



M14 Public perceptions of IAS survey launched

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Table of contents

Summary.....	6
List of abbreviations.....	6
1. Introduction and background.....	7
2. Methodology.....	8
2.1 Conceptual framework.....	8
2.2 Survey design.....	8
2.3 Data outputs and next steps.....	8
3. Acknowledgements.....	9
References.....	10
Annex.....	11







Summary

Stakeholder engagement through representative surveys marks a crucial milestone for OneSTOP, as it provides systematic insights into how the public perceives invasive alien species (IAS) and their management across its five Living Lab countries (Belgium, Finland, Portugal, Romania, and the UK). Building on previous research and the culturomics work in T6.1, the surveys launched in September 2025 will capture a broad socio-demographic sample of approximately 500 respondents per country. They will assess levels of awareness, perceptions, and associated values toward IAS, and explore how these vary by socio-economic characteristics (such as gender, age or residence). By including experimental components, the surveys will also test how different framings, such as biodiversity protection, health risks, economic arguments, or cultural contexts, affect public acceptance and support for IAS management.

The results will provide comparative cross-country evidence on how people perceive IAS, which management options they find acceptable, and what types of arguments and messages most effectively raise support for action, considering different socio-economic groups. These insights will directly inform interviews with policy actors in T6.3, where different framings and arguments will be tested to identify how IAS can be more effectively integrated into policies and practices. Ultimately, this milestone strengthens the link between public perceptions and policy development, helping to design targeted communication strategies, foster citizen engagement, and enable the socially robust implementation of IAS management across Europe.

List of abbreviations

EU	European Union
GF	GreenFormation
IAS	Invasive alien species





1. Introduction and background

Public awareness and acceptance of management options are decisive for the success of addressing invasive alien species (IAS). While ecological and economic impacts of IAS are well documented, social dimensions often determine the level of knowledge and the support or resistance to control measures (Shackleton et al., 2018; Estévez et al., 2015). Surveys across Europe and beyond show that public perceptions are shaped by a combination of knowledge, values, and emotional responses, as well as species-specific traits alongside socio-economic and cultural contexts (Fischer et al., 2014; Kapitza et al., 2019; Vaz et al., 2024).

Knowledge and awareness consistently influence attitudes. When people are informed about a species' invasive status and ecological risks, support for management tends to increase, though moral and utilitarian concerns can still generate opposition (Novoa et al., 2017; Lindemann-Matthies, 2016; Remmele & Lindemann-Matthies, 2020). Research also indicates that charismatic or culturally valued species often attract empathy, which reduces support for eradication, while species seen as harmful or unattractive are more likely to be accepted as management targets (Bremner & Park, 2007; Courchamp et al., 2018; García-Llorente et al., 2008). Additionally, framing plays a critical role. Studies have shown that ecological or loss-framed arguments can be more persuasive than economic or gain-framed ones (DeGolia et al., 2019; Junge et al., 2019), while both fact-based and emotional messages may be effective in different contexts (Shaw et al., 2021; Palmer et al., 2023). Other work highlights the importance of social norms, cultural identity, and efficacy beliefs in shaping public willingness to act (Pradhananga et al., 2025; Fenichel et al., 2014; Meinard et al., 2022).

Despite this growing body of research, gaps remain. Comparative cross-country studies are rare, and few explicitly integrate perceptions, plural values, and framing effects in a systematic way (Henke et al., 2024). Moreover, many existing surveys focus on individual species or contexts, limiting the generalisability of findings (Selge et al., 2011; Kowarik et al., 2021). Addressing these gaps is essential to better align IAS management with societal perspectives and to develop communication strategies that foster broader public and policy support.

The OneSTOP project responds directly to these gaps by launching coordinated surveys across five European countries, in OneSTOP Living Labs (Belgium, Finland, Portugal, Romania, and the UK) in September 2025 as part of Task 6.2. These surveys will generate representative, cross-country evidence on linkages among values, knowledge, public awareness and perceptions of IAS, while testing how different framings—such as biodiversity protection, human health, or economic costs—shape support for management. The findings will not only enrich existing research but will complement the culturomics analysis in Task 6.1, while providing the empirical basis for interviews with policy actors in Task 6.3. In this way, the survey acts as a pivotal link between understanding societal attitudes, testing communication framings, and informing strategies to more effectively integrate IAS into policy and practice within and beyond the OneSTOP Living Labs.





2. Methodology

2.1 Conceptual framework

The survey is designed to address key research questions on how awareness, socio-economic characteristics (such as age, gender, residence, and education), values, and framings interlink and influence public perceptions of invasive alien species (IAS) and acceptance of their management. Building on existing literature, the survey assumes that public perceptions are shaped by a mix of cognitive and emotional factors. Awareness and knowledge, species traits (e.g., charisma, ecological impact), cultural significance, personal experience, and proximity all influence attitudes toward IAS. These perceptions, combined with socio-economic characteristics and exposure to media and other public and community messages, determine acceptance or rejection of management options (Shackleton et al., 2018). Framing effects—such as presenting IAS management in terms of biodiversity protection, human health, or economic costs—are presumed to further shift public support (DeGolia et al., 2019).

2.2 Survey design

The survey (Annex 1) consists of 22 questions, combining closed Likert-scale items to measure levels of agreement or disagreement with specific statements, value-based attitudinal measures to capture underlying orientations toward biodiversity and IAS, multiple-choice questions to assess knowledge and awareness, and ranking exercises to reveal priorities and trade-offs between different management options. To test the role of framing, the survey incorporates an embedded experimental design. Respondents will be randomly assigned to one of three information treatments, one providing general information on IAS (used as a control frame), the other two presenting the same IAS but framed with different justifications for management, for example, biodiversity loss, human health risks, economic costs, or cultural and identity impacts. By holding the species constant while varying the framing, the survey allows for comparison of how different arguments influence perceptions, emotional responses, and willingness to support management. This approach will help identify which framings resonate most effectively across socio-demographic groups and country contexts, providing an evidence base for designing communication strategies that are both targeted and scalable.

Representative surveys of the general public (18+) have been launched in Belgium, Finland, Portugal, Romania, and the UK, with around 500 expected responses per country on Survey Monkey starting from September 2025. Sampling will ensure broad socio-demographic coverage by age, gender, education, and urban/rural distribution. Surveys were developed on the SurveyMonkey platform, and responses were collected via a professional survey company (Cint), with translation, testing, and species selection supported by the OneSTOP Living Labs. Each country has a dedicated survey section on two specific IAS—one plant and one animal—selected according to the following criteria: inclusion on the EU Union list, relevance as a national or Living Lab priority, varying levels of public visibility, charisma, and management controversy to ensure cross-country comparability while capturing local relevance.

2.3 Data outputs and next steps

The collected data will provide comparative evidence on awareness and perceptions toward IAS across countries alongside potential socio-economic determinants, as well as insights





into the effectiveness of different communication framings. Findings will directly feed into Task 6.3, informing interviews with policy actors and supporting the development of targeted communication, engagement, and policy strategies within OneSTOP. The survey data will be analysed during 2026, with detailed results reported in Deliverable D6.2.

3. Acknowledgements

We thank all the consortium partners who supported the development of the survey and provided review, feedback and translation. We would also like to thank Laura Verbrugge for reviewing the concept note.

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M14 Public perceptions of IAS survey launched

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5. Annexes

Annex 1

The survey question for the UK





Measuring societal perception of species and nature

We are conducting a brief survey on people's perceptions of certain species found in their country. We are interested in your opinion; therefore, there is no right or wrong answer!

Your answers (the survey will take approximately 8 minutes) will help researchers understand public views on nature and inform future information materials.

Participation in this survey is voluntary. This survey is anonymous, and no personal data will be collected. This survey is part of a broader research study. To ensure unbiased responses, additional context about the study and data use is shared at the end.

1. Gender

- Female
- Male
- Non-binary
- I use a different term
- Prefer not to say

2. Age

- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65 or older

3. Residence

- Urban area
- Peri-urban area
- Rural area

4. Highest completed level of education

- No qualification
- Apprenticeship
- GCSEs or equivalent
- A levels or equivalent
- Degree or above
- Other qualification

5. How would you rate your general knowledge about local nature and species on a scale (1=Very low, 5=Very high)?

1 2 3 4 5

6. Please rate how much you agree with each of the following statements (1=Not at all, 5=Very much).

- a. Nature and species are important because they provide resources (e.g. food, medicine, materials) on which we depend





- b. Spending time in nature is essential for my mental and physical health
 - c. I believe nature and species have inherent value beyond what they provide to people
-

In the next part of the survey, you will be asked about two different species.

First, we will ask questions about the species shown in the picture below.



7. Where have you seen this species before? (You can choose more than one answer.)
- In media
 - In the UK: in built-up areas (towns, cities, villages, etc.)
 - In the UK: in the wild (outside of built-up areas, in a natural environment)
 - In captivity (zoo, wildlife park, enclosure, etc.)
 - Outside the UK
 - I have never seen it
 - I am not sure
 - Other, please specify:.....
8. How often have you physically encountered this species?
- a. Once
 - b. More than once
 - c. I have never encountered it / I am not sure
9. Do you know the name of the species in the picture above? (Enter any common or scientific name you are aware of.)
- a. No
 - b. Yes. Please provide the name you are aware of:
10. Please indicate how strongly you agree with each of the following statements concerning this species (1=Not at all, 5=Very much).





- It is visually attractive
- It is interesting/makes me curious
- It makes me feel worried/fearful
- It provides economic benefits
- It causes economic harm
- It provides ecological benefits
- It causes ecological harm
- It belongs in the native ecosystem
- It is important in local culture and traditions
- It belongs in our landscape

11. This species has spread rapidly since its introduction into Great Britain in the 19th century and is now widespread. How acceptable do you find each of the following options for limiting or preventing the spread or impacts of this species (1=Completely unacceptable, 5=Completely acceptable)?

- Do nothing
- Monitor only
- Awareness-raising to engage citizens in limiting the spread or impact (e.g., report sightings, avoid feeding)
- Culling (trapping or shooting)
- Contraception

The following questions refer to the second species displayed below.



12. Where have you seen this species before? (You can choose more than one answer.)

- In media
- In the UK: in built-up areas (towns, cities, villages, etc.)
- In the UK: in the wild (outside of built-up areas, in a natural environment)
- In captivity (zoo, wildlife park, enclosure, etc.)
- Outside the UK
- I have never seen it
- I am not sure
- Other, please specify:.....

13. How often have you physically encountered this species?





- a. Once
- b. More than once
- c. I have never encountered it / I am not sure

14. Do you know the name of the species in the picture above? (Enter any common or scientific name you are aware of.)

- a. No
- b. Yes. Please provide the name you are aware of:

15. Please indicate how strongly you agree with each of the following statements concerning this species (1=Not at all, 5=Very much).

- It is visually attractive 1 2 3 4 5 I do not know / Unsure
- It is interesting/makes me curious
- It makes me feel worried/fearful
- It provides economic benefits
- It causes economic harm
- It provides ecological benefits
- It causes ecological harm
- It belongs in the native ecosystem
- It is important in local culture and traditions
- It belongs in our landscape

16. This species has been observed spreading rapidly in the UK. How acceptable do you find each of the following options for limiting or preventing the spread or impacts of this species (1=Completely unacceptable, 5=Completely acceptable)?

- Do nothing
- Monitor only
- Awareness-raising to engage citizens in limiting the spread or impact (e.g., report sightings)
- Annual herbicide treatment
- Mechanical or manual control (e.g. digging/mowing)
- Grazing

17. How familiar are you with the term “Invasive alien species”? (Select one.)

- a. Never heard of it
- b. Heard of it, but do not really know what it means
- c. I know the term and know what it means

18. Which of the following best describes an “invasive alien species”? (Select one.)

- a. A native species that spreads quickly
- b. A species introduced by humans that spreads quickly, causes harm to the environment, people or the economy
- c. Any species not originally from this region
- d. I do not know / I am not sure

19. Please rate the severity of the impacts an invasive alien species could have in your country (1=Not a severe problem, 5=A very severe problem).

1 2 3 4 5 I do not know





- a. Economic loss through agriculture or forestry
- b. Decline in native biodiversity through impact on native species and/or ecosystems
- c. Human health problems (e.g., allergy due to pollen, spreading disease)
- d. Affecting ecosystem services/functions

20. If an invasive alien species were to spread in your neighbourhood, which of the following should be the authorities' top priorities? Please drag to rank from 1 (highest priority) to 5 (lowest priority).

- a. Avoiding economic losses for people
- b. Preserving local cultural practices
- c. Conserving native species and ecosystems
- d. Protecting human health and safety
- e. Avoiding cruelty or suffering to any animals

--

The species we showed earlier were the grey squirrel (*Sciurus carolinensis*) and the giant hogweed (*Heracleum mantegazzianum*). Both species are invasive alien species.

Frame- Grey squirrel (*randomised-each respondent will see only one option*)

(Control)

"Invasive alien species are animals, plants or other organisms that are introduced by humans, either intentionally or accidentally, into places outside of their natural range, negatively impacting native biodiversity, ecosystem services or human economy and well-being."

(Biodiversity Impact Message)

The grey squirrel is driving the extinction of our native red squirrel both through direct competition for resources and as a carrier of deadly squirrel pox virus.

(Economic cost message)

Grey squirrels cause costly damage to trees through bark stripping, which affects timber production, and can be an economic pest of orchards and nut growers.

21. Imagine that your local authorities are asking residents how to allocate funds for conservation efforts, including controlling the grey squirrel population. Please indicate how much you agree with each statement (1=Not at all, 5=Completely agree).

- I would be in favour of conservation actions that do not involve controlling or harming any species (e.g., habitat restoration, protecting endangered species)
- I would be in favour of field surveys & a public reporting app to monitor the population





- I would be in favour of awareness-raising campaigns to engage citizens in limiting the spread or impact (e.g., report sightings, avoid feeding)
- I would be in favour of culling (trapping or shooting)
- I would be in favour of contraceptives
- I would not be in favour of supporting any conservation efforts

Frame- Giant hogweed (*randomised-each respondent will see only one option*)

(Control)

“An alien species refers to an animal, plant, or other organism that has spread, with human involvement (either intentionally or unintentionally), from its natural range to new areas. Invasive alien species, in turn, are those that additionally have harmful impacts on native biodiversity, ecosystem services or human economy and well-being.”

(Public Health Message)

Giant hogweed sap causes serious burns on people and pets if exposed to UV radiation in sunlight.

Loss Message (Cultural/Environmental)

The spread of giant hogweeds disrupts traditional landscapes and threatens species unique to our region—what we lose may never return.

22. Imagine that your local authorities are asking residents how to allocate funds for conservation efforts, including controlling the giant hogweed population. Please indicate how much you agree with each statement (1=Not at all, 5=Completely agree).

- I would be in favour of conservation actions that do not involve controlling or harming any species (e.g., habitat restoration, protecting endangered species)
- I would be in favour of field surveys & a public reporting app to monitor the population
- I would be in favour of awareness-raising campaigns to engage citizens in limiting the spread or impact (e.g., report sightings)
- I would be in favour of an annual herbicide treatment
- I would be in favour of implementing grazing
- I would be in favour of mechanical or manual control (e.g. digging/mowing)
- I would not be in favour of supporting any conservation efforts

Many thanks for your contribution.

This data will help us understand views on invasive alien species and inform policy in that regard. If you want to get more information on invasive alien species or about the project, please visit <https://onestop-project.eu/> and follow the project's social media platforms <https://www.linkedin.com/company/105749949>, <https://bsky.app/profile/onestop-project.eu>.





Data policy: You will remain anonymous and will not be able to be identified in any way. Due to the anonymous nature of this survey, submitted responses cannot be withdrawn. The collected data will be used for research purposes and made available in an open-access format. Should you have any questions about the research and data collection, please [contact us here](#).

OneSTOP receives funding from the European Union's Horizon Europe Research and Innovation Programme (ID No 101180559). Views and opinions expressed are those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Executive Agency (REA). Neither the EU nor REA can be held responsible for them.

Please find more information on the research [here](#).

I have read the information above and consent to the use of my responses in this research.

☐ I agree.

Participant Information Sheet for the OneSTOP survey responders

We are conducting research on the perception of invasive alien species in the framework of the [OneSTOP](#) project (OneBiosecurity Systems and Technology for People, Places and Pathways). You were invited to fill out this survey as part of this research. Below you will find information on why the research is being conducted and what it will involve.

What is the purpose of this research?

The purpose of the research is to investigate how the general public perceives invasive alien terrestrial species and their different management approaches. This work will be undertaken within this survey. The survey is conducted in Belgium, Finland, Portugal, Romania and the UK.

Who is organising and funding the research?

The research is organised by [GreenFormation Kft.](#) and funded by the European Commission (Grant agreement 101180559). The research was granted ethics approval through Coventry University's Research Ethics review and approval process (reference: P186886).

What are the potential benefits and risks in taking part?

You will help better understand the public's perception of invasive alien species and their management. Feedback collected through the research will be analysed to inform policy regarding invasive alien species management.





We have considered any risks involved in this project. No risks have been identified for survey responders. If you have any questions or would like more information, please contact us [here](#).

Will my information be handled confidentially?

All information provided by will be kept securely. Your participation is anonymous.

The collected data will be treated in accordance with the ethical and legal requirements of Horizon Europe, including the [European Code of Conduct for Research Integrity](#), and the ethical guidelines outlined in the OneSTOP project's Grant Agreement and Data Management Plan.

What will happen to the results of the research?

The results may be summarised in published articles, reports and presentations.

In line with Horizon Europe's Open Science policy, research data that is suitable for open access will be made available in an open-access repository.

Thank you for taking the time to read this and for filling out the survey!



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Annex 2

Survey Links¹:

Belgium:

[https://nl.surveymonkey.com/r/Perception_survey_BE?fedResponseID=\[fedResponseID_value\]](https://nl.surveymonkey.com/r/Perception_survey_BE?fedResponseID=[fedResponseID_value])

Finland:

[https://fi.surveymonkey.com/r/Perception_survey_FI?fedResponseID=\[fedResponseID_value\]](https://fi.surveymonkey.com/r/Perception_survey_FI?fedResponseID=[fedResponseID_value])

¹ Used by the panel provider



**Romania:**

[https://www.surveymonkey.com/r/Perception_survey_RO?fedResponseID=\[fedResponseID_value\]](https://www.surveymonkey.com/r/Perception_survey_RO?fedResponseID=[fedResponseID_value])

Portugal:

[https://pt.surveymonkey.com/r/Perception_survey_PT?fedResponseID=\[fedResponseID_value\]](https://pt.surveymonkey.com/r/Perception_survey_PT?fedResponseID=[fedResponseID_value])

The UK:

[https://www.surveymonkey.com/r/Perception_survey_UK?fedResponseID=\[fedResponseID_value\]](https://www.surveymonkey.com/r/Perception_survey_UK?fedResponseID=[fedResponseID_value])

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