

VALORISATION PROJECT

TrIAS-AWARE

Increasing citizen awareness of the need to report alien species



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FINAL REPORT

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1. SUMMARY

The goal of TrIAS-Aware was to raise awareness and knowledge of invasive alien species with the general public. Goodwill, cooperation and action of the general public is recognised as an important element in monitoring, detecting, and managing invasive species. The general public usually have a positive attitude towards wild organisms, but do not always understand why some species should not be released or planted, and why some are controlled by conservationists. TrIAS Aware intended to explain the problem and the related issues in such a way that people are empowered to be part of the solution.

TrIAS Aware built upon the TrIAS project (Tracking Invasive Alien Species). TrIAS is a data driven project to connect citizen science to both policymakers and scientists through automated data workflows. Most of the data used by TrIAS are collected by amateur naturalists and their organizations, such as Natuurpunt and Natagora. TrIAS is analysing these data to create indicators, models and risk assessments for invasive alien species. One of the aims of TrIAS is to provide information on invasive species back to the citizen naturalists in the form of indicators and maps. However, TrIAS did not have any budget for communication to the general public and TrIAS Aware was intended to fill that gap.

The high-level goals of TrIAS Aware were to raise awareness of invasive alien species with the general public and the citizen science community in Belgium. With greater awareness we would hope to increase the reporting of invasive species through apps and the reduce the extent to which these alien species are cultivated and spread within Belgium. The general public needs first to be aware that there is a problem to address and the issues that it causes. They then need information on how to recognise invasive species, how to avoid those that pose a risk to human health (such as e.g. giant hogweed), which species are problematic for biodiversity and then they need advice on what to do, such as reporting them. Although we hope to increase reporting of invasive species, we also hope that raising awareness of invasive species will increase recording of wild organisms in general, which would be beneficial to science and conservation of our native flora.

A particular goal of TrIAS Aware was to communicate in the language of the participants. We recognise that language is a barrier to reaching many people who nevertheless have important roles in the control of invasive species.

2. INITIAL OBJECTIVES AND VALORISATION FOCUS

The project aimed to create media that is easily accessible to the general public that can get our message on invasive species across in a balanced and easily digestible format. We did not want to demonize certain species, but rather make people more aware of the issue so that they can adapt their behaviour, for example, in what species they choose to buy, and how they dispose of their garden waste.

With regards to valorisation the most important element is encouraging the reporting of invasive species. In the Belgian context this mostly comes through nature recording apps run by Natagora and Natuurpunt. TRIAS Aware aimed to get more people to try these apps and to encourage their ongoing use.

3. OVERVIEW EXTERNAL COLLABORATION(S)

TriAS - TriAS Aware is a product of the TriAS project (<https://osf.io/7dpgr/>). TriAS has championed the use of open data workflows to inform citizens, scientists and policy makers on invasive alien species (Groom et al. 2019). TriAS envisages a cyclic workflow whereby all beneficiaries have a stake in the output and contribute to the workflow, whether that's through the provision of data, expertise or funding. TriAS-Aware worked with TriAS partners to generate and distribute educational and promotional materials that support the TriAS goals, but were not foreseen in the original TriAS project.

- Groom, Q, et al. 2019. Empowering Citizens to Inform Decision-Making as a Way Forward to Support Invasive Alien Species Policy. *Citizen Science: Theory and Practice*, 4(1): 33, pp. 1–11. DOI: <https://doi.org/10.5334/cstp.238>

Groene Pioneers (<http://groenepioniers.be/>) was a two-year citizen science project funded by the Flemish government through their Scivil program. It aimed to share knowledge of invasive species through three work streams, Young Pioneers working with school age children; Online Pioneers on the crowdsourcing platform DoeDat (www.doedat.be) and Visiteering together with teams of adults to volunteer and visit the Botanic Garden. Groene Pioneers was also in the process of organizing a Bioblitz when it was cancelled due to the pandemic. This was replaced with a Home Safari (home-safari.be) We contributed to a stall in the Bees Market 2019 (<https://www.biodiversity.be/4984/>) together with Groene Pioniers. The website of Groene Pioniers (<http://groenepioniers.be/info/>) also provides information to the public and notably to garden enthusiasts on impacts of alien plants and native alternatives for invasive species, for which the information from a past Life project in Belgium, AlterIAS (Alternatives to Invasive Alien Species), was used. This way, the information gathered through this code of conduct project was kept and disseminated.

Alien-CSI (<https://alien-csi.eu/>) is a networking action of the European Commission's COST Office (European Cooperation in Science and Technology). Alien-CSI brings together 39 countries to investigate how citizen science can be used to support decision-making on invasive alien species.

A small group of wikipedians within this COST action are interested in increasing knowledge on Wikipedia and Wikidata on invasive alien species. We ran a workshop in Krakow, Poland with Alien-CSI to teach Wikipedia editing. You can see a little of the related work here (<https://youtu.be/xaB3002LEQs>).

An example of the output are pages on Wikipedia for the species on the List of Invasive alien species of Union concern.

- https://fr.wikipedia.org/wiki/Liste_des_esp%C3%A8ces_exotiques_envahissantes_pr%C3%A9occupantes_pour_l%27Union_europ%C3%A9enne
- https://nl.wikipedia.org/wiki/Unielijst_voor_invasieve_uitheemse_soorten

And specific pages for species on that list, e.g.

- https://fr.wikipedia.org/wiki/Ludwigia_grandiflora
- <https://nl.wikipedia.org/wiki/Waterteunisbloem>

4. GENERATED PRODUCTS AND IMPLEMENTED APPROACHES

Infomercial on Invasive Alien Plants

We created an animation in Dutch, English, French and German to explain the problem of invasive species and what people can do about it.

- French https://youtu.be/k2Zkb_oYI_Q
- German <https://youtu.be/LwJauZVpCVk>
- Dutch <https://youtu.be/IBhQajriff4>
- English <https://youtu.be/Uvt2sBRKqm0>

These animations have been watched over one thousand times on YouTube, but have also been used at events, on social media, in schools and on the Groene Pioniers website (<http://groenepioniers.be/lesmateriaal/>).

Infographic on Invasive Alien Species

The concept behind the infographic was to raise awareness of invasive plants and the environmental problem they caused. It is meant to introduce the general public to some of the species so that they may be able to identify them.

The species we illustrated were selected for several reasons to support our aims. Some species, such as *Heracleum mantegazzianum* (Giant hogweed) *Crassula helmsii* (New Zealand pigmyweed) were selected because they have such a high impact on biodiversity and human health. Other species were selected because they are emerging as new invasive species in Belgium. Examples are species such as *Fraxinus pennsylvanica* (green ash) and *Ailanthus altissima* (tree of heaven). We also included some invasive species that are also common garden plants, such as *Buddleja davidii* (butterfly bush) and *Lupinus polyphyllus* (garden lupin).

It is impossible in one infographic to introduce the reader to all the invasive species, but there were several important messages we wanted to communicate. Most importantly we wanted to make it clear that there are things we can do to reduce the problem of invasive plants, such as being selective about what we plant in our gardens and how we dispose of garden waste. Secondly, we wanted to encourage people to record observations of invasive species so that these records can be used to inform invasive species management.

Infographics were written in [Dutch](#), [French](#) and [English](#) and have been downloaded 200 times (Fig. 1).

TriAS Aware printed 1600 infographics in both French and Dutch and 500 in English. However, the Alien-CSI project paid for another 2500 in each of French, English and Dutch and finally the Groene Pioniers project paid for a further 8000 copies in Dutch. These have not all been distributed yet and the pandemic has made this more difficult. However, we are distributing them at all appropriate events. Also, other organizations, such as [Tuinrangers](#) will be distributing them to their members.

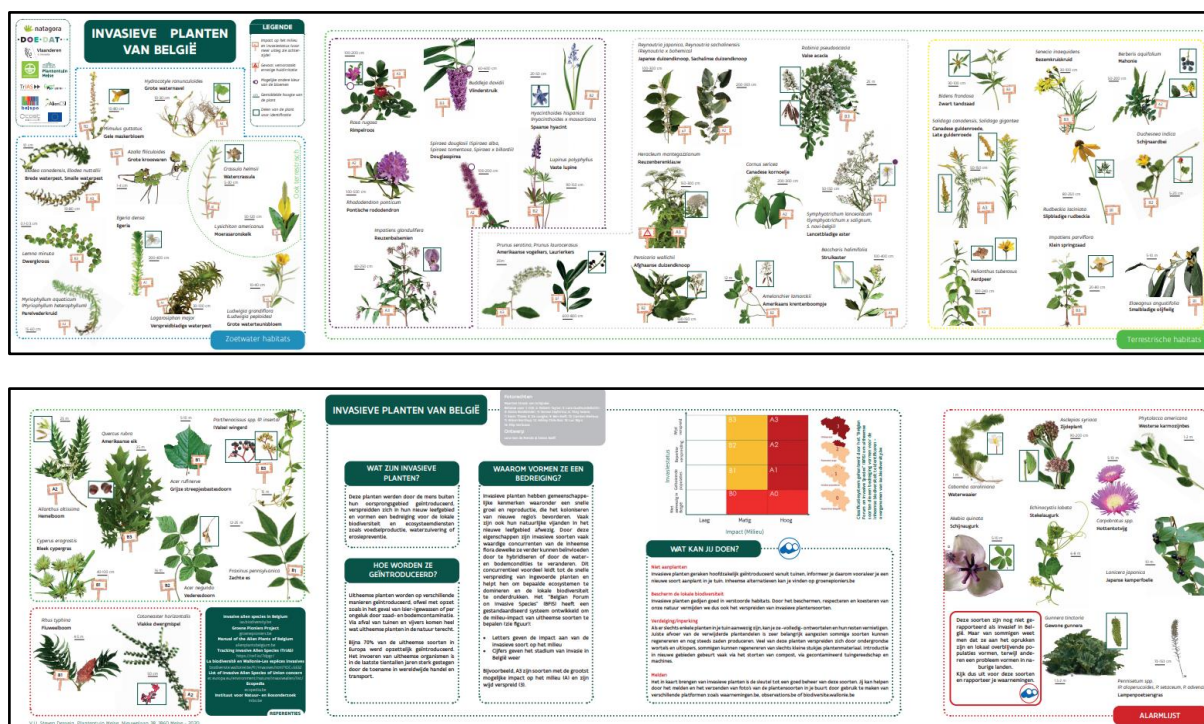


Figure 1. The invasive species infographic. This is the [Dutch](#) version, but [French](#) and [English](#) versions exist. These are also available online for download and are openly licenced for anyone to use.

Publications

In line with project objectives, TriAS Aware published a number of articles on selected invasive alien species for naturalist's journals, notably of *Natuurpunt* and *Natagora*. The target audience of these are primarily naturalists and managers of nature reserves and the goal was to improve knowledge on those species and increase the recording through apps and online recording portals. The information was also disseminated through [Ecopedia](#), the Flemish website for field managers and [ExotenNET](#), the newflash of the Flemish community of practice on invasion management. A selection of emerging species (*Rosa multiflora*, *Phytolacca americana*, *Vaccinium corymbosum*, *Spiranthes cernua* x *odorata*, alien crayfish species), identified through the automated indicator workflows of the TriAS project, was presented this way:

- Adriaens, Tim, Toon Van Daele, Johan van Valkenburg, Filip Verloove, and Quentin Groom. "Westerse karmozijnbes, ruderaal exoot of tijdbom onder schraalnatuur?" *Natuur. Focus* 18, no. 3 (2019): 116-118.
- Adriaens, T., J. Van Valkenburg, F. Verloove, and Q. Groom. 2019. Trosbosbes, probleemsoort in wording? *Natuur. Focus* 2019(2): 75-76
- Keteleer, S., Van Daele, T., Verloove, F., Groom, Q., & Adriaens, T. (2020). Veelbloemige roos, een ongewenste nieuwkomer in mantelzomen? *Natuur.Focus*, 19(1), 39-41.
- De Knijf, G., Scheers, K., Denys, L., & Adriaens, T. (2020). Exotische rivierkreeften in België - Een (k) nijpend probleem? *Natuur. focus*. 2020 4 156-163.
- D'hondt, B., Verloove, F., Adriaens, T., Vanpaemel, L., Steeman, R., & Zwaenepoel, A. (2018). Een invasieve orchidee, mooi maar ongewenst. *Natuur.Focus*, 133-135.

Also, several articles were published in journals about invasive alien species, explaining the policy context (e.g. the EU Regulation and its implementation in Belgium) and the needs for management:

- Branquart, E. & Latli, A. (2020). Ces espèces qu'on n'attendait pas. Une menace pour la biodiversité en Wallonie ? Le Magazine Natagora 95: 6-9.
- Adriaens T, Verreycken H, & D'hondt B (2017) De aanpak van invasieve uitheemse soorten in Vlaanderen. De Levende Natuur: tijdschrift voor Natuurbehoud en Natuurbeheer, 118(4), 116-121
- Adriaens T, Groom Q, Vanderhoeven S, Davis A, Strubbe D, Reyserhove L, Desmet P, Oldoni D & D'hondt B (2018) Het belang van citizen science: onderzoek, beleid en beheer rond invasieve uitheemse soorten. Natuur.Focus. 2018-4: 185-193.

5. IMPACT AND ADDED VALUE OF THE VALORISATION ACTION

TriAS-Aware was used with various other projects in the Botanic Garden to raise awareness of invasive species in a number of ways. The videos and infographics have been used and will be used in the future for events with the general public, including the #HOMEsafari & Bioblitz.



Figure 2. The TriAS Aware infographics being used at a school at a lesson on invasive species led by the education team of the Botanic Garden.

6. MEASURES TO MAINTAIN THE COLLABORATION(S)

In 2020 TRIAS Aware partners were included in two project proposals with the Botanic Garden. Sadly, these were not funded, though they were ranked highly. We will continue to seek funding to work together on issues related to invasive alliance species and other topics of mutual interest. The Botanic Garden is now planning to hold a bioblitz in the Garden every year. In 2021 this will be again a Home Safari due the pandemic, but we hope this will be a landmark annual event in future years. We will conduct these events together with Natagora and Natuurpunt and other TRIAS partners from Universities and INBO.