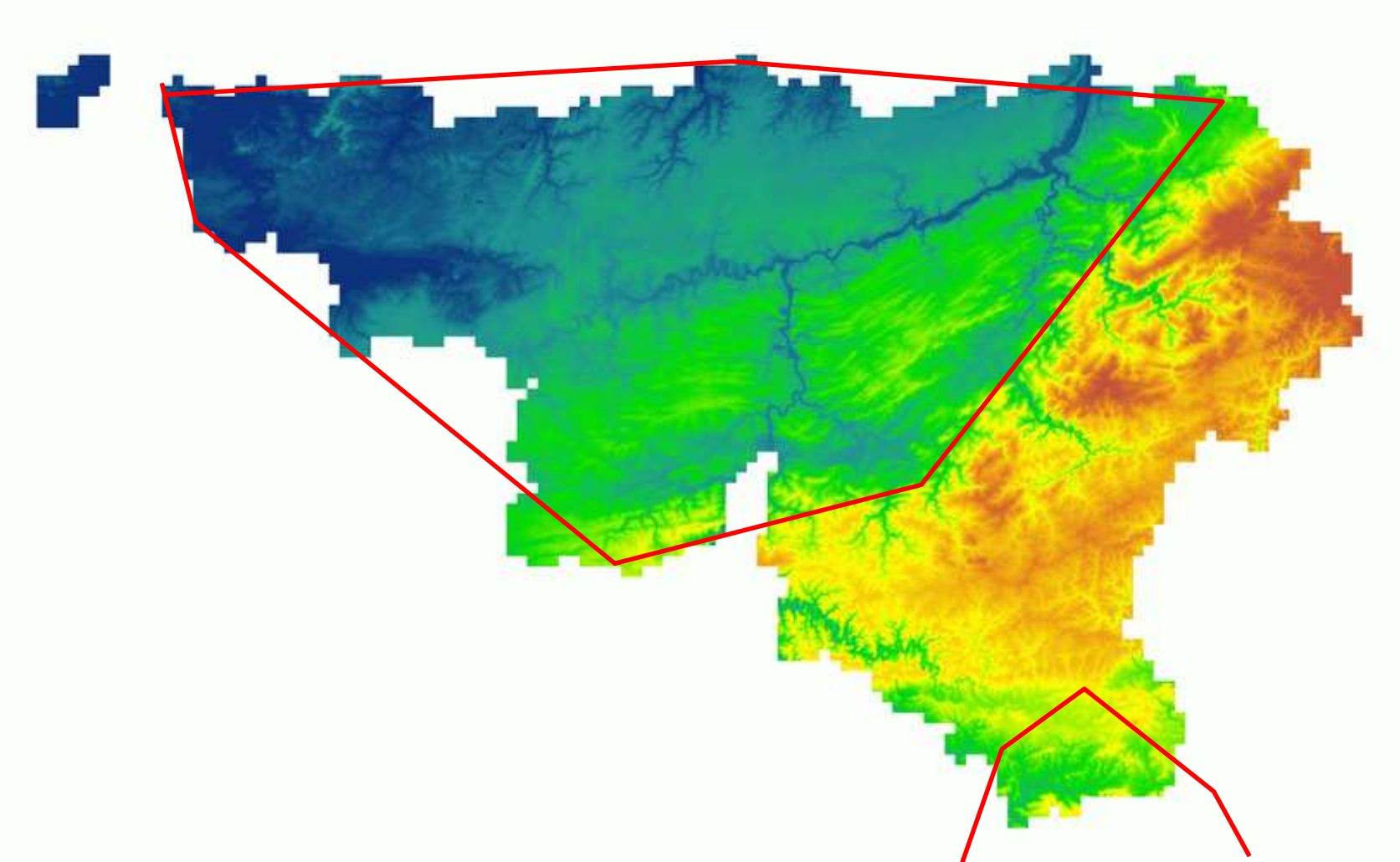
Results



→ Climatic envelope

→ Environmental niche

Results



Conclusion

Even if our approach is not exhaustive, it provides a good picture about *Ambrosia artemisiifolia* in Wallonia:

- Many ephemeral population (natural or human-related causes)... but not all !
- Many small populations ... but some large ones exist !
- Higher elevations are not really at risk
- Bird seeds are one of the main introduction pathways.

Thank you for your
attention !



Observatoire wallon des
Ambroisies

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