Preparedness support for drinking water suppliers and municipalities

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Nordic-Baltic Drinking Water Meeting
Reykjavik, 23.10.2025

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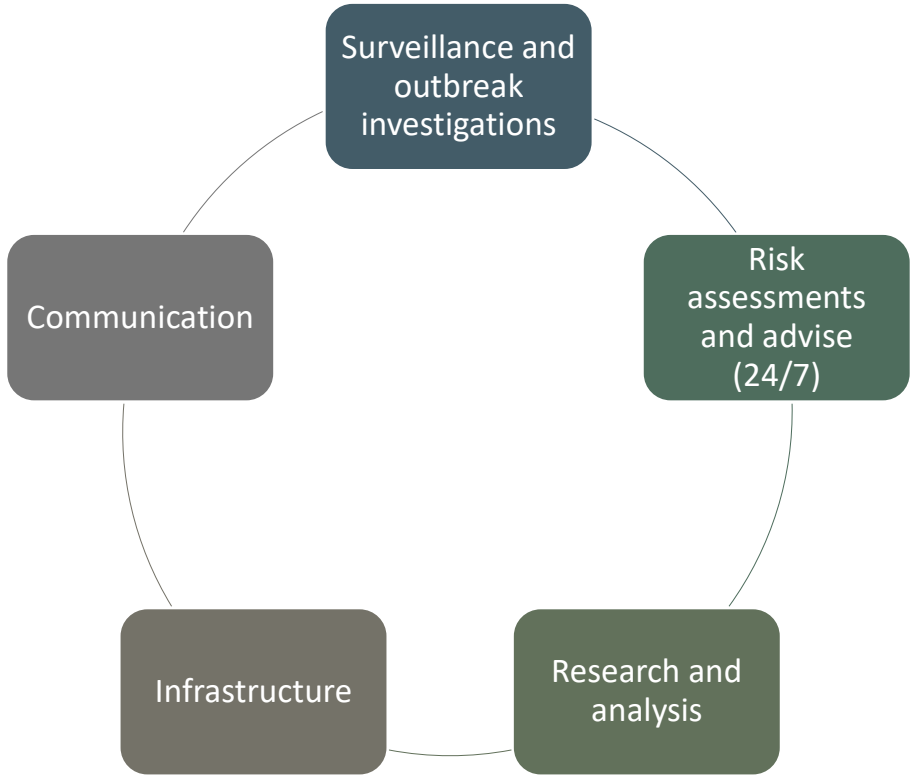
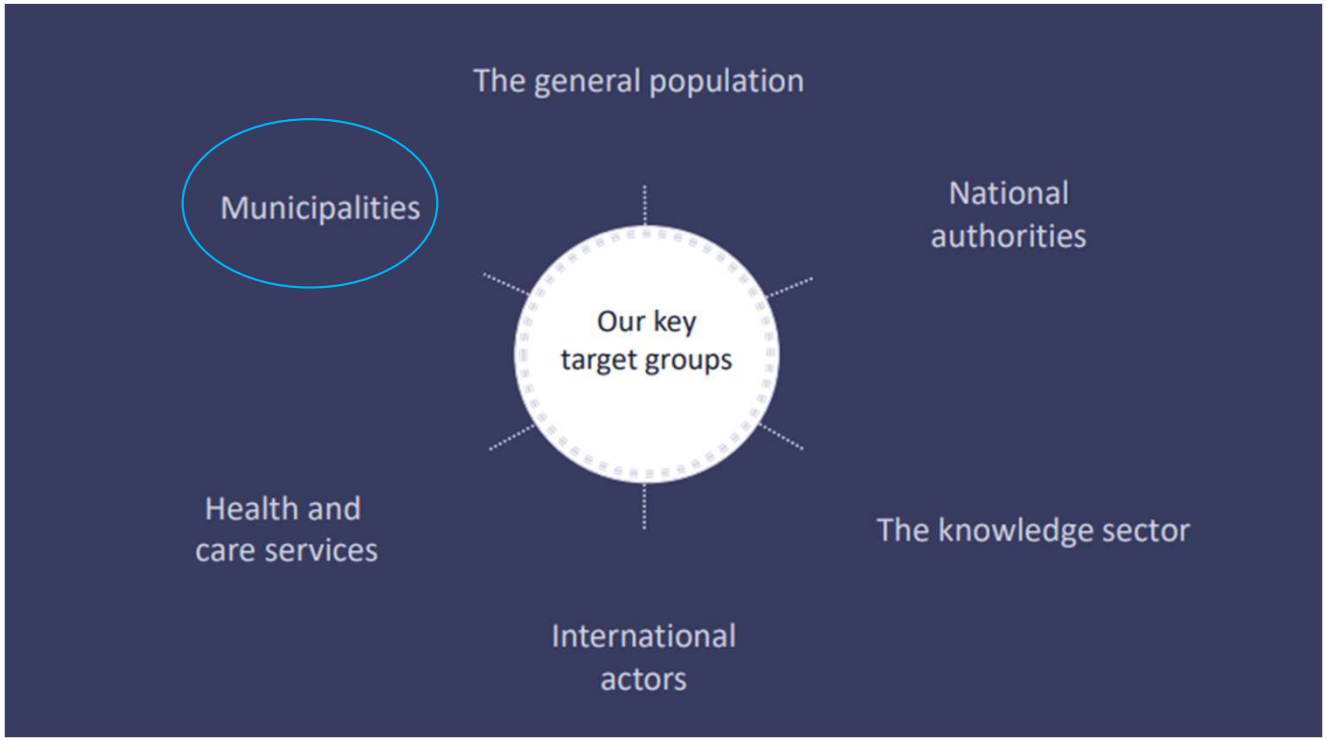
Norwegian Institute of Public Health

Preparedness is one of NIPHs core tasks

infectious disease outbreaks (B)- chemical incidents (C)- environmental incidents



Our target groups



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Providing preparedness support for municipalities*:*
- examples from recent disease outbreaks in Norway

High precipitation/climate change

Local outbreak of tulaeremia («rabbit fever») caused by *Francisella tularensis* (zoonotic disease)

- Outdoor sports event (orienteering)
- Wet conditions
- Affecting 500 participants from different regions
- Municipal doctor responsible for outbreak management
- NIPH providing support in the **Outbreak Investigation (ongoing)**

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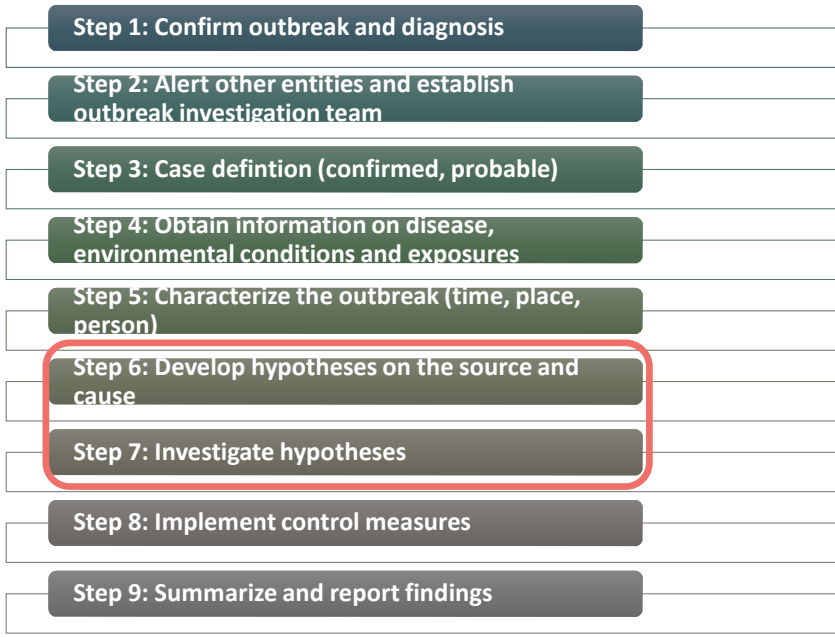

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General recommendations:

- One Health approach essential to identify risks of zoonotic disease outbreaks
- More research needed to assess the impact of climate change on the risk of new disease outbreaks

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Security and resilience

Local outbreak of waterborne gastrointestinal disease in industrial park

- Industrial area (~ 50 companies, ~3000 employees), including defense industry
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General recommendations:

- Strenghten routines for detection and alert
- Ensure timely and correct information sharing to affected entities, persons and the general public
- Emphasize that *E.coli* in drinking water is an indicator of fecal contamination
- Clearify roles and responsibilites «before something happens»
- Implement risk-reducing measures around water supply systems (including security measures)

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Vannvakta – the Drinking Water Utility crisis support team

Nordic-Baltic drinking water expert group 2025 | Reykjavik

23 October 2025

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Background and organization

- Launched in March 2017.
- A 24-hour advisory service for waterworks that require advice and support in the event of acute incidents that may have an impact on water supply and the potential to cause health-related problems.
- The team is made up of professionals with experience from waterworks operations and crisis management, and from the NIPH.

NASJONAL VANNVAKT

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Professionals from waterworks

Annie E. Bjørklund

Lars J. Hem

Asle Aasen

Lene Veraas

Communication expert

Odd Atle Tveit

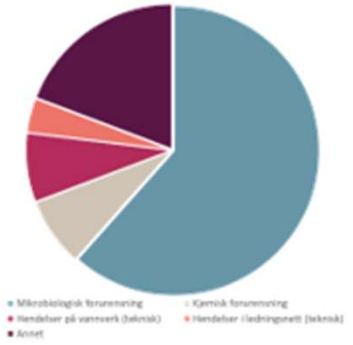
Karl Olav Gjerstad

Markus Rawcliffe

Svein Ove Moen

How the team operates

- Facilitating a rapid response to prevent situations that could have an impact on health, for example the spread of disease or health hazards caused by chemical contamination.
- Often routine questions about indicator bacteria and subsequent actions i.e. boiling advisory
- In special circumstances, the team will provide advice
  - regarding hazardous chemical agents in the event of threats
  - communication to the media and public.
- The team will not take over responsibility for the crisis and there will be no change in prevailing roles, responsibility and established notification and emergency preparedness routines.
- Around 50 calls per year and increasing (65 so far in 2025)



That one time «Hans» made a real mess

Anders Bekkelund
Department of Infection Control and Preparedness | NIPH

Nordic-Baltic drinking water expert group 2025 | Reykjavik
22 October 2025

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Extreme weather «Hans»

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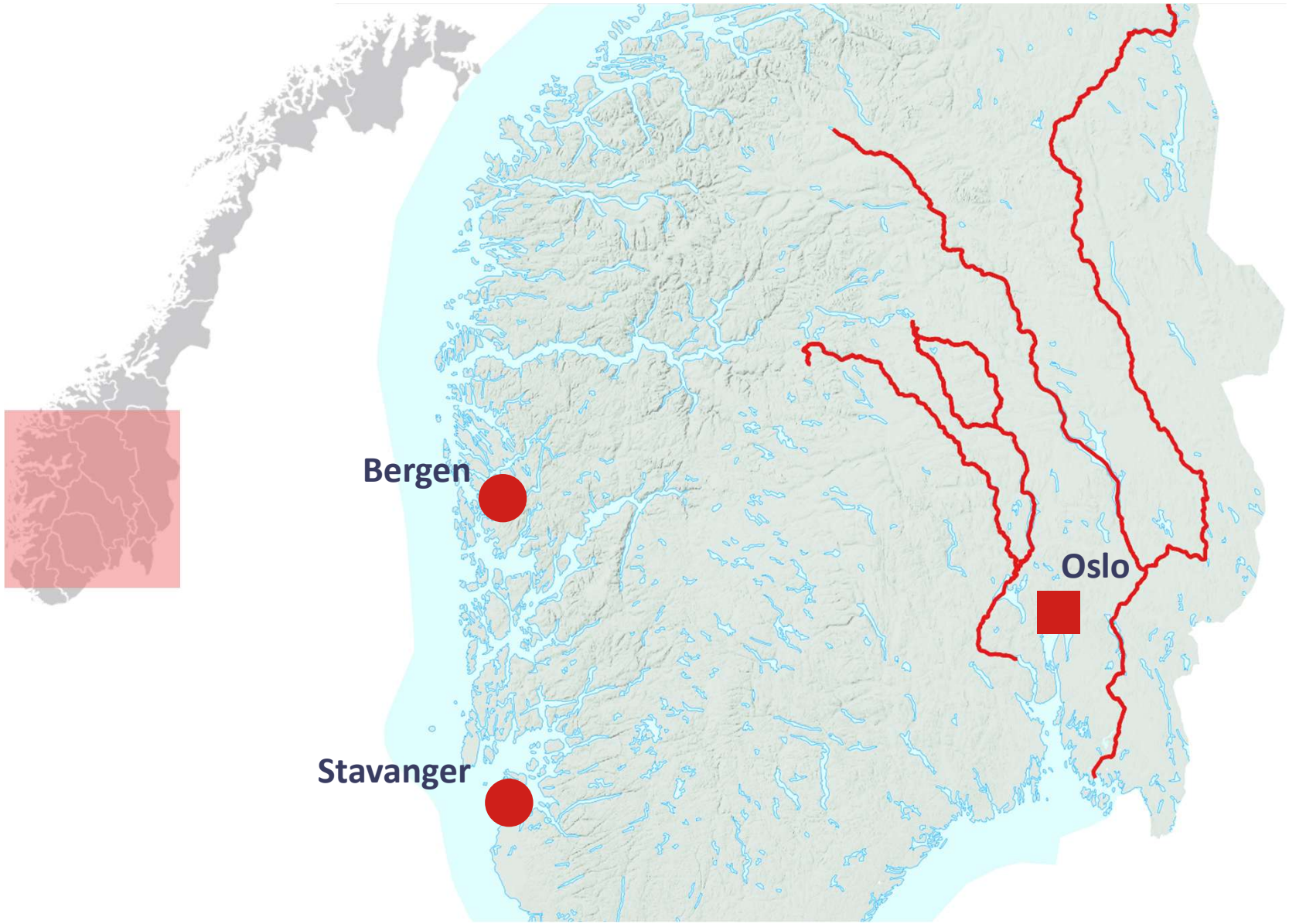

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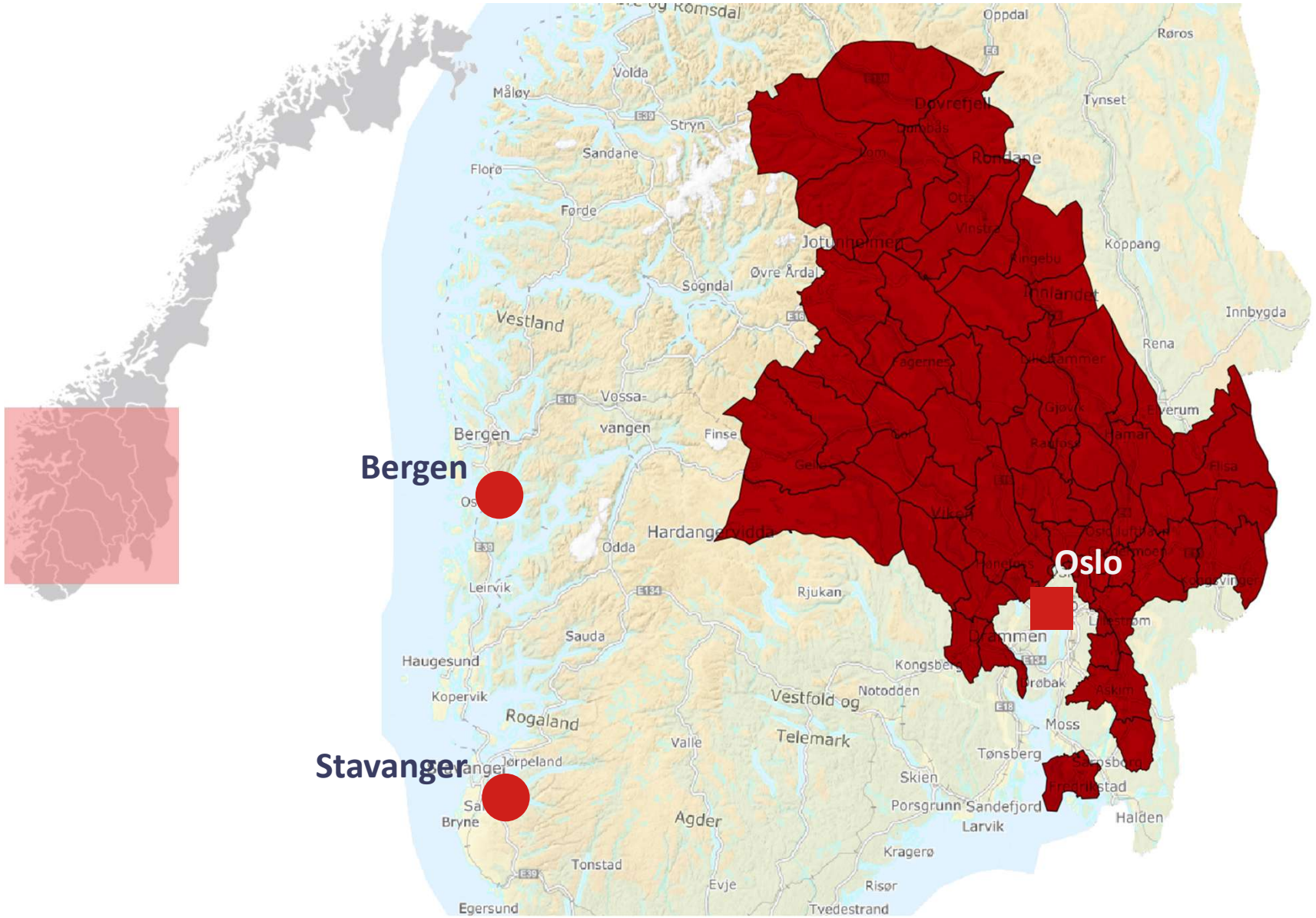
Bergen
Oslo
Stavanger
Romsdal
Oppdal
Røros
Volda
Måløy
Stryn
Dovrefjell
Tynset
Sandane
Florø
Førde
Jotunheimen
Øvre Årdal
Sogndal
Vestland
Koppang
Innbygda
Rena
Vossa-
vangen
Finse
Hardangervidda
Odda
Leirvik
Rjukan
Sauda
Haugesunds
Kopervik
Rogaland
Notodden
Vestfold og
Telemark
Valle
Moss
Tønsberg
Skien
Porsgrunn
Sandefjord
Larvik
Halden
Agder
Kragerø
Tonstad
Evje
Risør
Egersund
Tvedestrand

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SSU/Wikimedia commons


VG


GD


Hole kommune


NRK

Some dry (or wet) facts

Affected municipalities

63

Affected water utilities

215

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Median utility size (persons)

300

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Served by water utilities in total

844,000

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Residents in affected areas

947,000

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Served from groundwater

157,000

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Served from surfacewater

687,000

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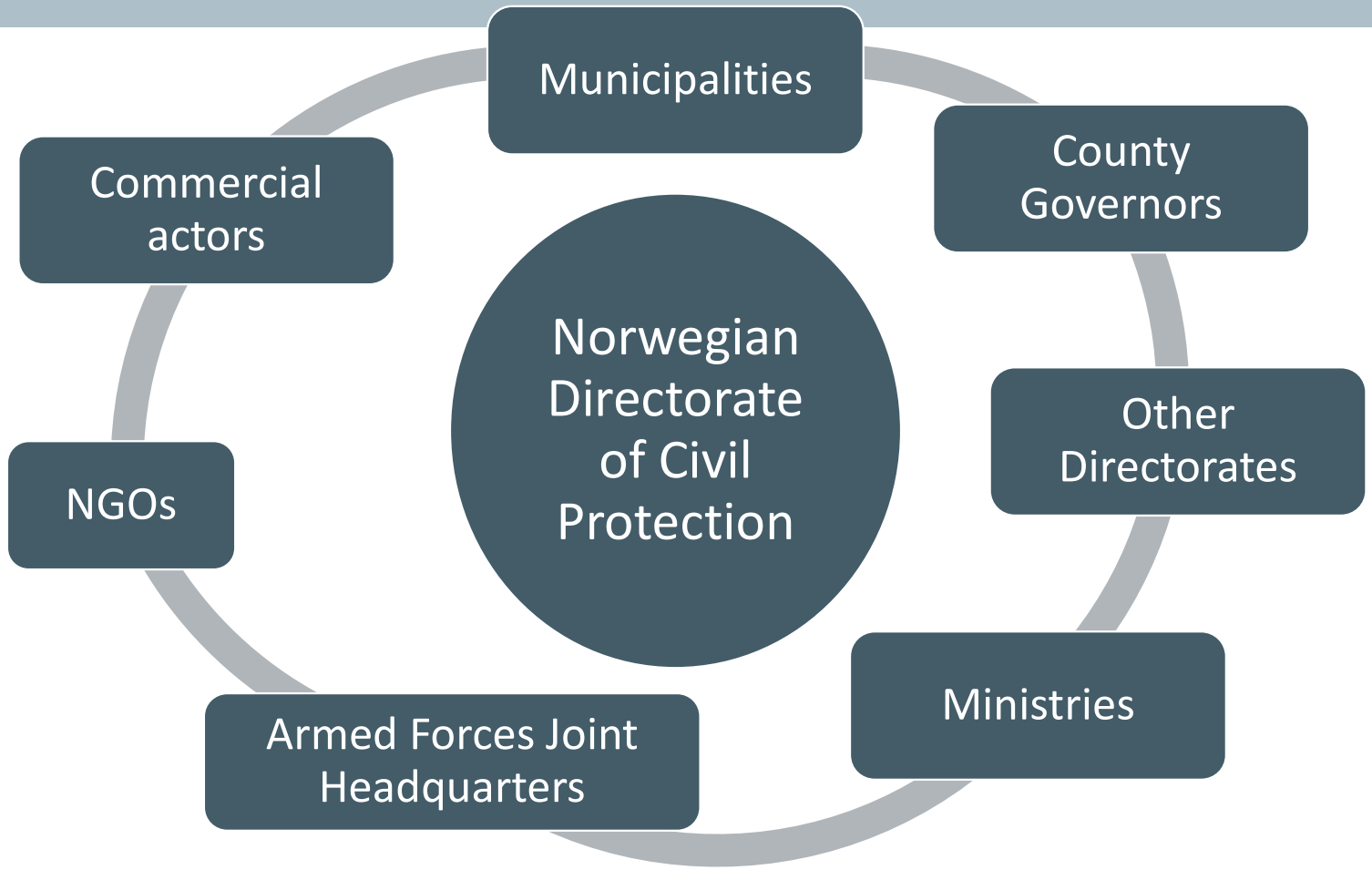
Preparedness organisation during «Hans»



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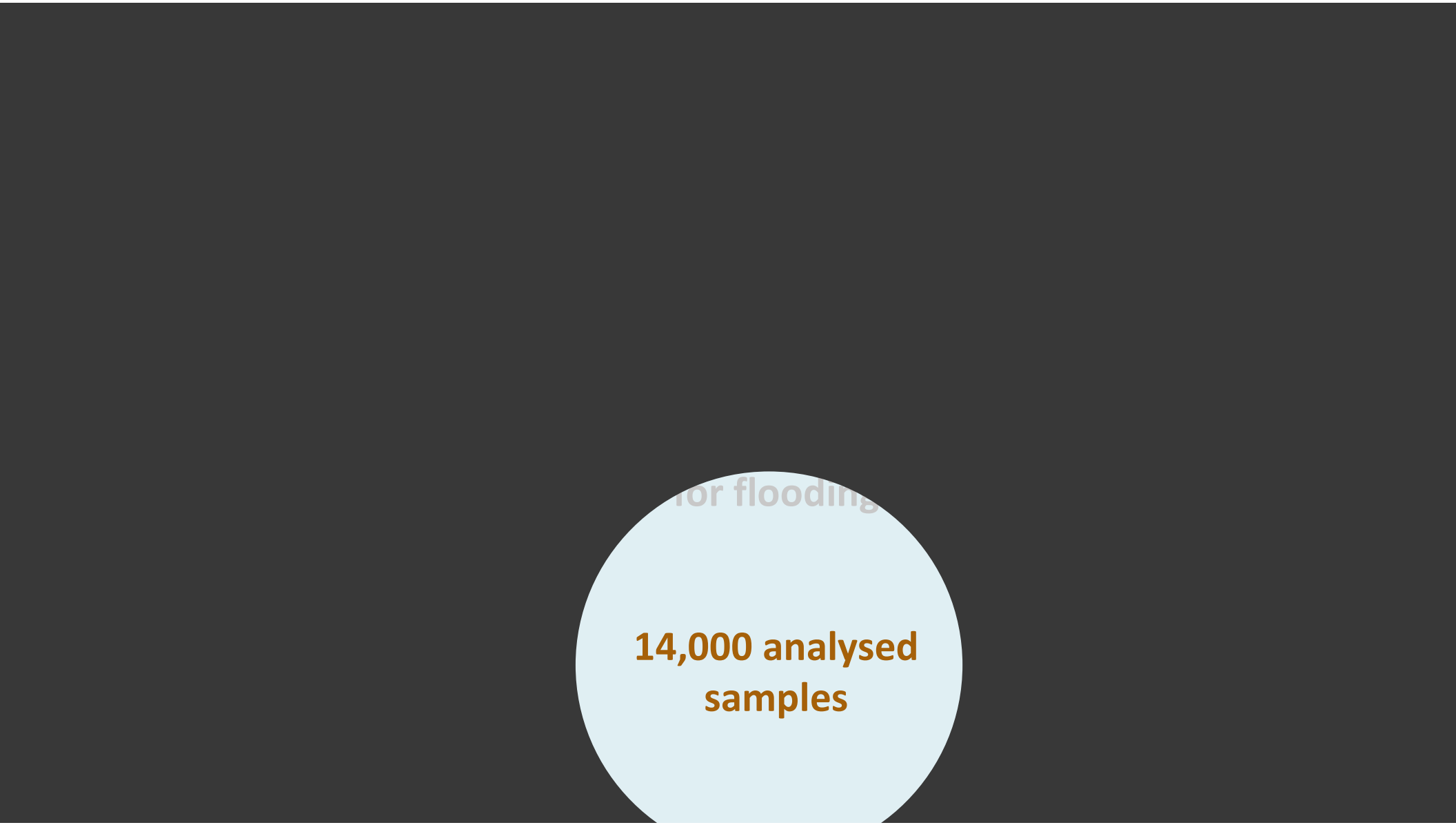
Research opportunity

44 participating municipalities

93 municipal water service providers

600,000 persons served

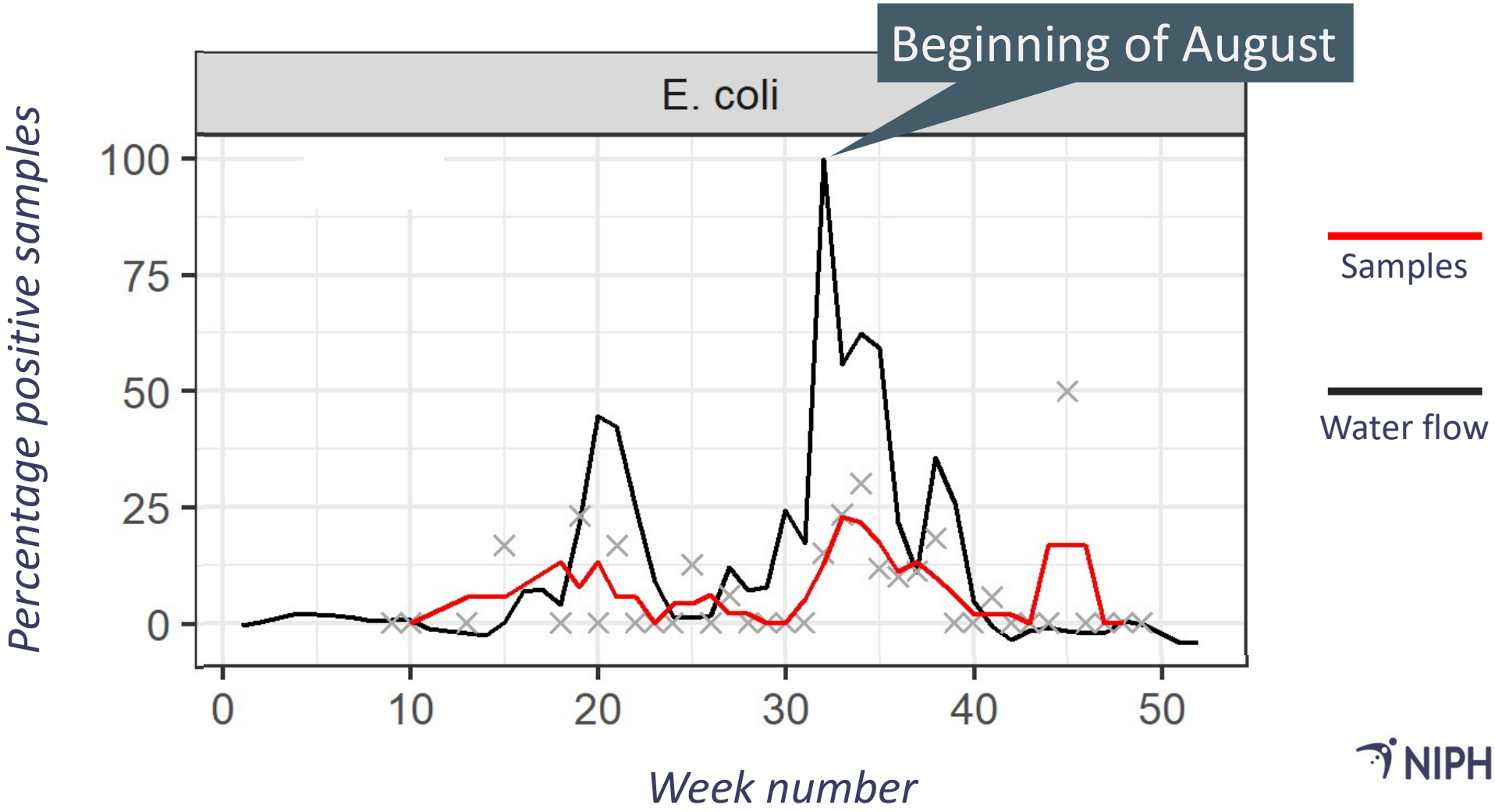

14,000 analysed samples

E. coli
C. perfringens
Intestinal enterococci

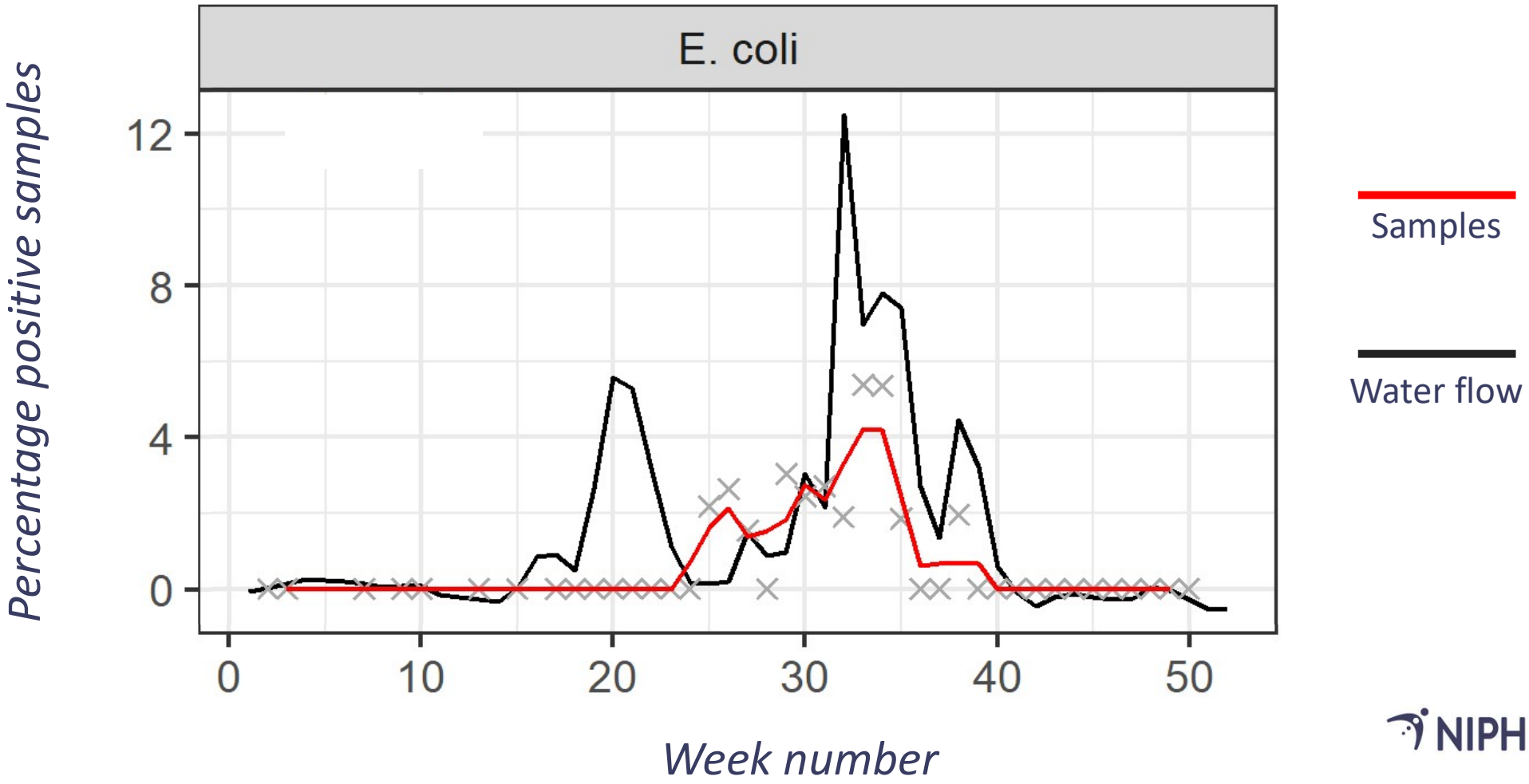
River water flow as an indicator for flooding

Found a correlation between water flow and positive samples

Raw water


Beginning of August
E. coli
100
75
50
25
0
0
10
20
30
40
50
Percentage positive samples
Week number
Samples
Water flow
NIPH

Drinking water



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Extreme weather and drinking water safety: impacts of the 2023 flood *Hans* in Norway

Anders Bekkelund, Petter Langlete, Carl Fredrik Nordheim, Tora Alexandra Ziesler, Elisabeth Henie Madslien, Susanne Hyllestad