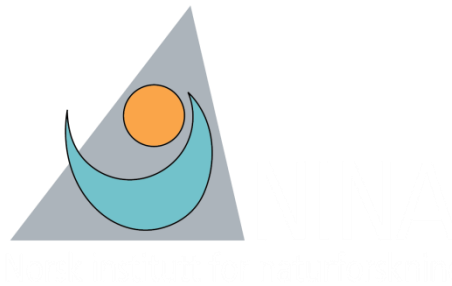




# Pink salmon in Norway 2017

Ingebrigt Uglem & Kjetil Hindar



# Status – medio September – number of fish

- 2773 pink salmon caught in the sea and in the sports fisheries in rivers – reported to NINA
- More captures will come:
  - ▶ Capture statistics for individual rivers
  - ▶ Drift counting of spawning stocks
  - ▶ Reports from mitigation
  - ▶ Reports from bag net fisheries

Count	Ocean	River	Unknown
Finnmark	49	1513	1
Troms	19	139	-
Nordland	77	356	1
Nord-Trøndelag	4	58	-
Sør-Trøndelag	8	52	-
Møre og Romsdal	24	145	1
Sogn og Fjordane	12	35	-
Hordaland	21	64	-
Rogaland	10	94	2
Vest-Agder	-	22	-
Telemark	-	2	-
Vestfold	-	5	-
Buskerud	2	11	-
Oslo	-	12	-
Østfold	-	17	1
<b>Total</b>	<b>228</b>	<b>2536</b>	<b>9</b>

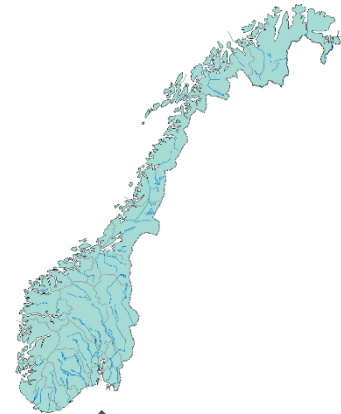


# Status – medio September number of rivers

Pink salmon reported in the sports fisheries from 236 rivers



County	Rivers
Finnmark	43
Troms	23
Nordland	56
Nord-Trøndelag	8
Sør-Trøndelag	15
Møre og Romsdal	28
Sogn og Fjordane	18
Hordaland	14
Rogaland	17
Vest-Agder	6
Telemark	1
Vestfold	2
Buskerud	2
Oslo	2
Østfold	1
<b>Total</b>	<b>236</b>



# Status – medio September - mangement

- Extraordinary fisheries in 22 rivers
- Harpoon, nets and sports fishing gear
- Numbers are still incomplete

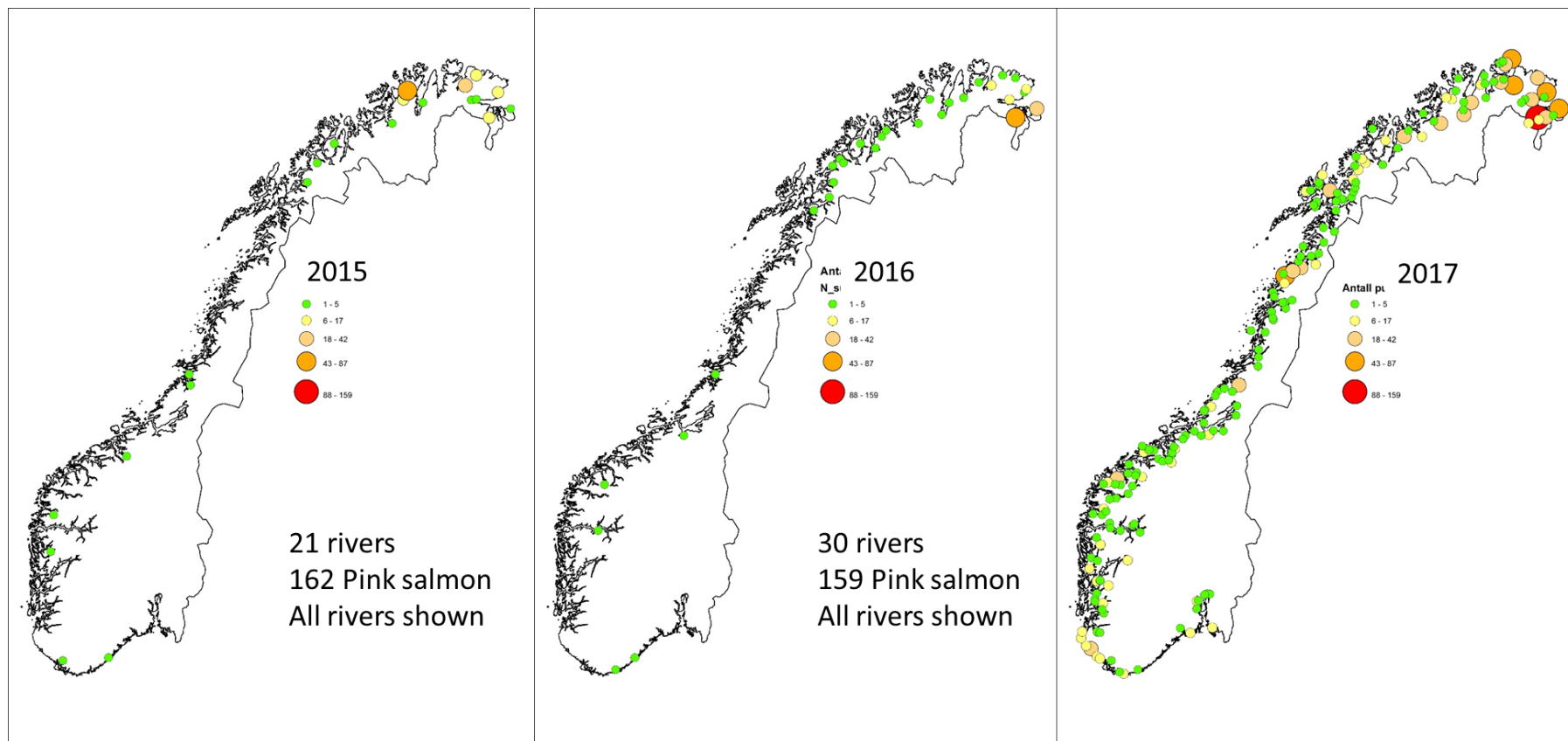
County	Rivers	Number of fish
Finnmark	6	1463
Troms	13	62
Nordland	1	-
Møre og Romsdal	2	114
<b>Total</b>	<b>22</b>	<b>1639</b>



- Destruction of spawning redds by raking the river floor

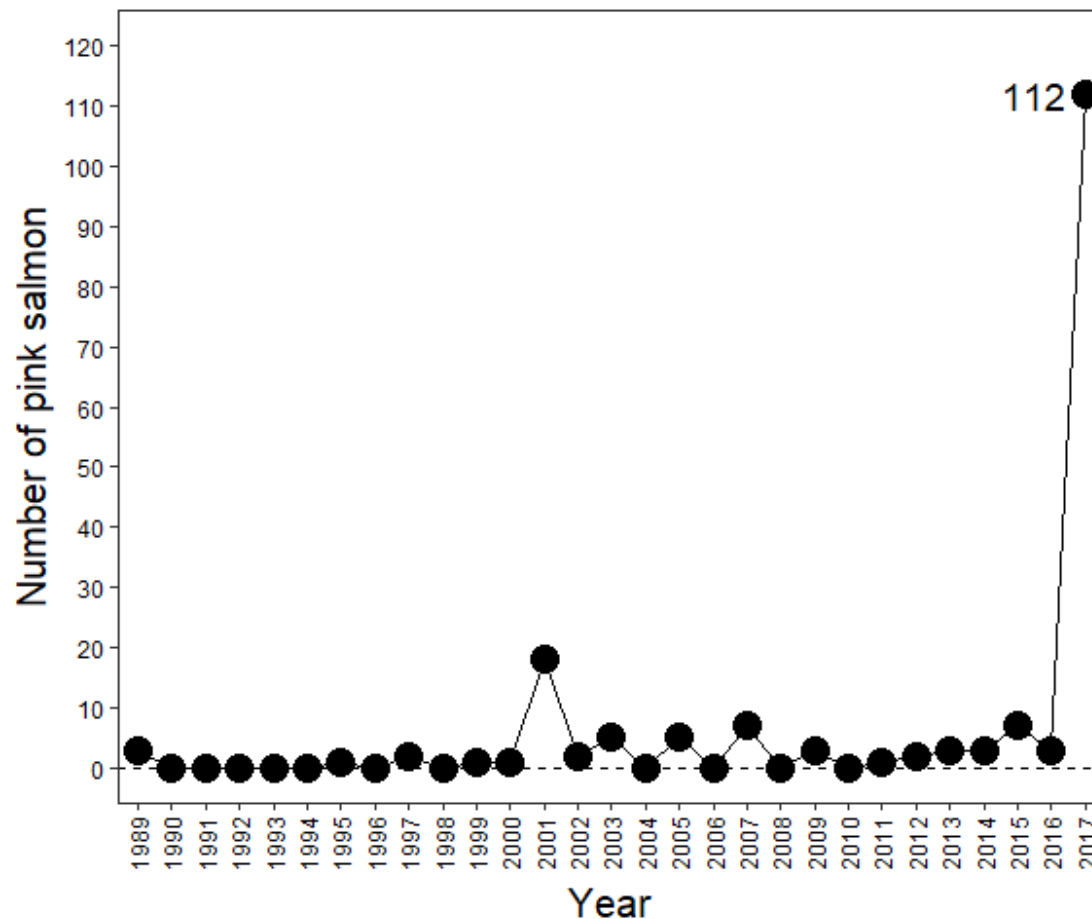


# Reported catches in rivers



# Long-term trends

Number of pink salmon in NINA's scale archive – preliminary numbers for 2017



# Where do they come from?

- ▶ Large self-sustaining populations in the White Sea (100 tonnes in R Varzuga alone, 2017)
- ▶ Small self-sustaining populations in a handful of rivers in northeastern Norway (fry collected for >10 years)
- ▶ Unknown sources
- ▶ How to distinguish?
- ▶ Genetic and fish scale (growth) analyses



Attilio Vicario

# Potential impacts



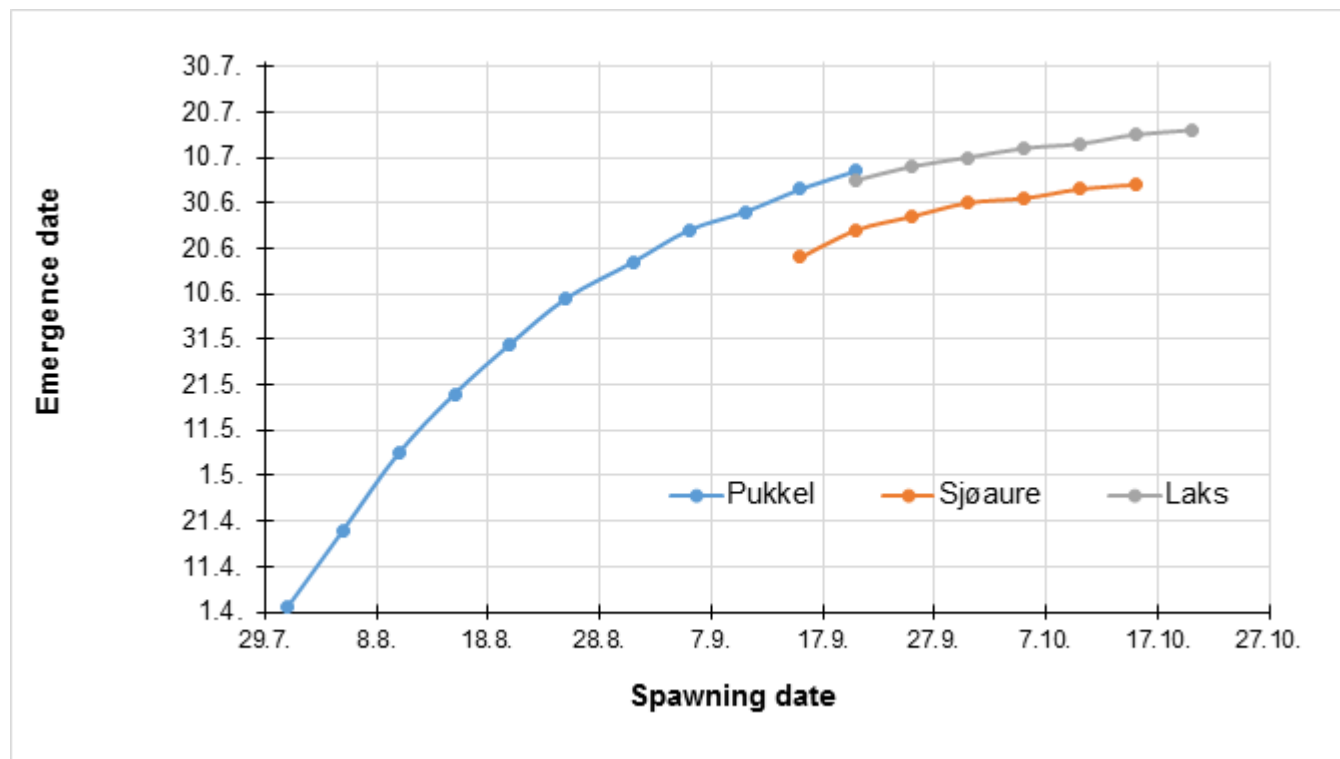
- Spawning competition?
  - ▶ May be sea trout X spent female pink?
- Competition for food
  - ▶ May be in estuaries where pink can dwell for months?
- Disease transmission
  - ▶ Pacific salmon diseases?
  - ▶ Native salmonid diseases from White Sea to Atlantic coast?
  - ▶ *Gyrodactylus salaris* between rivers that share estuaries/fjord?
  - ▶ Fungi from carcasses affect later-spawning native salmonids?
- Blocking native salmonids from access to spawning grounds?
- Aggression towards native juveniles?



# Spawning 8-15 August «everywhere»?

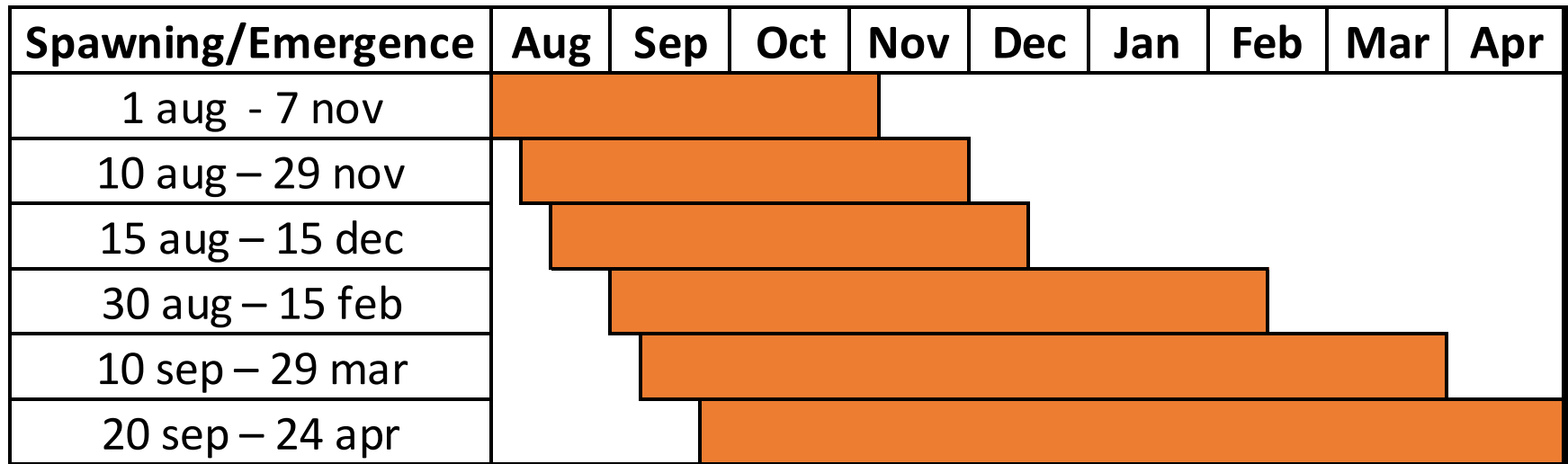


# Predicted emergence time – cold river (NE Norway)



- Pink salmon (blue), sea trout (red) and Atlantic salmon (grey) emergence time as a function of spawning time – «8-15 August all over»?

# Predicted emergence time – warm river (S Norway)



- Pink salmon emergence time (right end of bar) as a function of spawning time (left end)
- Can they emerge before Christmas?

# Available material at NINA

- Scale samples from 2017 (>300)
- Whole frozen fish (appr. 80-100) or fish tissue
- Contact:
  - ▶ [ingebrigt.uglem@nina.no](mailto:ingebrigt.uglem@nina.no)
  - ▶ [eva.thorstad@nina.no](mailto:eva.thorstad@nina.no)





# History

- Released in Russia
  - ▶ 1956 – 1978
  - ▶ 1985 – 2001
    - Unsuccessfull
    - Successfull
- Spread to Norway
  - ▶ Observed/caught since 1958
  - ▶ 25-50 tonnes along Norwegian coast 60s-70s
  - ▶ Limited catches until 2017

