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# Update on control and management of IHN outbreak in Finland

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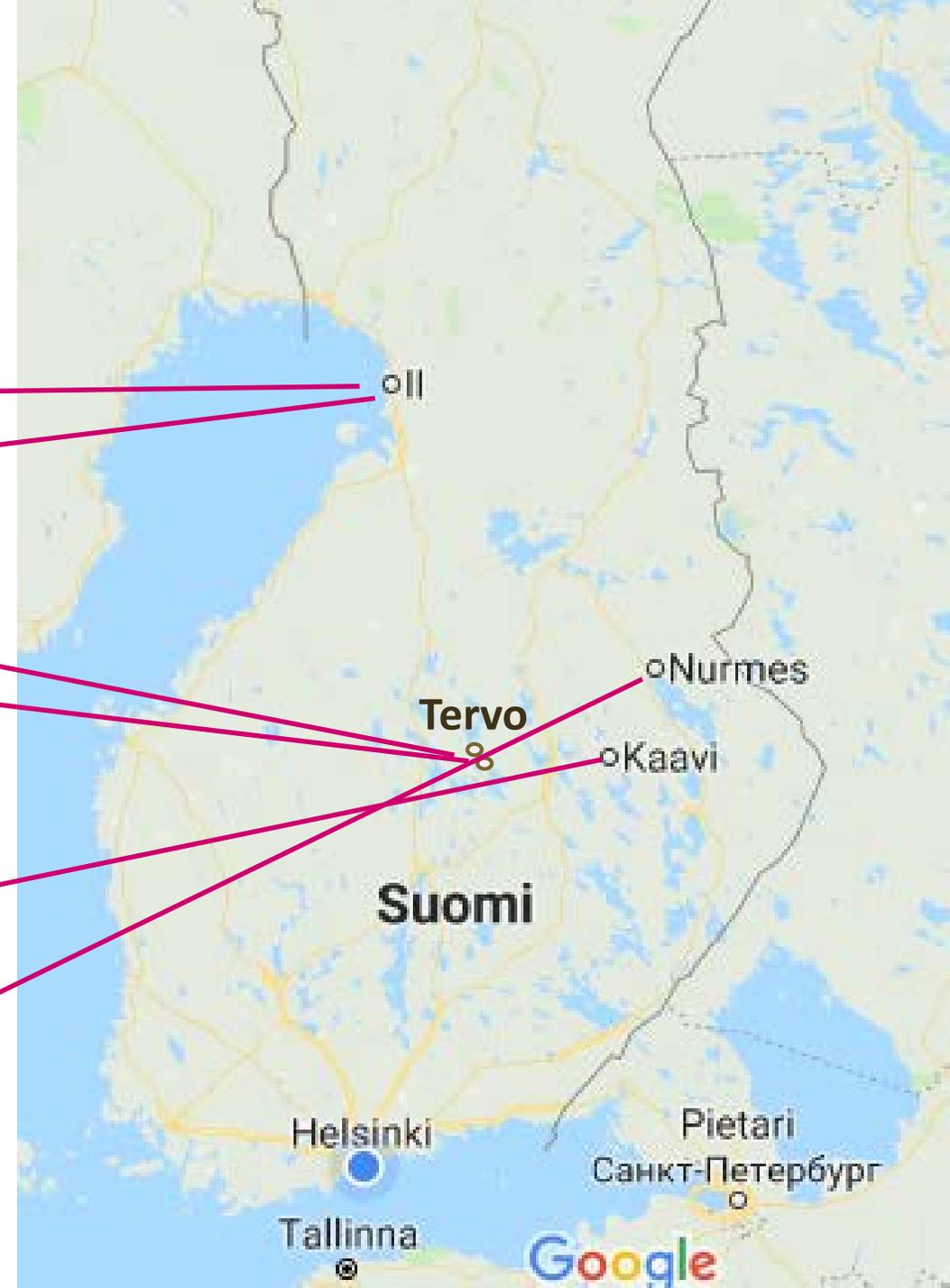
Finnish Food Authority

Virology Unit

24th AW for National Reference Laboratories for fish diseases  
3.11.2020

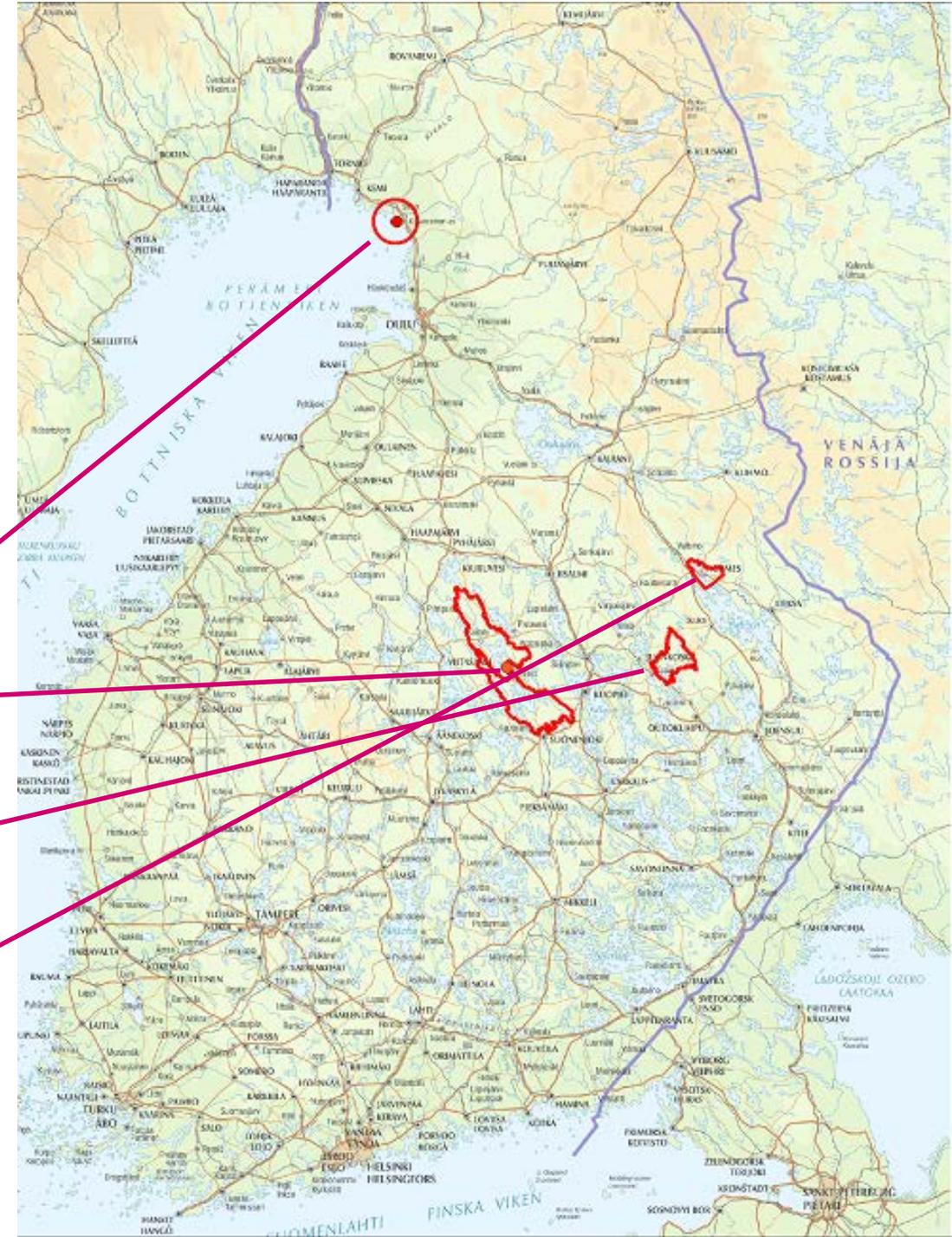
# Cases of IHN in Finland 2017–2018

- 1. **Ii**, Nov. 30, 2017: Rainbow trout, netcage
- 2. **Ii**, Dec. 8, 2017: Rainbow trout, netcage
- 3. **Tervo**, Dec. 11, 2017: Broodstock farm
- 4. **Tervo**, , Dec. 28, 2017: Rainbow trout, fishing pond
- 5. **Kaavi**, Jan. 5, 2018: Rainbow trout, fishing pond
- 6. **Nurmes**, Jan. 19, 2018: Rainbow trout, fishing pond



# Containment areas

- Containment areas were established around the positive farms and units
  - 30.11.2017 around the two positive farms in Ii
  - 11.12.2017 around the positive farm and pond in Tervo
  - 8.1.2018 around the positive pond in Kaavi
  - 22.1.2018 around the positive pond in Nurmes





# Measures on affected farms

- Affected farms and ponds were emptied
  - About 230 000 kg of fish were slaughtered by 14.2.2018
  - Fish used for human consumption, animal feed, and fertilizers
- All affected farms were disinfected by the end of October 2018
- After disinfection, a fallowing period of at least six weeks before taking new fish required
- Testing of new fish for IHNV was intensified



# Restrictions in containment areas

Concerning fish and other aquatic animals that are susceptible to IHNV or vector species of IHNV:

- Forbidden to transfer fish (or other aquatic animals), milt and eggs within, in, or out of the containment area
- Forbidden to stock fish, eggs or milt into natural water systems
- The production units must monitor health status and mortality of the fish, and immediately notify the local official veterinarian, if changes are detected
- Dead aquatic animal must be destroyed in a way that does not cause risk of spreading the disease
- Transport vehicles that have been used for transportation of fish and other aquatic animals, milt and eggs that originate from the containment area, must be cleaned and disinfected



# Sampling and testing of contact farms of the positive farms

- Official control visits and sampling started immediately after each detection of IHN
- Contact farms and other production units of the six positive farms and ponds, nearby units, units within the same water area, units located near the units with planted fish that originated from the positive facility in Tervo, farms and units considered to be at risk based on epidemiological investigations
- Wild fish from areas with high risk of infection
- In the initial testing of the contacts, approximately 2000 farmed fish from 31 farms, 150 fish from 17 other production units, including fishing ponds, and 40 wild fish were tested during November 2017–March 2018
- Intensified testing of negative contacts was continued for two years



# Surveillance program to regain an official IHN-free status

- Finland has officially been declared free of IHN since 2005
- As of July 2018, Finland, except the three zones (Tervo, Kaavi and Nurmes) and one compartment (Ii) where IHN was detected, has had an official IHN-free status
- The three zones and one compartment have had a status of surveillance zone since September 2018
- Surveillance program of two years is ongoing in the three zones and one compartment
  - Official control visits and sampling of 75 fish twice a year on fish farms (three in use in the compartment of Ii, and one in the zone of Tervo)
  - Sampling of fish from two fishing ponds in the zones of Tervo and Nurmes
  - Sampling of wild fish
    - Approximately 3200 wild fish have so far been sampled and tested during 2018–2020

# Surveillance zones

- Conversion of containment areas into surveillance compartment and zones:
  - The area in Ii in July 2019
  - The area in Nurmes in September 2019
    - The surveillance zone includes the whole lake Pielinen
  - The area in Tervo in February 2020
- The containment zone in Kaavi still remains, for there are no fish farms in the area
  - Sampling consists of wild fish





# Restrictions in surveillance zones

- Forbidden to transfer alive or ungutted farmed salmon (incl. landlocked salmon) and rainbow trout, and their milt and eggs out of the zone to other parts of Finland (or any category I, II or IV areas)
- Salmon and rainbow trout, and their milt and eggs that are transferred to the surveillance areas from other parts of Finland must have a health certificate signed by an official veterinarian of the place of origin
- Transfer of other species of fish within, in or out of the zone is allowed
- In the containment area in Kaavi, stocking of rainbow trout is allowed, but other restrictions of the containment area remain



## Restart of activity in farms and production units where IHN was detected

- The following periods after eradication of fish and disinfection of the premises started between June 2018 (the two net cage farms in Ii, and the fishing ponds in Tervo, Nurmes and Kaavi) and October 2018 (Tervo farm)
- The fishing pond in Nurmes started their activity again in summer 2018
- The two net cage farms in Ii, the Tervo farm, and the fishing pond in Tervo took new fish during spring and summer 2019
- The fishing pond in Kaavi has not taken new fish



# Regaining an official IHN-free status

- Since the last detection of IHN in January 2018, all samples tested have been negative for IHNV
  - Samples from the contact farms of the IHNV positive farms and ponds
  - Samples from wild fish from areas with high risk of infection
  - Samples from sentinel fish from the farms and ponds that were positive for IHNV, after eradication of fish, disinfection of the premises and a fallowing period
  - Samples from farmed fish and wild fish tested in the surveillance program
- The surveillance zones and compartment are expected to regain an official IHN-free status
  - The compartment in Ii by the end of 2020
  - The zones in Tervo, Nurmes and Kaavi in summer 2021



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**Thank you!**