Austrian Agency for Health and Food Safety

www.ages.at

Co-funded by the European Union

One Health surveillance and Vector monitoring from the Alps to the Mediterranean: outcomes of OH SURVector

WOAH Regional Seminar

VECTOR-BORNE DISEASES IN THE EUROPEAN REGION

25-27 June 2025

Annette Nigsch, AGES - Austrian Agency for Health and Food Safety

Consortium Coordinator

OH SURVector: One Health surveillance and vector monitoring for cross-border pathogens

"OH SURVector - Tracking Threats. Protecting Lives"

OH SURVector

Consortium with 8 partner institutions in 5 Member States

Austria
Mosquito monitoring
Tick monitoring

Czech Republic
Mosquito monitoring
Tick monitoring

Greece
Tick monitoring

Hungary
Mosquito monitoring
Tick monitoring

Slovakia
Mosquito monitoring
Tick monitoring

Pathogen screening:

- West Nile,
- Usutu, etc.,
- *Borrelia* spp.,
- Crimean-Congo haemorrhagic fever,
- tick-borne encephalitis,
- Q-fever, etc.

→ Priorities differ by country

OH SURVector

Goals and Partners

- **Funding:** EU4Health programme 2021-2027 (80 % funding rate)
- **Project period:** Jan 2024 – Dec 2026
- **Goals:** setting and scaling up One Health Surveillance for vectors and vector-borne pathogens to protect the health of humans, animals and the environment.
  - Early detection of **newly introduced vector species** and **pathogens.**
  - Early detection of an **increased risk of exposure** in new areas and periods of the year.
  - Early epidemic detection and **monitoring of ongoing outbreaks**.
  - Strengthening the **cross-sectoral collaboration** on **national and cross-border level** towards an integrated One Health approach.
- **Partners:**

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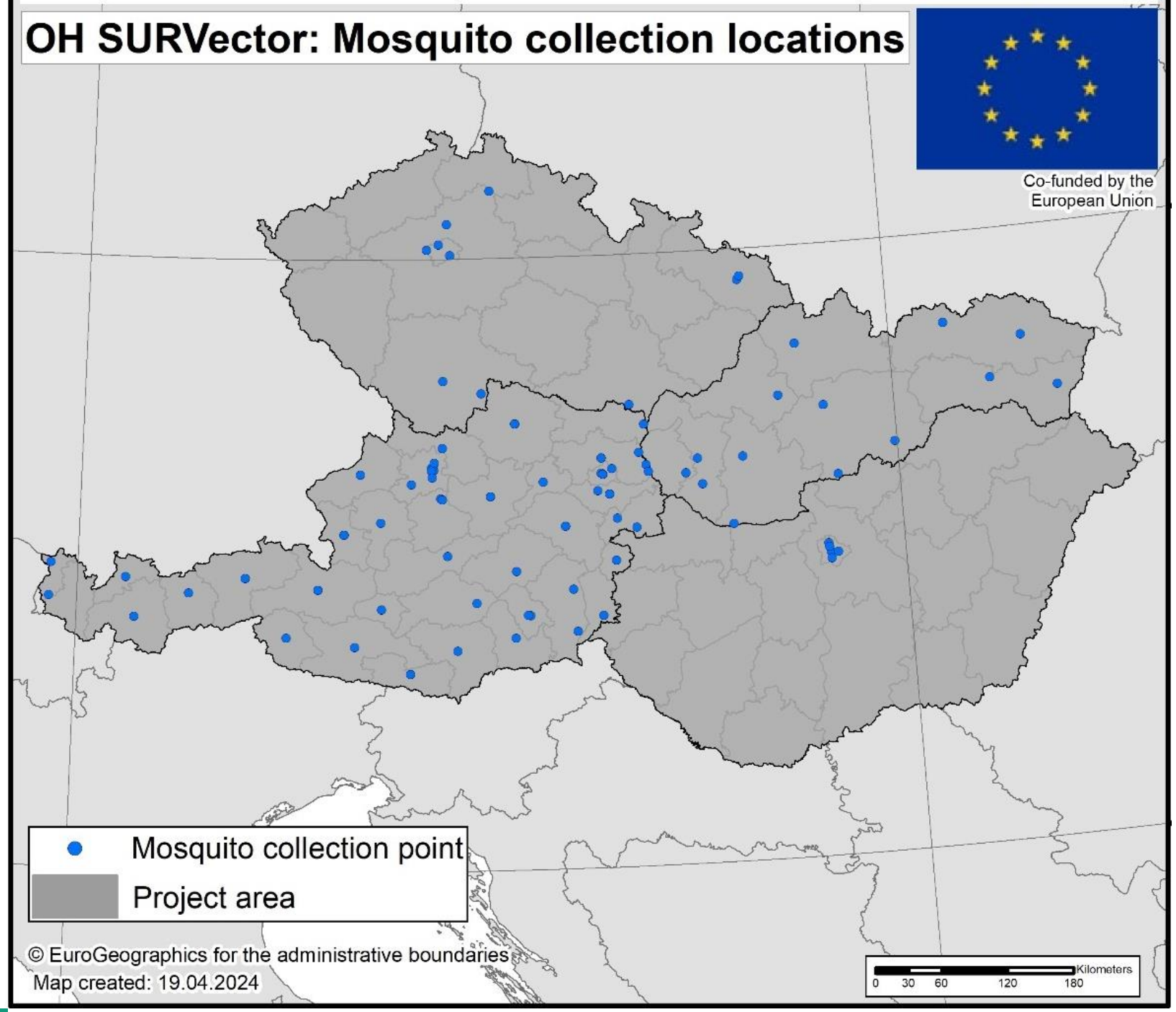
NATIONAL INSTITUTE OF PUBLIC HEALTH SZÚ
NATIONAL PUBLIC HEALTH ORGANIZATION
ELGO - DIMITRA HELLENIC AGRICULTURAL ORGANIZATION - DIMITRA
ARISTOTLE UNIVERSITY OF THESSALONIKI
NNK
nébih from farm to fork
UNIVERSITY OF VETERINARY MEDICINE AND PHARMACY IN KOŠICE

Consortium with intersectorial collaboration

	Austria	Czech Republic	Greece	Hungary	Slovak Republic
Human Health	AGES	NATIONAL INSTITUTE OF PUBLIC HEALTH SZÚ	NATIONAL PUBLIC HEALTH ORGANIZATION; ARISTOTLE UNIVERSITY OF THESSALONIKI	NNK	
Animal Health			ELGO - DIMITRA HELLENIC AGRICULTURAL ORGANIZATION - DIMITRA	nébih from farm to fork	THE UNIVERSITY OF VETERINARY MEDICINE AND PHARMACY IN KOŠICE

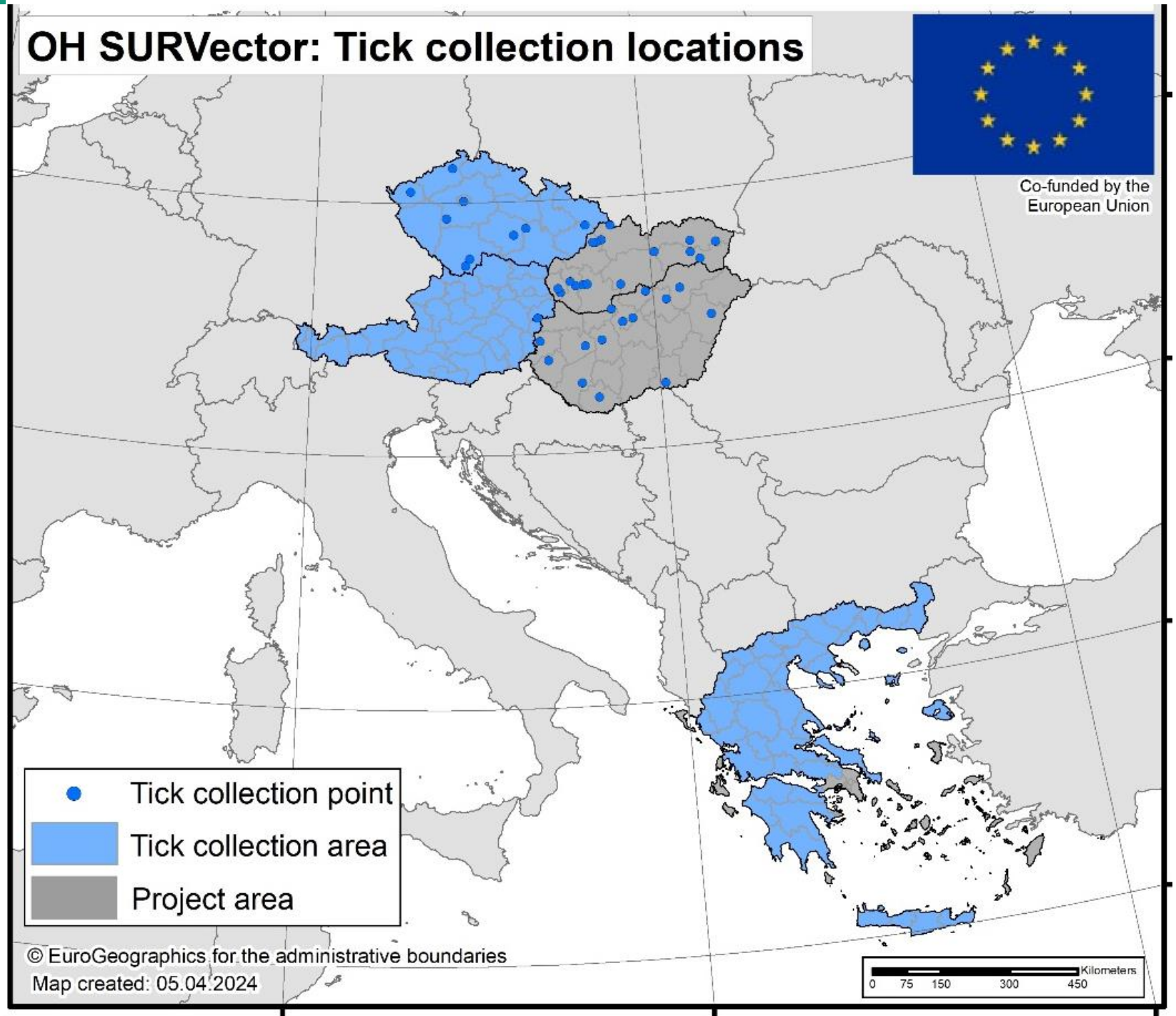


Mosquitoes

- 4 countries screened for WNV

Results 2024:

- Ca. 110.000 mosquitoes
- 2777 pools tested for WNV (and USUV)
- 10 pools WNV+ (AT, HU, SK, CZ)
- 20 pools USUV+ (AT, HU, SK)

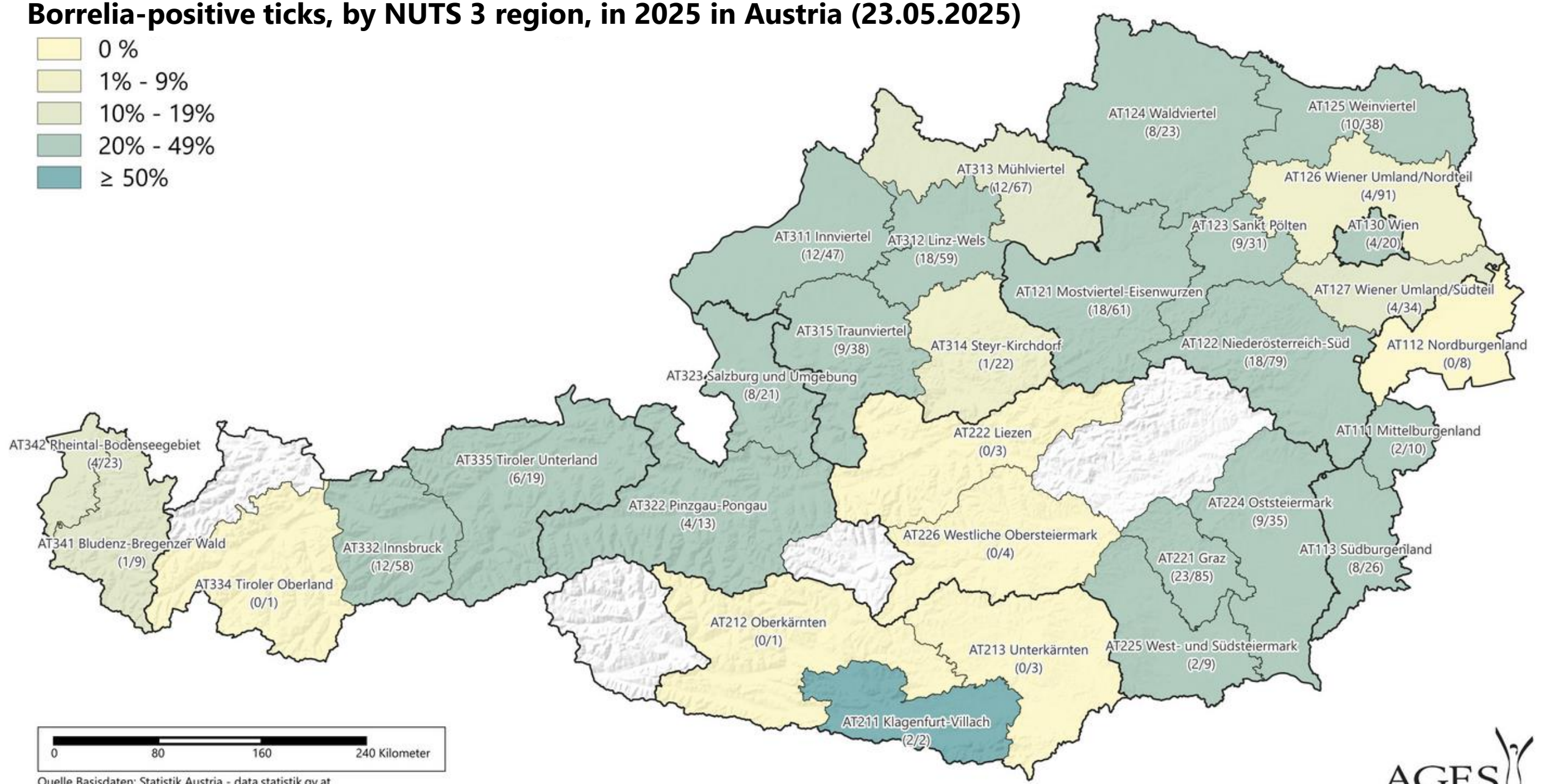


MS	Borrelia	Q-fever	CCHF	TBE
AT	X		X	
CZ	X			X
EL			X	X
HU	X	X	X	X
SK	X			X
Sum	4	1	3	4

Ticks - Results 2024:

- ~ 35.000 ticks collected
- Borrelia: huge variation
- No *Coxiella*, but *Rickettsia*
- No CCHFV, but Aigai-Virus
- TBEV: HU and CZ

Borrelia-positive ticks, by NUTS 3 region, in 2025 in Austria (23.05.2025)



Quelle Basisdaten: Statistik Austria - data.statistik.gv.at
Erstellt: 23.06.2025

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Harmonization Potential

Project structure

+ Cooperation with sister projects under the same call
+ regular exchange with EFSA, ECDC and all MS participating in this call

Consortium-level activities:

- Deliverables and Milestones
- Compare / exchange / lern methods from each other
- Share results
- Interprete: what do the results mean for the whole region ?
- Communicate together: European + international institutions
- Evaluate together: is it useful to do cross-border VBD surveillance from Alpine regions to the Mediterranean ?

Milestone of the project: Harmonization potential

What have we promised

- Within this Consortium, we see a large potential for innovation by learning from each other and sharing experiences.
- We will also assess options for harmonization at different stages of our vector surveillance activities: field work, lab work, data management and analysis, communication.

- **Importantly, any harmonization effort shall still take account of the specific needs, capacities, conditions and specific national contexts of the Consortium MSs.**

Expected result of this Harmonization

- Minimum: a report summarizing the results of our harmonization potential workshop and explain differences between the surveillance activities (country landscape / ecosystem differences, presence of pathogens, etc.
- Further goal: a methodological scientific paper or opinion paper

Relevance:

- OH SURVector project level: how much harmonization is helpful to each of us?

- European level: " What are the most relevant characteristics that should be harmonized to make vector monitoring and pathogen screening comparable between countries ?"

What is harmonisation

- Harmonization - definition:
  - 100% the same
  - more or less the same = 80% the same ?
  - Similar = … % the same ? → does harmonizatio

- **Slovak Republic:** A 1×1 m flag of **cotton cloth** flagged over the **low vegetation** along a **standardised 100 m long trail**.
- **Czech Republic:** The collection flag consists of **white cotton cloth with medium-length hair (resembling animal fur)** sized 1 × 1 m, attached to a wooden pole approx. 150 cm long. (1); at least ten locations will be selected where sampling will take place; **4 transects à 100 m2 per sampling site** for estimation of tick abundance;

(1) Vectornet, 2022: Technical report Field sampling methods for mosquitoes, sandflies, biting midges and ticks

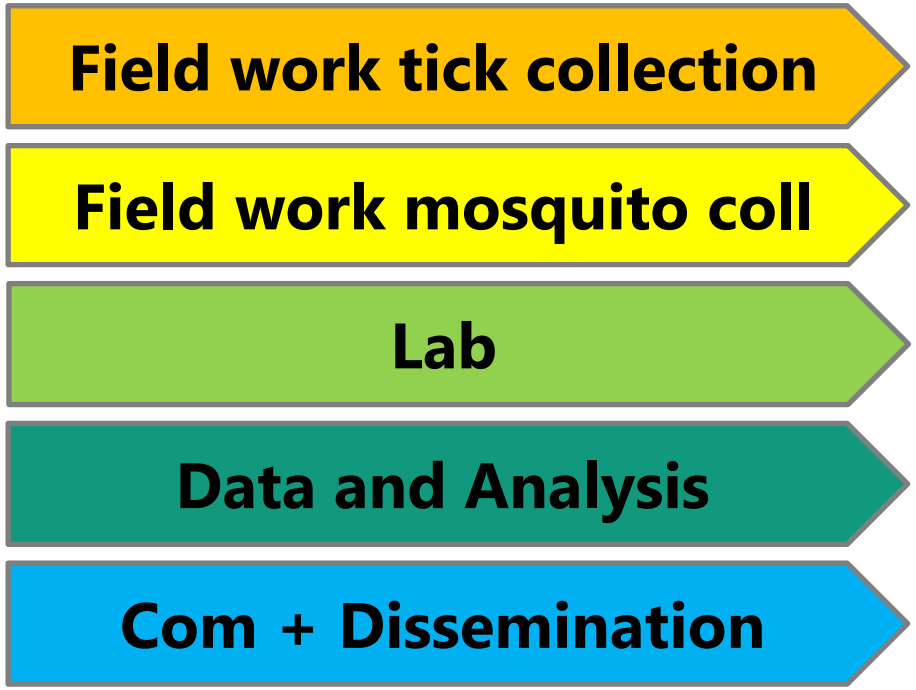
What is harmonisation

- Harmonization - definition:
  - 100% the same
  - more or less the same = 80% the same ?
  - Similar = … % the same ? → does harmonization start at 5% (?)

- **Our solution:** define minimum criteria to what level a method / task should be performed.
- Example: Mosquito species identification method:
  - Minimum = by morphology using an identification key (Becker and/or Moskeytool on-line);
  - Additional = molecular method and count the unidentifiable individuals to the lowest possible taxonomic level

Expert Workshop on Harmonization Potential

- Group discussion: **What are the most relevant characteristics that should be harmonized to make vector monitoring and pathogen screening comparable between countries ?**
- **Goal:** Identify the 3 – 5 most relevant characteristics



Field work tick collection

- Target **age group**: Development stage of ticks
- **Sampling location**: ecosystem, exposure to humans, animals

Field work mosquito coll

- **Type of trap:** Female traps (BG or other)
- **Attractant:** minimum CO2; additional lure
- **Minimum operation time** of trap = 24 hours

Lab

- Vector **pool sizes** for pathogen screening vs. costs

Data and Analysis

- create **common indicators** to extend comparability
- **integrated data analysis** (human, animal, vector)

Com + Dissemination

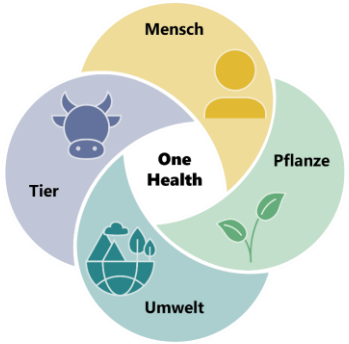
- **Vector** presence results
- **Pathogen** presence results

Challenges and the way forward

- **VBD surveillance = expensive**:
  - VBD surveillance cannot be „bought from the shelf“
  - you need a couple of years from a pilot to an „ok – that‘s what is helpful für us“.
- **Vector control** in the future → need to be based on a sound data → countries facing threats now or probably soon have to get prepared well in advance.
- **Database / data infrastructure** to record data, document vector control linked to VBD surveillance. → Option for region-wide support to provide a database for vector data and pathogen screening data + get away from Excel tables?
- We believe that – sooner or later – we will need **national VBD surveillance programmes** in all countries.
  - Suggestion: Define what is the **minimum standard** we need – and can do - for a **sustainable VBD surveillance** in times of limited ressources.

Thanks to the whole OH SURVector Consortium and all our supporters

OH SURVector Consortium meeting in Prague, 12-13 May 2025



Österreichische Agentur für Gesundheit
und Ernährungssicherheit GmbH

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Get in contact with OH SURVector

Project Website:

OH SURVector - One Health surveillance and Vector monitoring for cross-border pathogens – AGES

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