

Case study

Sweden



Safeguarding public health against new tick species

In 2018, two non-native tick species were detected in Sweden for the first time, and since then, additional non-native species have been identified. The emergence of new species may be linked to climate change and poses a risk to public health, as some could introduce new tick-borne diseases. This is why tick surveillance and monitoring are essential. In 2023, the tool **Rapportera Fästing** (Report Tick) was developed within the IDAlert project and launched at the Swedish Veterinary Agency (SVA) in Sweden to tackle the threat from non-native tick species. The SVA encouraged civil society to submit photos and samples of non-endemic tick species.



SVA has developed Rapportera Fästing, a web-based tool and a mobile application.

It increases preparedness against non-native tick species and emerging tick-borne pathogens in Sweden by:

- Acting as an **early warning system** for non-native tick species
- Facilitating **large-scale data collection** on endemic tick species distribution and activity
- **Educating and raising awareness** about ticks and tick-borne diseases among the general public

In a nutshell



Ticks can carry pathogens, and new tick species may introduce additional ones.



Climate change may facilitate the spread of non-native tick species



Rapportera Fästing is a tool for monitoring ticks and providing early warnings.



As of April 2026, more than **35,000 reports** had been submitted since 2023.

Enhancing preparedness for new tick-borne infections with Rapportera Fästing

After non-native tick species were found in Sweden in 2018, the need to improve resilience to emerging health risks became clear. In response, the SVA, within the IDAlert project, developed Rapportera Fästing, a citizen science tool designed to collect information on ticks across the country. The web version was launched in spring 2023, followed by a mobile app in June 2025.

Acting as an early warning system for non-native tick species

By reporting directly to the SVA, the agency can quickly detect new non-native tick species and identify significant increases in tick presence across the country.

Facilitating large-scale data collection on tick distribution and activity

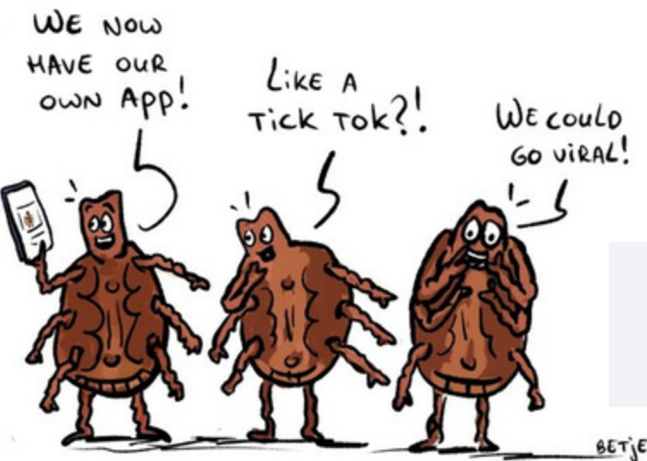
By making it easy for people to contribute, the initiative enables large-scale data collection across the whole country and over long periods.

This helps researchers monitor where ticks are found, which species are present, and how their activity changes over time. The tool collects data not only on new, non-native species, but also on endemic ticks, building a more complete picture of tick distribution and activity throughout the year.

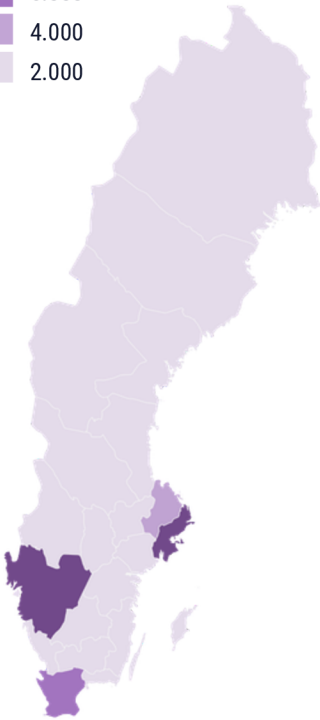
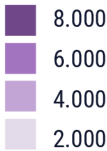
Educating and raising awareness about ticks and tick-borne diseases among the general public

Beyond data collection, Rapportera Fästing also raises awareness about ticks and tick-borne diseases through the media. These communication efforts help the public better understand the risks and how to protect themselves.

Rapportera Fästing is regularly promoted in Swedish media, including local and national newspapers, radio, and TV (on average more than 200 times per year since its launch).



Reports since 2023 by province:



As of April 2026, more than 35,000 reports had been submitted since 2023.



Climate and ticks



Ticks thrive within temperatures between 10°C and 26°C and in relative humidity above 45%.



Average seasonal temperatures in Sweden today (compared with the pre-industrial period):

- Southern Sweden:** Spring 7°C, Summer 17°C, Autumn 9°C (+2.5 to +3°C warmer)
- Central Sweden:** Spring 2.7–5°C, Summer 14–16°C, Autumn 4–7°C (+1.5 to +3.5°C warmer)
- Northern Sweden:** Spring 0.5°C, Summer 13.4°C, Autumn 1.6°C (+1.3 to +3°C warmer)

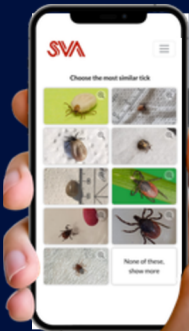
Ticks and tick-borne diseases in Sweden

- The region has endemic **Lyme disease** and **tick-borne encephalitis (TBE)**. These infections are usually mild and flu-like, but can sometimes become more serious and lead to encephalitis.
- Ticks are now **active all year**. Even in cold, wet, and snowy conditions in southern and central Sweden, ticks are still being found, often on dogs and cats. Climate change is expected to increase their spread and activity.
- Climate change may favour the spread of new **non-native tick species** in the territory and with it the risk of **new tick-borne pathogens** that can cause disease in both animals and humans.

Inside Rapportera Fästing

Participants **report tick** sightings by submitting photographs and information on location and host species, and can use images on the platform to help identify tick species. If a non-endemic species is identified, participants are invited to voluntarily send the specimen by mail for further analysis. Experts at SVA review and validate all submissions and analyse the specimens in more detail.

Receiving feedback and results quickly is key to **keeping users engaged**. After submitting tick information through the app, participants receive direct feedback on the identification. In addition, an interactive map shows tick sightings reported by the public in near real time.



Envisioning Climate-Resilient Futures

Impact

- ✓ The data collected through Rapportera Fästing, in addition to enabling national-level surveillance of tick species, is also used for **targeted surveillance** within other research projects.
- ✓ Information extracted from Rapportera Fästing is shared with the Public Health Agency of Sweden and can **support public communication on ticks and tick-borne diseases**, as well as updated vaccine recommendations.
- ✓ In collaboration with Uppsala University, researchers are analysing thousands of collected ticks for the **tick-borne encephalitis (TBE) virus**. In the future, these samples could also be tested for other pathogens, depending on further collaboration and funding.

Next steps

- ✓ The tool is continuously being developed and improved. Each year an updated version has been released to improve user experience. After each update, feedback is shared with both citizens and researchers to improve the system.
- ✓ The next step for Rapportera Fästing is to add artificial intelligence (AI) for image recognition. Photos submitted during the first two years have been used to train the AI to identify tick species more accurately.
- ✓ By the end of the project, the tool could be adapted for use in other Scandinavian and European countries. For example, if implemented in Spain, the image guidance could be updated to show local tick species.

Further reading

- **New piece on the IDAlert webpage:**
idalertproject.eu/new-tick-species-discovered-in-sweden
- **How to use Rapportera Fästing:**
sva.se/aktuellt/insamlingar/rapportera-faesting/
- **Blog posts from Rapportera Fästing:**
sva.se/aktuellt/bloggar/faestbloggen/
- **Automated tick classification using deep learning and its associated challenges in citizen science:**
<https://doi.org/10.1038/s41598-025-10265-x>

Rapportera Fästing:



fasting@sva.se | anna.omazic@sva.se
murielle.alund@sva.se

About IDAlert

The IDAlert project develops tools, knowledge, and capacity-building resources to address pathogen emergence and transmission and support evidence-based decision-making. The project's tools and methods are being validated in hotspot sites across Spain, the Netherlands, Greece, Sweden, and Bangladesh facing rapid urban transformation and climate-related disease risks.

Study conducted by:



Other organisations involved in Rapportera:



[IDAlertproject.eu](https://idalertproject.eu)



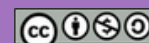
@IDAlert



@IDAlertproject



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement no 101057554.



Barcelona Supercomputing Center - Centro Nacional de Supercomputación, 2026