



EYWA

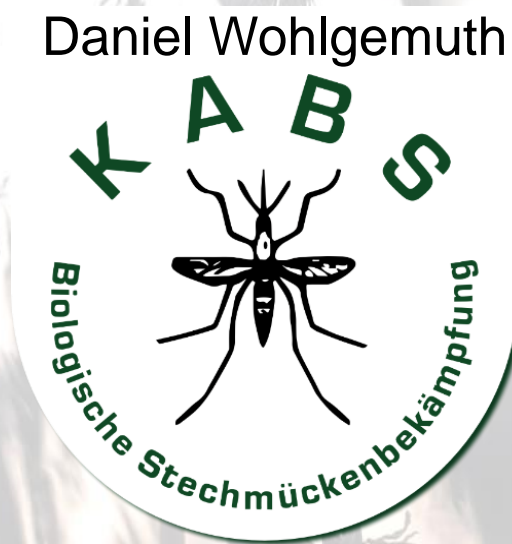
Early Warning System
for Mosquito Borne Diseases

EO creates
opportunities
for Health &
Epidemics

Potential utilisation of EYWA for targeted vector monitoring in the upper Rhine valley, Germany

Sci. Director: Dirk Reichle

Daniel Wohlgemuth



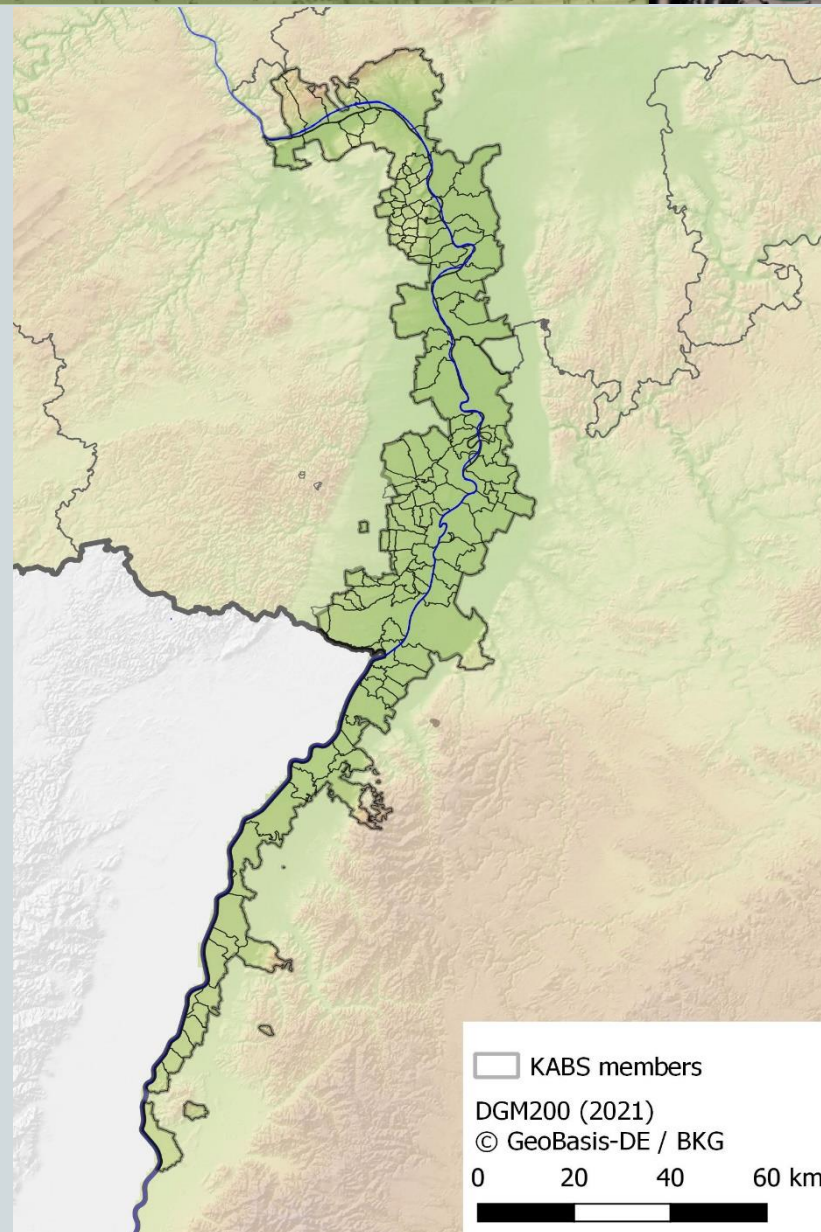
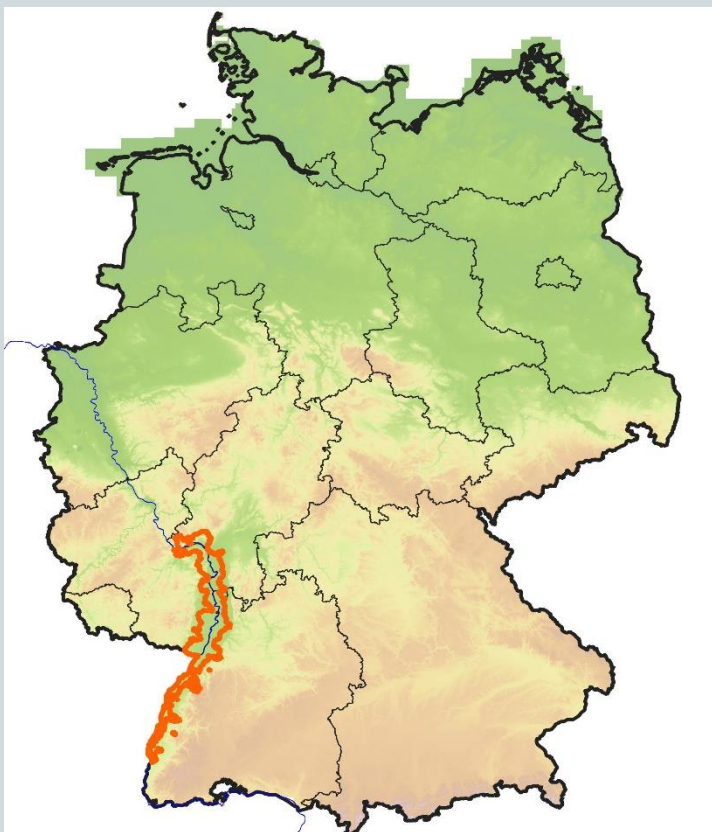
Earth Observation for Epidemics
of Vector-borne Diseases /
EuroGEO Action Group

EuroGEO

NEXTGEOSS
European Data Hub and Platform

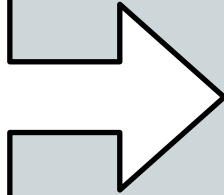


- non profit mosquito control association since 1976
- 99 members: **municipalities**, administrative districts and federal states



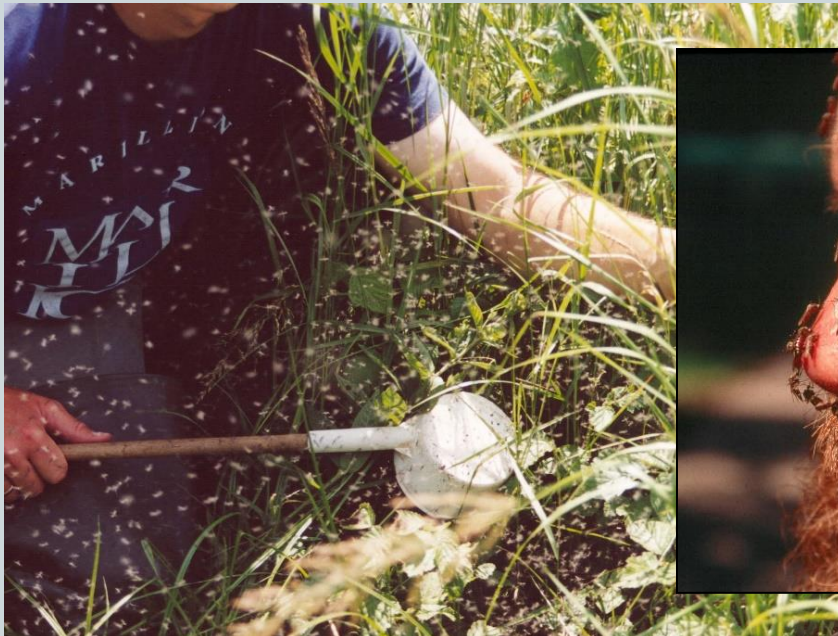
Nuisance control

- Mass development of floodwater mosquitos
- Pioneer since 1978:
B.t.i. as environmentally friendly control agent

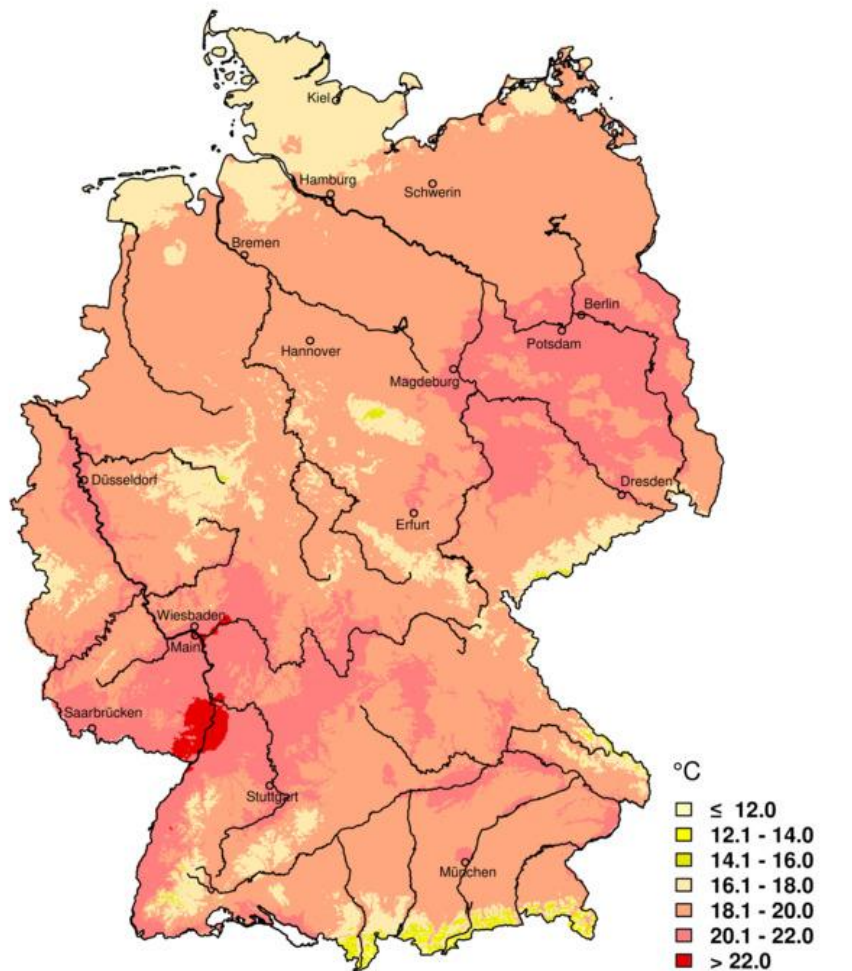


Vector control

- *Aedes albopictus*
- *Culex* spp. West-Nil-Virus



Lufttemperatur Sommer 2022 Temperature Summer 2022



© Deutscher Wetterdienst 2022

Diese Karte wurde am 15.09.2022 mit den Daten aller Stationen aus den Messnetzen des DWD erstellt.
This chart was produced on September 15, 2022 using data of all stations of the networks of DWD.

Vector control

- *Aedes albopictus* since 2007, control since 2016
- West-Nil-Virus first detected in Ger in 2018
=> established

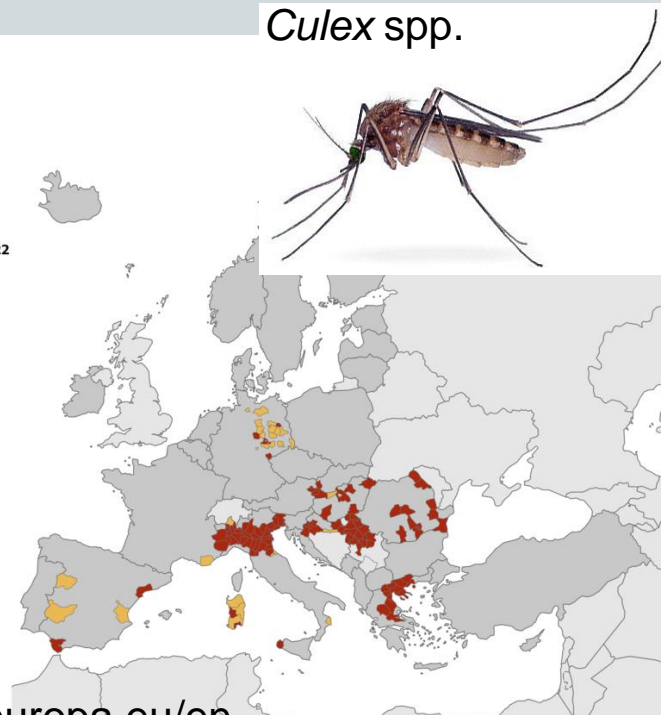
Culex spp.

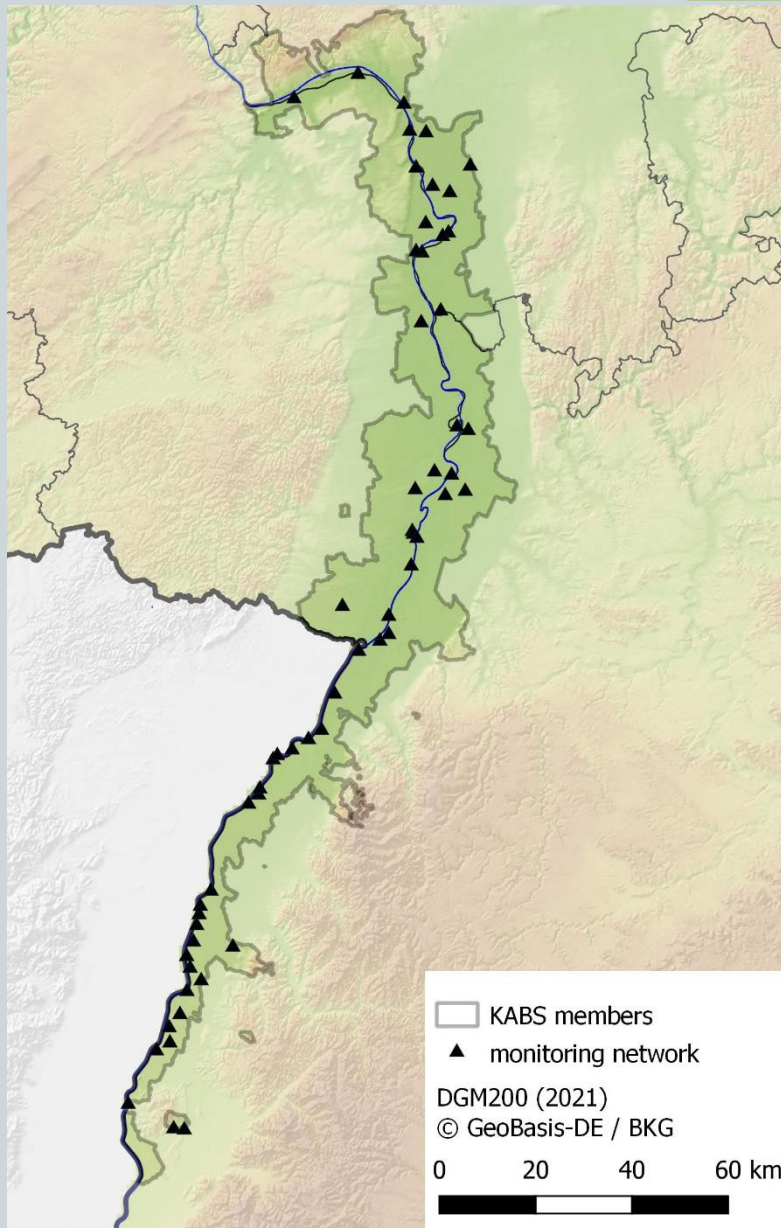


Distribution of human and animal West Nile virus infections in NUTS 3 or GAUL 1 regions of the EU/EEA and neighbouring countries during the 2022 season, as of 28 of September 2022

- Human infections, with or without outbreaks among equids and/or birds
- Outbreaks among equids and/or birds
- No infections reported
- Not included

Countries not visible in the main map extent
■ Malta ■ Liechtenstein





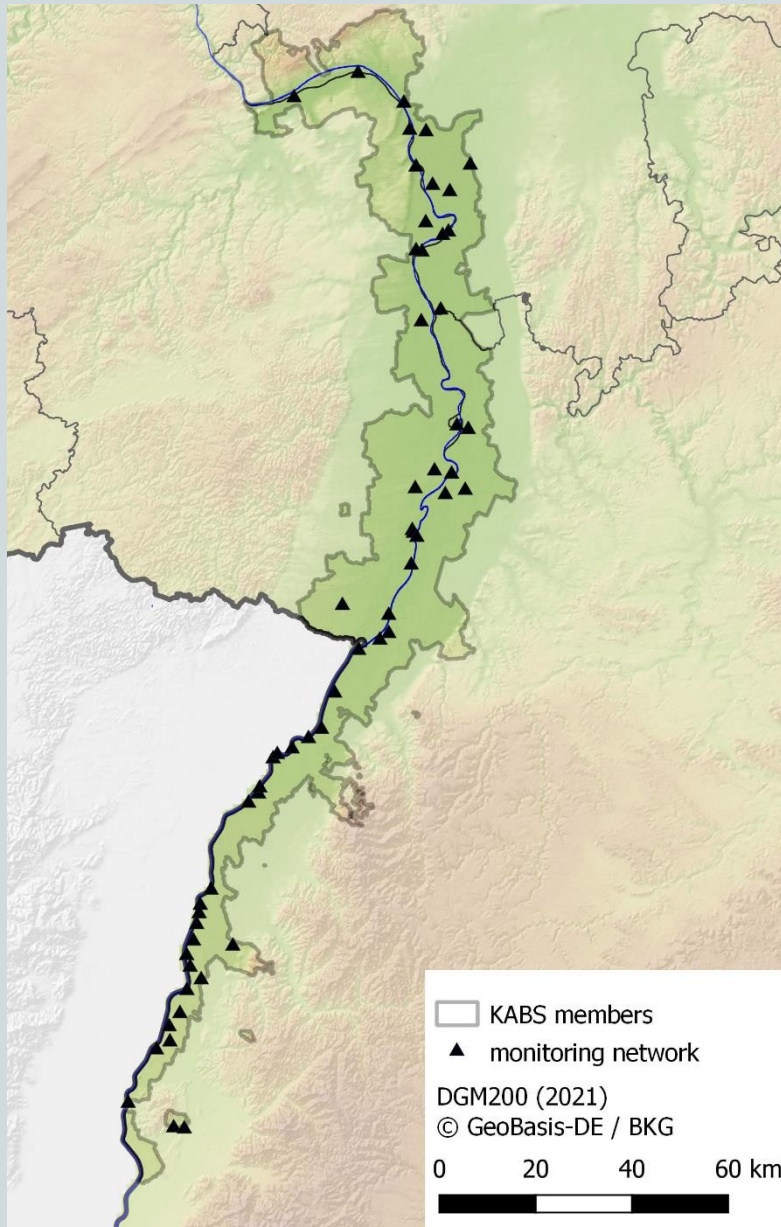
Entomological data

monitoring network since 1991

- 55 sampling locations
- ~biweekly sampling April/May
– September

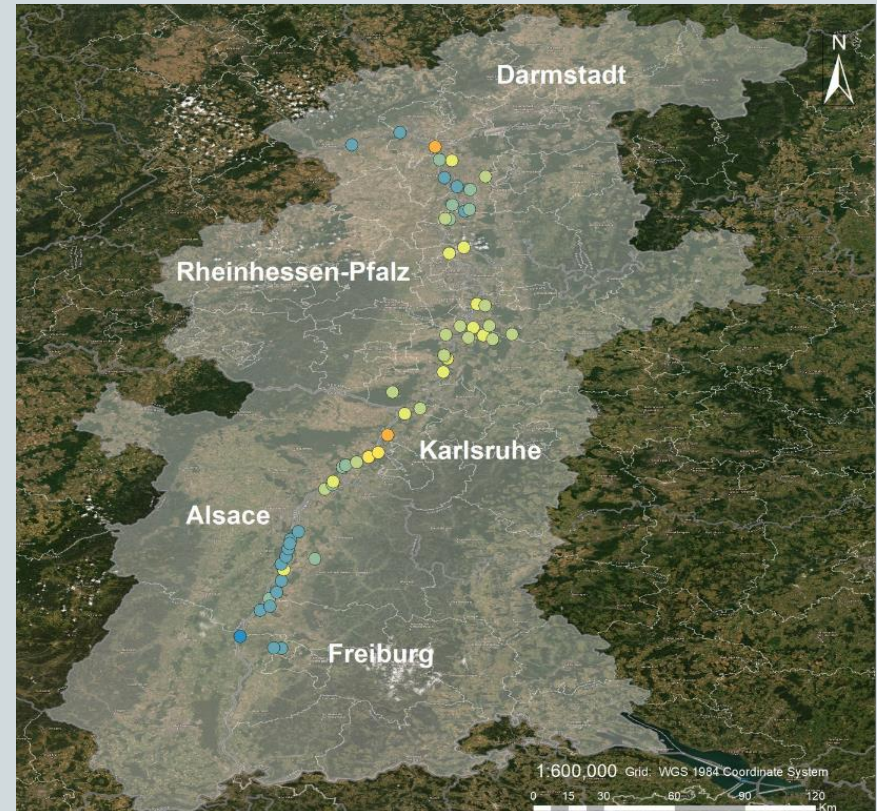
=> Data for model validation and adaptation for Germany

How can KABS implement EYWA?

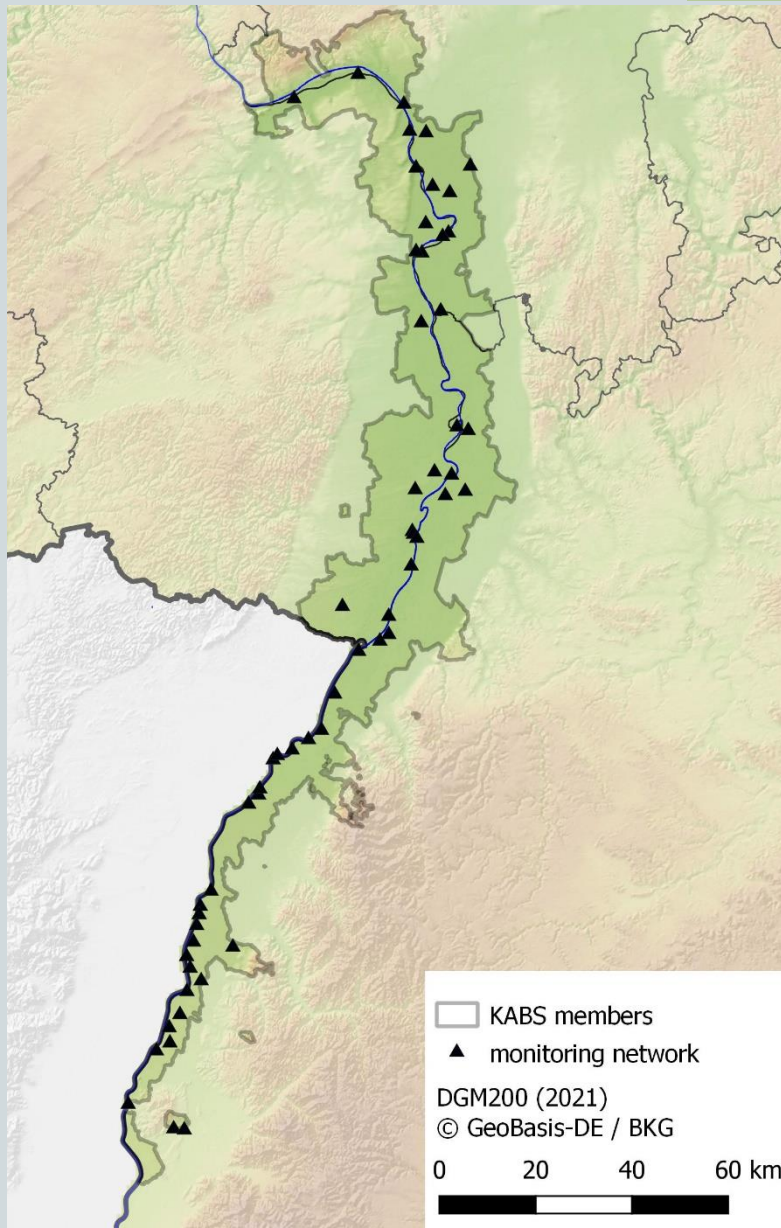


Extension of monitoring network and WNV screening

- Limited resources



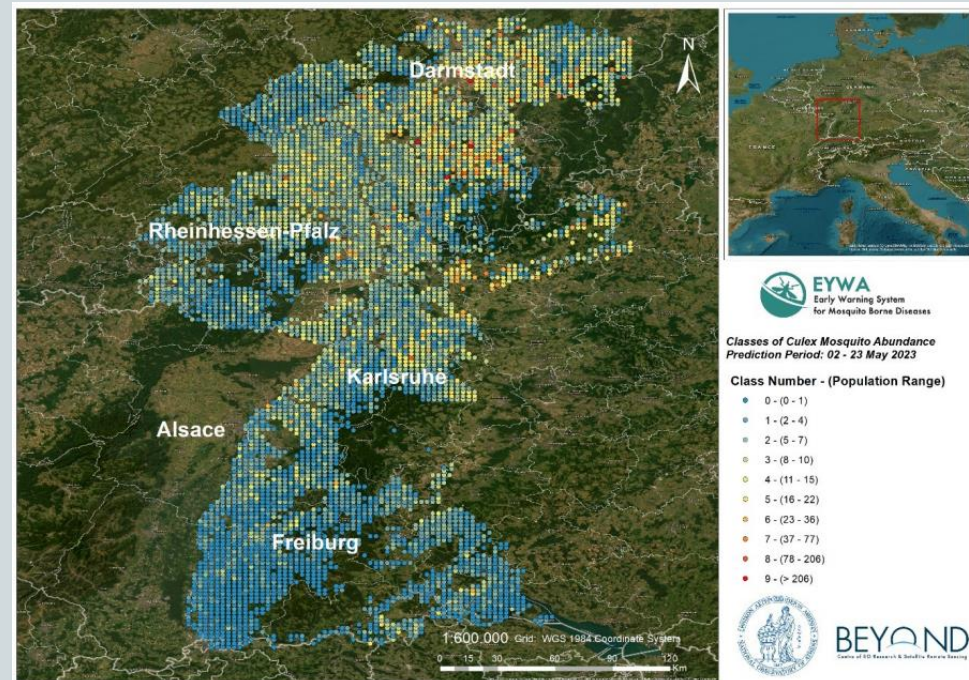
How can KABS implement EYWA?



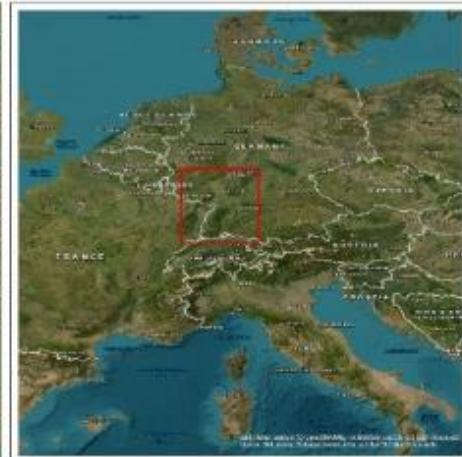
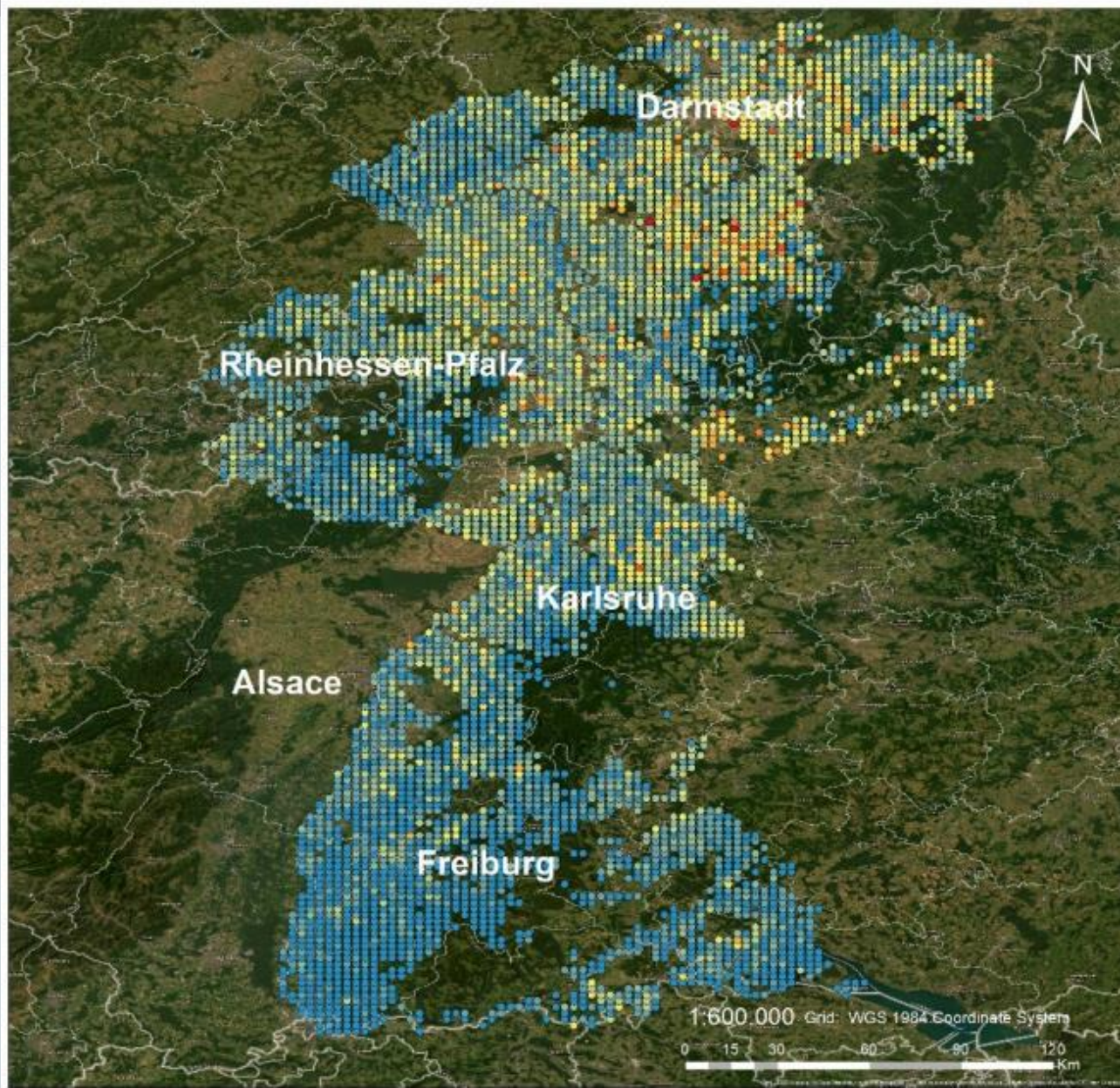
Extension of monitoring network
and WNV screening

- Limited resources

=> Spatial interpolation



How can KABS implement EYWA?



Classes of Culex Mosquito Abundance
Prediction Period: 02 - 23 May 2023

Class Number - (Population Range)

- 0 - (0 - 1)
- 1 - (2 - 4)
- 2 - (5 - 7)
- 3 - (8 - 10)
- 4 - (11 - 15)
- 5 - (16 - 22)
- 6 - (23 - 36)
- 7 - (37 - 77)
- 8 - (78 - 206)
- 9 - (> 206)



Thank you!

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Contact us

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(Lead Partner of EYWA)

Earth Observation for Epidemics
of Vector-borne Diseases /
EuroGEO Action Group

EuroGEO

Partners

Greece

National Observatory of Athens (NOA) – BEYOND Centre of EO Research & Satellite Remote Sensing

Ecodevelopment S.A

University of Patras – Physics Department - Laboratory of Atmospheric Physics (LapUP)

Dimitrios Vallianatos (IDCOM)

Aristotle University of Thessaloniki

University of Thessaly, Medical School. Laboratory of Hygiene and Epidemiology

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Istituto Zooprofilattico Sperimentale delle Venezie (IZSVe)

Edmund Mach Foundation

University of Trento

Serbia

University of “Novi Sad”, Faculty of Agriculture, Laboratory for Medical and Veterinary Entomology

Scientific Veterinary Institute “Novi Sad”

University of Novi Sad, Faculty of Medicine

Germany

German Mosquito Control Association (KABS)

Bernhard Nocht Institute for Tropical Medicine

France

EID Méditerranée