

UPDATE ON THE IHN STATUS IN DENMARK

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Where we left of: Overview of Infectious hematopoietic necrosis (IHN) outbreak 2021

Timeline of the 2021 IHN outbreak in Denmark

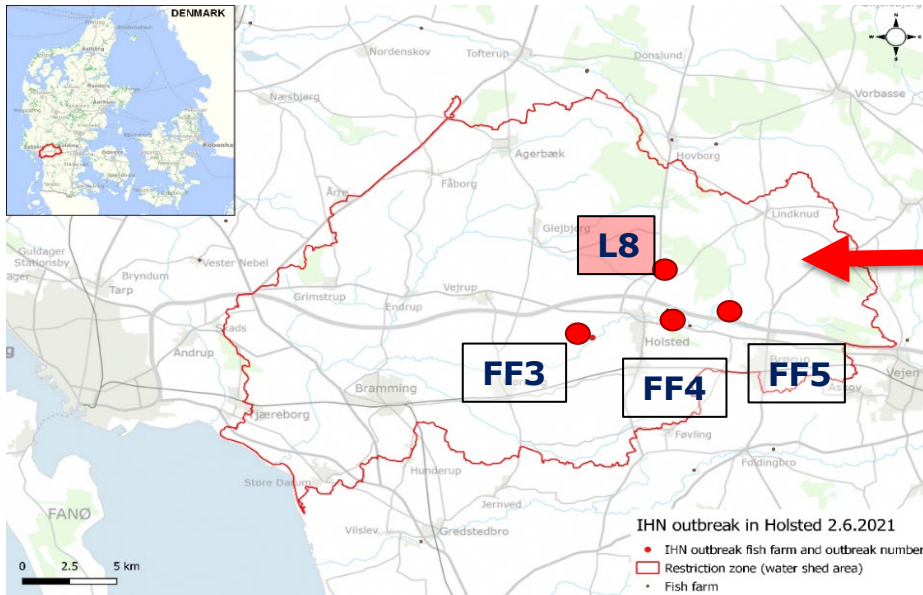
- 18th of May 2021:
- First detection of IHN in DK threatening the IHN-free status
- 18/5 – first positive fish farm identified from DE recipient
- 25/7 – 44 fish farms and 81 lakes had been tested for IHNV
 - 6 fish farms (FF) and 3 fishing lakes (L) had been found positive
 - Likely transmission routes were found between all infected premises and considered one chain of infection
 - No further outbreaks were identified and efforts switched to clearing infected premises and general surveillance
- 12/8 – FF10 positive after clinical suspicion
- 6/9 – FF11 positive after clinical suspicion
- 10/12 – Denmark relinquishes the IHN-free status on request from industry

Timeline 2021

18 May – First farm declared infected with IHNV (FF1)

June 3 – additional five fish farms (FF2 – FF6) and one put and take lake (L7) have been found positive

July – September - Two additional fish farms (FF10-FF11) and two lakes (L8-9) were declared positive



The source of the outbreak could not be identified with certainty, but all evidence point to one introduction to DK with rapid dispersion

What about 2022?

- IHN-free compartments - 28 farms approved and 1 farm in eradication program to get free status
- The rest of DK not free of IHN
- No restriction zone, if infection is detected
- Infected farms can only sell to other infected farms
- Registered in the Central livestock register (CHR register) as “Infected”
- Emptying, cleaning, disinfection and fallowing necessary to move to the category of “In surveillance program”

Registration of infected farms in CHR was temporarily not done during the summer due to difficult interpretation of the AHL, also the surveillance program for IHN was temporarily only done as a side effect to surveillance for VHS

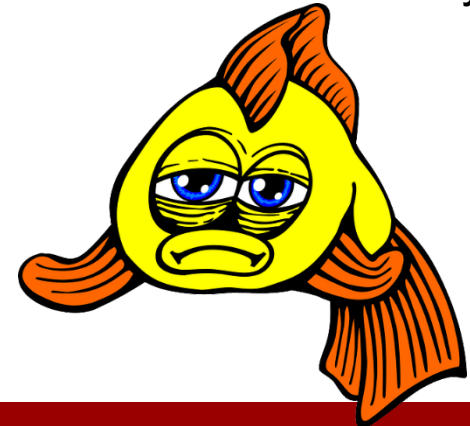
The Association of Danish Aquaculture (the industry) made a screening of 16 selected farms in May – based on 30 fish/farm, three pools on cell culture (EPC) - no IHNV detected

New outbreaks in 2022

April – July 9 fresh water farms (1 P&T) and 9 saltwater farms

October 2022 one additional saltwater farm was detected as infected

Based on G-gene sequencing it is the same isolate circulating as in 2021



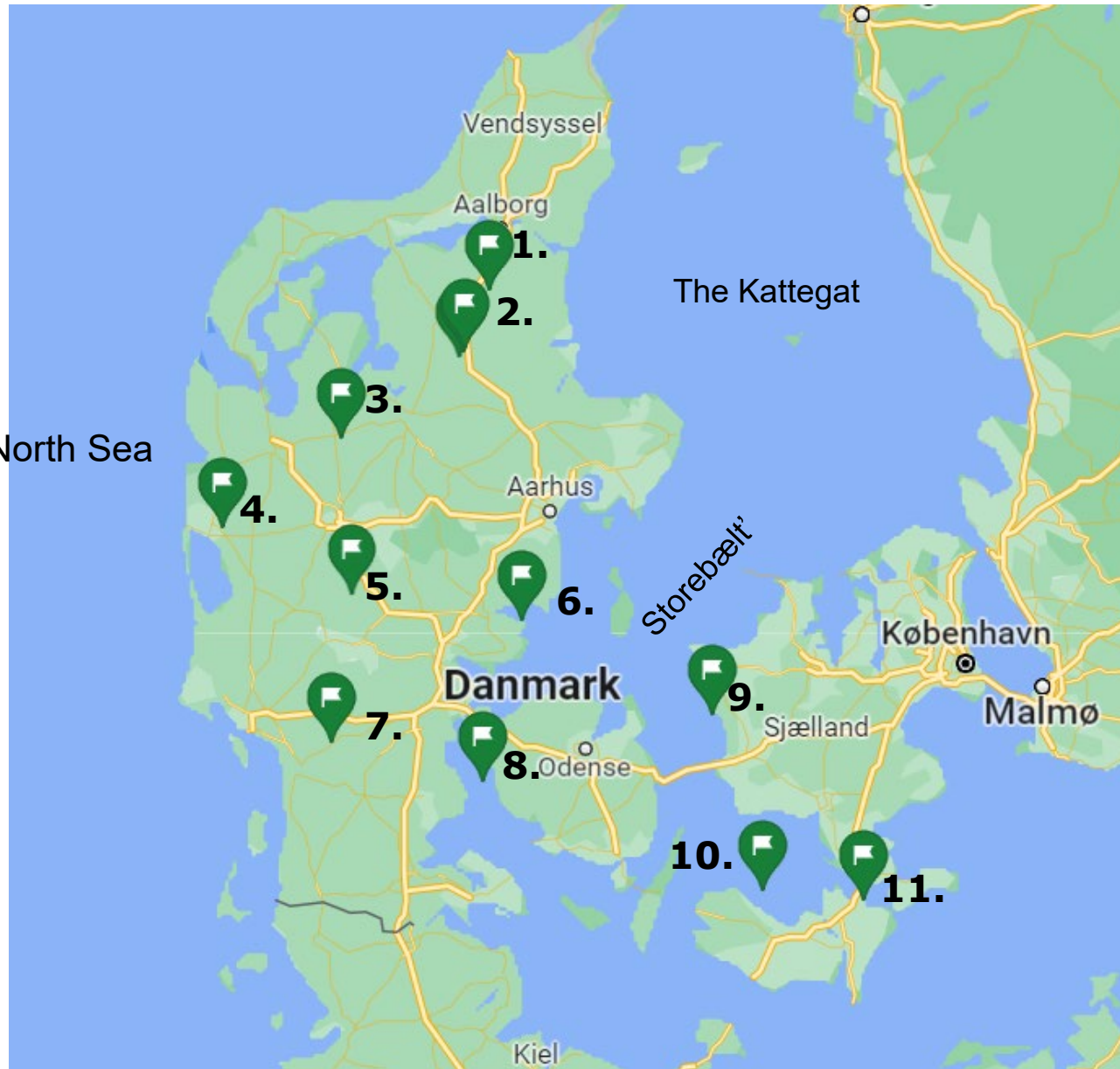


Figure by T. Christoffersen

The 19 outbreaks is seen in 11 different areas of DK

1. : Lindenberg Å
2. : Simested Å
3. : Haderup Å
4. : Heager Å
5. : Karstoft Å
6. : Horsens fjord samt i havet ved Asvig og Hjarnø
7. : Kongeåen
8. : I havet ved Bågø
9. : Musholm Bugt
10. : I havet ved Rågø og Fejø
11. : I havet ved Grønsund

Infection in sea cages has only been registered in Europe twice before (Finland and Croatia)

Increased risk for infecting the wild population

Migrating salmon is mainly in the North sea

No evidence of a new introduction

Status mid-november 2022

Registered as infected 15-11-22:

- 8 freshwater farms (one farm is infected for second time)
- 1 put and take (epidemiological unit with a fresh water farm)
- 11 saltwater farms (rainbow trout in sea cages)



All the saltwater farms was emptied by the end of the year and a fallow period is a natural part of the cycle for marine aquaculture



70.000 fisk kan være sluppet ud efter påsejling af havbrug

En fiskekutter påsejlede natten til lørdag et stort opdrætsanlæg i Storebælt. Mange fisk kan være sluppet ud.

POLITIKEN DANMARK

In Musholm bay, a fishing boat collided with a seacage on November 12th and an estimated number of 70.000 RBT of size 3-4 kg has escaped.

Both farms in the bay are registered as infected in CHR

Last time they were tested at the end of October 2022 (75 fish), IHNV was below detection limit, so luckily prevalence is low; but development of IHNV carriers are debated.

The message to anglers then was:

BE A HERO, GO FISHING



Foto: Finn Frandsen

2023 – How are we doing?



IHN positive farms by end of May 2023

No evidence of a new introduction (N- and G-gene sequencing)

The same number of IHN-free compartments

On-going ordinary surveillance on cell culture (combined with surveillance for VHS) – so far no infected farms discovered

The Association of Danish Aquaculture decided to make a screening March-May – this time based on qPCR, Only 20 fish, two pools including brain. Goal to test the production farms not tested by comp. auth.

Voluntarily involvement

57 farms tested – 2 infected farms discovered

One early in March – comp auth. found 4 pos contacts

One in late April – comp auth found 1 pos contact

Registered as infected by May 29 2023 in CHR

One farm from 2021 and one from 2022 (black)

Seven new farms

THANK YOU FOR LISTENING

Thank you to all my colleagues at the
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