

CONSORTIUM

**20 international partners from
14 countries**

In partnership with the European Alien
Species Information Network (EASIN)

-  Meise Botanic Garden
-  Aarhus University
-  UK Centre for Ecology & Hydrology
-  BIOPOLIS-CIBIO
-  Coventry University
-  The Cyprus Institute
-  Research Institute for Nature and Forest
-  Institute of Botany of the Czech Academy of Sciences
-  Lincoln University
-  Platform Kinetics
-  Pensoft Publishers
-  Stellenbosch University
-  University of Exeter
-  University of Vienna
-  GreenFormation
-  Helmholtz Centre for Environmental Research
-  Ovidius University of Constanta
-  Natural Resources Institute Finland
-  The Binary Forest
-  Joint Research Centre



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DURATION

January 2025 – June 2028

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Funded by
the European Union

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.



**OneBiosecurity
Systems and
Technology for
People, Places and
Pathways**



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BACKGROUND

Invasive alien species (IAS) are fungi, plants, and animals introduced by human activities into ecosystems where they would not naturally exist. They spread rapidly, harming biodiversity, disrupting ecosystems, and, in some cases, posing risks to health and food security. IAS cost the EU billions annually and their impacts are exacerbated by interactions with other causes of biodiversity loss, including climate change, trade, and land-use changes. The Invasive Alien Species Regulation (EU 1143/2014) and the EU Biodiversity Strategy for 2030 aim to control IAS and reduce their impact. Furthermore, EU initiatives such as EASIN (European Alien Species Information Network) provide access to alien species data and information from various sources.

OneSTOP aims to improve IAS detection, monitoring, and management by integrating advanced detection technologies like eDNA from the air, computer vision, modelling approaches and citizen science. We will develop tools for prioritising IAS management based on assessment of impacts and using modelling approaches to inform understanding of biological invasions. Open data access underpins all of our work. The implementation of the project's tools in five Living Labs across Europe fosters collaboration and real-world application. By combining science, technology, and community efforts, we aim for a more effective and coordinated response to mitigate the threat of IAS.

PILLARS



DETECTION

We integrate advanced technologies such as environmental DNA (eDNA) analysis, computer vision, and citizen science to improve the identification and tracking of IAS, enabling faster and more effective responses.



PRIORITISATION

By using automated workflows, model projections, and multi-criteria analysis, we will develop a data-driven system to assess IAS risks, helping policymakers and stakeholders allocate resources more efficiently.



DISSEMINATION

We ensure that IAS-related data are shared in a standardised and open-access format, following FAIR principles. This supports better coordination among researchers, authorities, and international initiatives, improving the effectiveness of IAS management strategies.



SOCIO-POLITICAL ACTION

Through Living Labs and socio-political research, we foster inclusive decision-making. By harmonising policies across different regions and promoting collaboration across sectors, we will ensure that insights from policymakers, scientists, and the public are captured.

LIVING LABS

We are establishing five Living Labs across Europe to support the co-creation of innovative IAS detection and monitoring technologies with relevant practitioners. These labs, located in diverse climatic and socio-economic settings, engage local stakeholders and the public to ensure the tools developed meet the needs of the users. They provide real-world environments for piloting new methods, refining tools, and informing policy discussions on IAS management.



-  **BELGIUM** – Led by **EV-INBO** (Research Institute for Nature and Forest) and **MeiseBG** (Meise Botanic Garden)
-  **FINLAND** – Led by **LUKE** (Natural Resources Institute Finland)
-  **PORTUGAL** – Led by **CIBIO** (Research Centre in Biodiversity and Genetic Resources)
-  **ROMANIA** – Led by **UOC** (Ovidius University of Constanta)
-  **THE UNITED KINGDOM** – Led by **CU** (Coventry University)