Salmon stocks in the Baltic – current status

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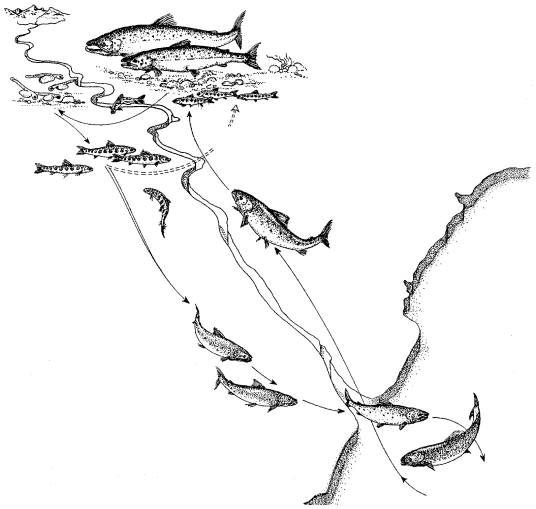
Sötvattenslaboratoriet Drottningholm

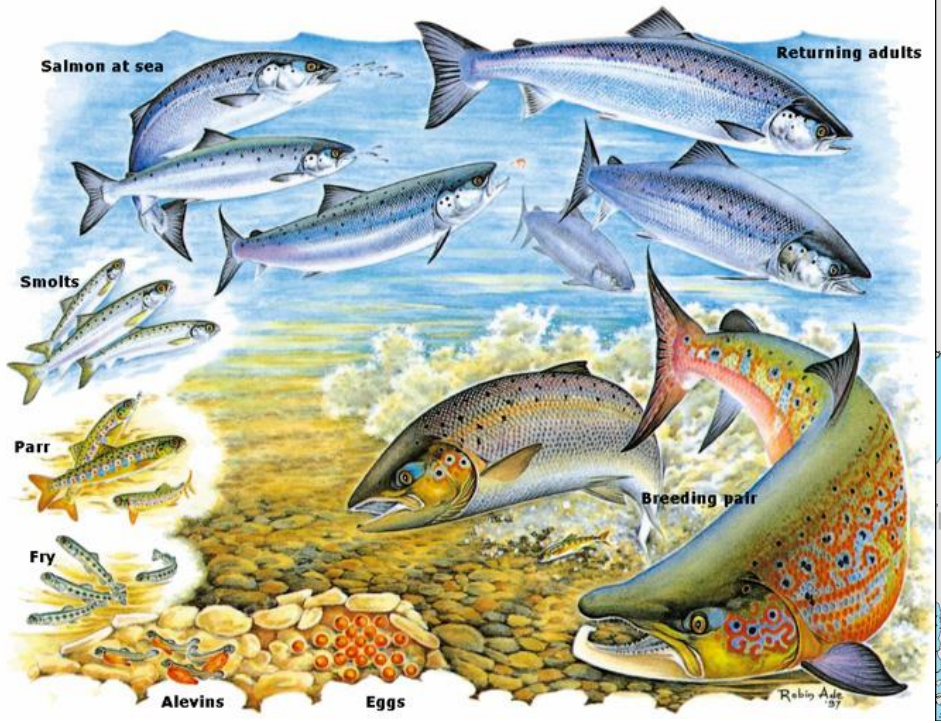
Jockfall, Kalixälven

6 000 years ago

Nämforsen (Ångermanälven)

Salmon life cycle

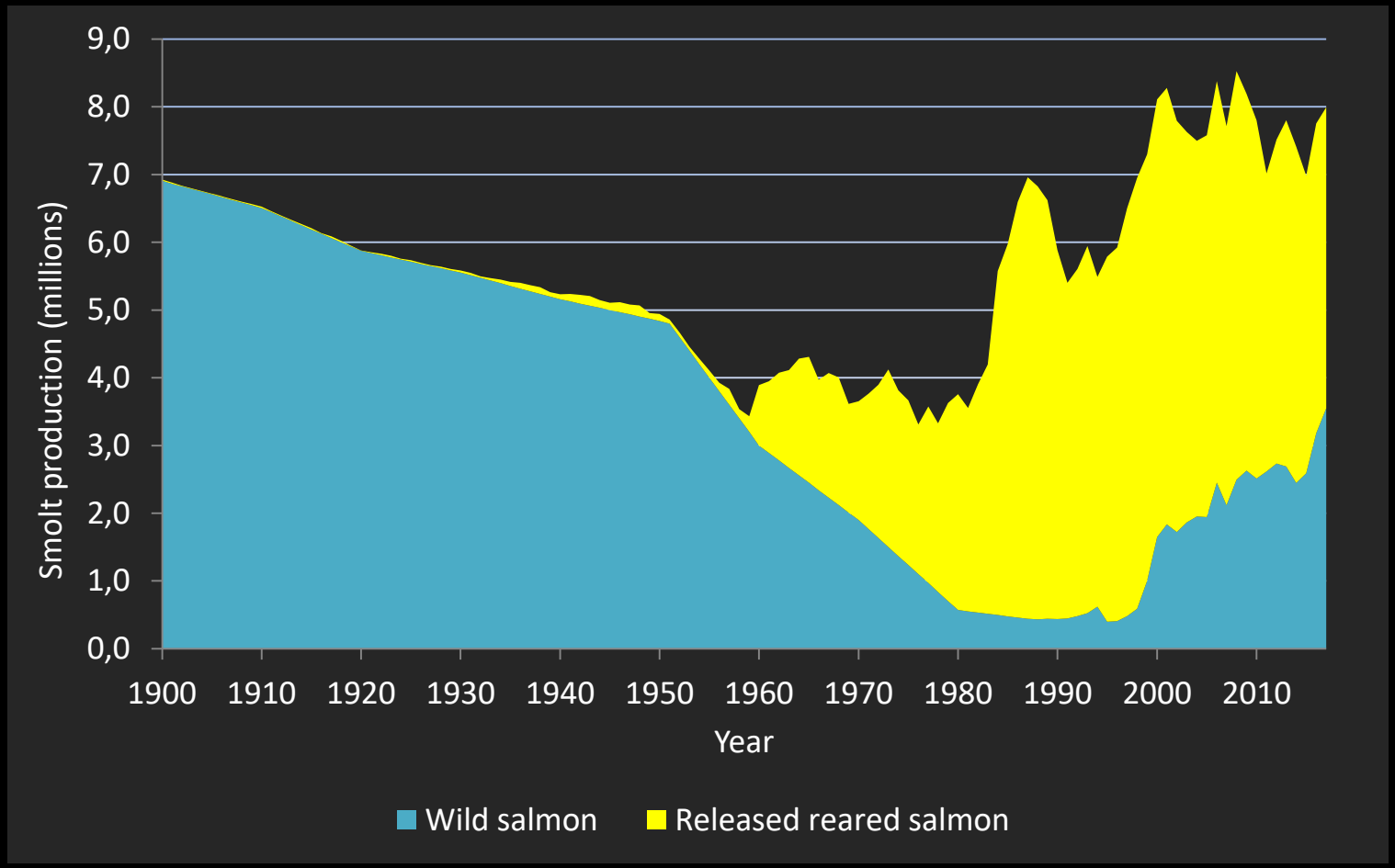




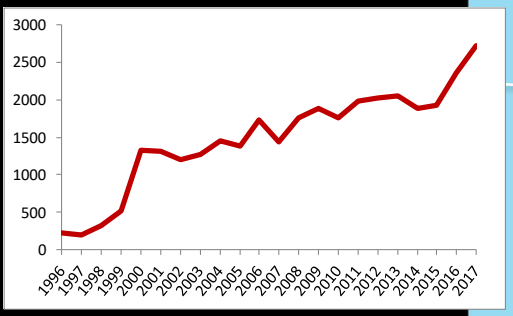
90-95% of all wild smolts
60-65% of all reared smolts

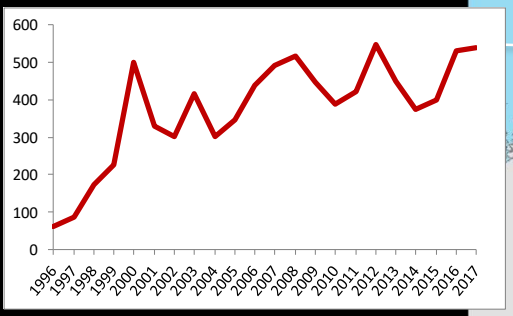
Originally 84 rivers with wild salmon in the Baltic – today ~30 rivers left

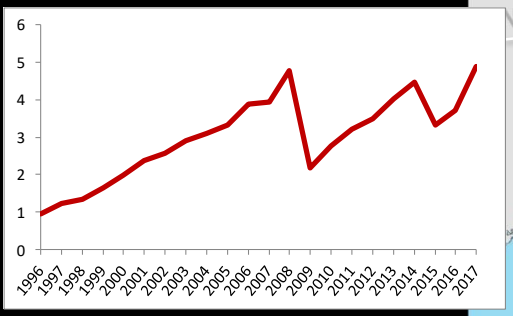
Salmon production – development 1900 - 2017

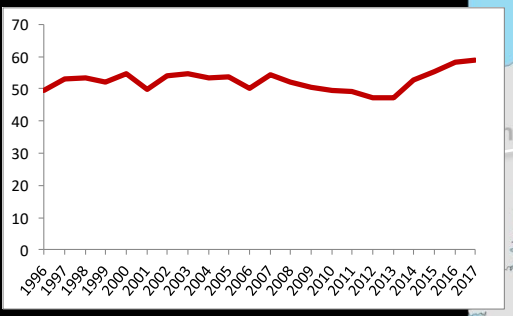


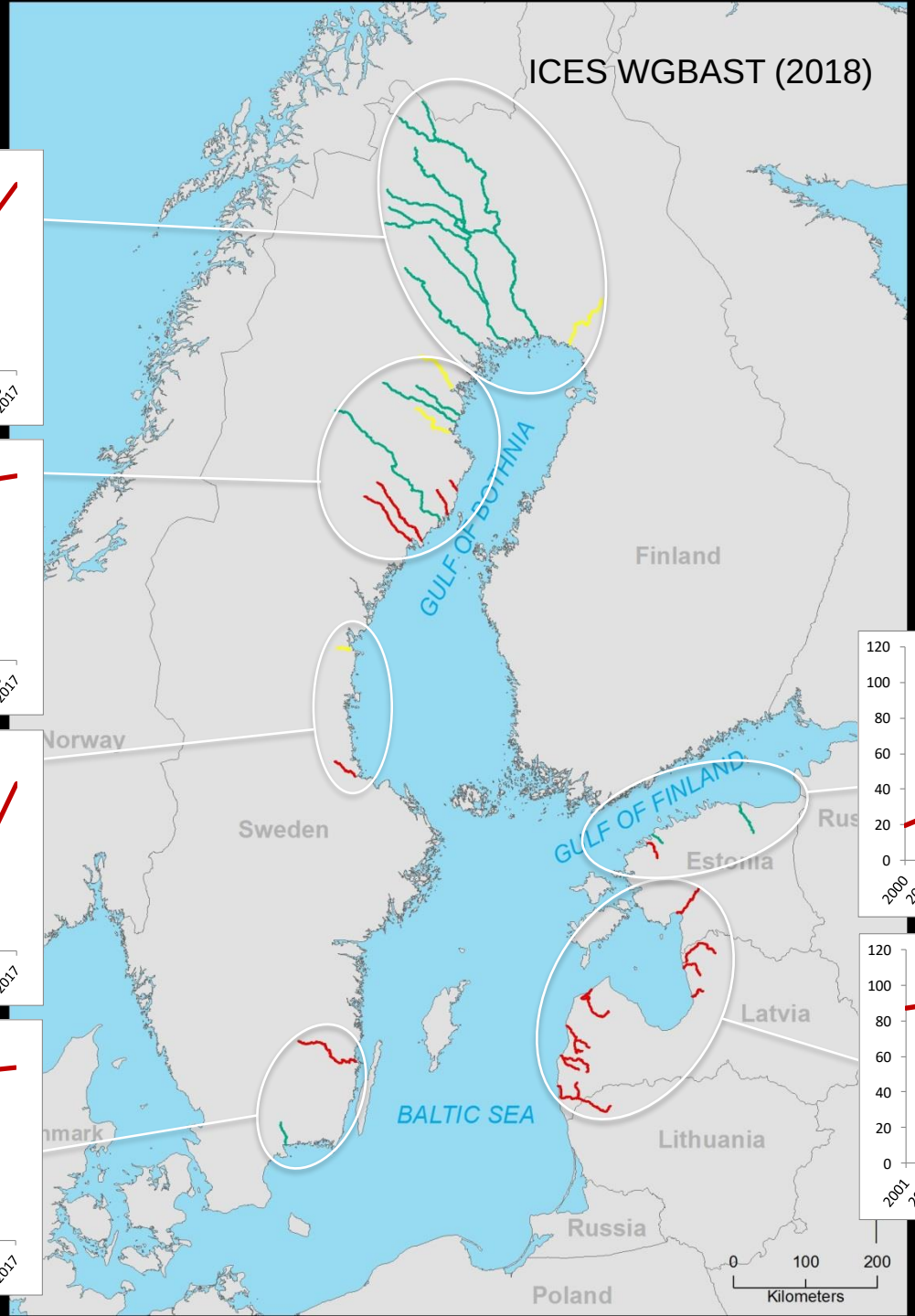
Smolt production (in 1000s)





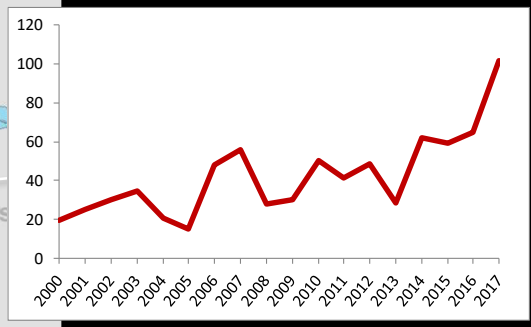


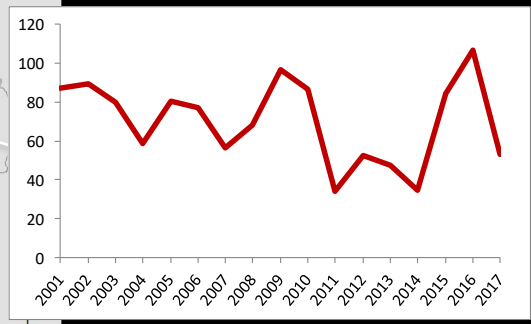


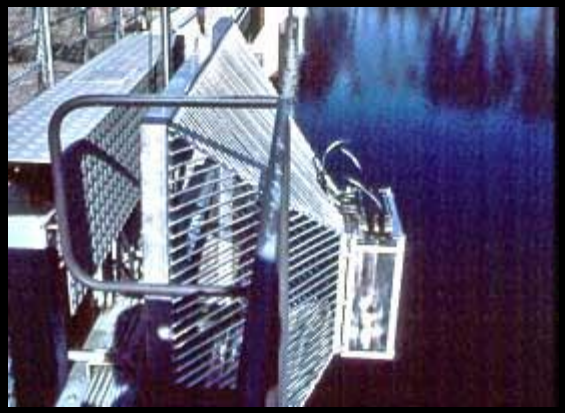


Status Wild salmon (smolt production 2017)

- 75% of potential (MSY)
- 50% of potential
- below 50% of potential





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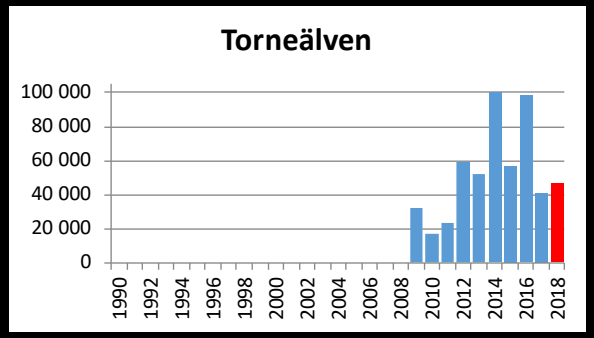
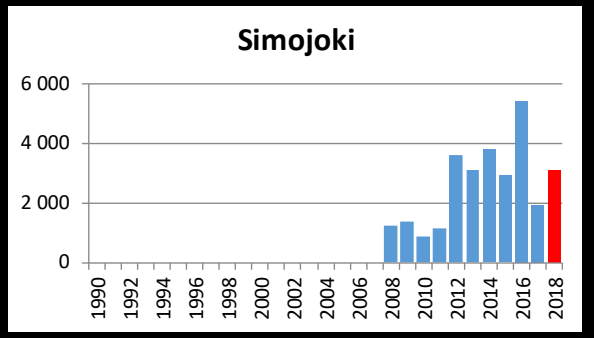
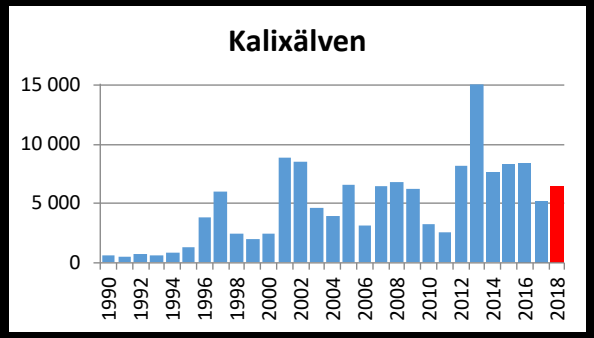
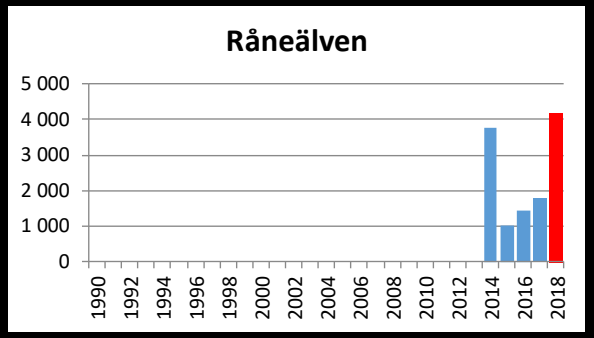
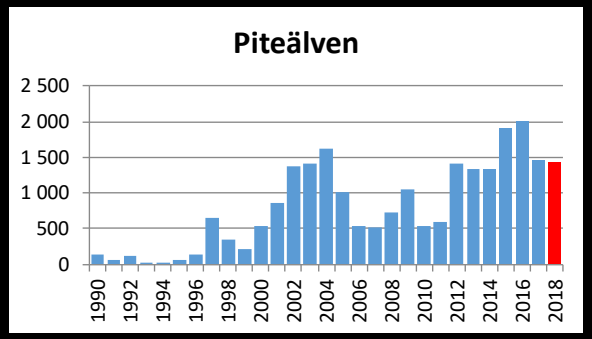
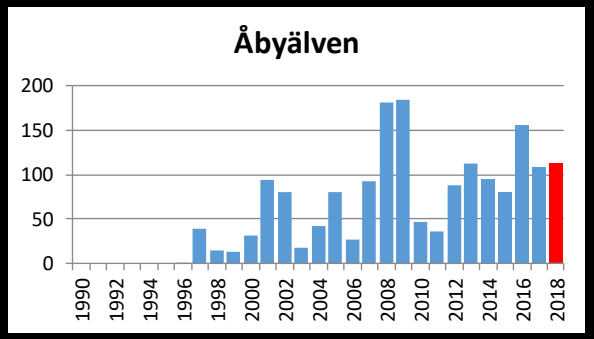

Torneälven
100 000
80 000
60 000
40 000
20 000
0
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014 2016 2018

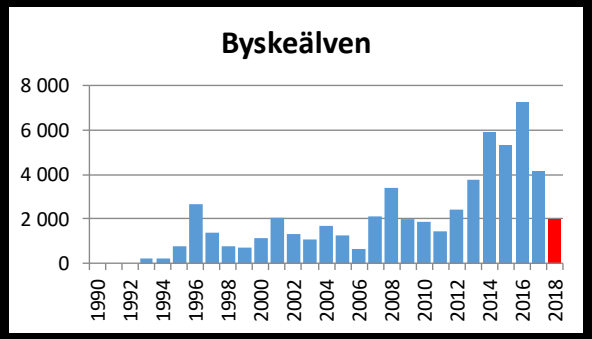

Simojoki
6 000
4 000
2 000
0
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014 2016 2018

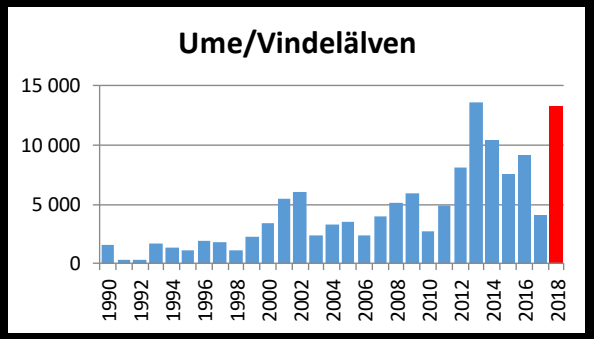

Kalixälven
15 000
10 000
5 000
0
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014 2016 2018


Råneälven
5 000
4 000
3 000
2 000
1 000
0
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014 2016 2018


Piteälven
2 500
2 000
1 500
1 000
500
0
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014 2016 2018


Åbyälven
200
150
100
50
0
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014 2016 2018


Byskeälven
8 000
6 000
4 000
2 000
0
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014 2016 2018


Ume/Vindelälven
15 000
10 000
5 000
0
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014 2016 2018

Health problems

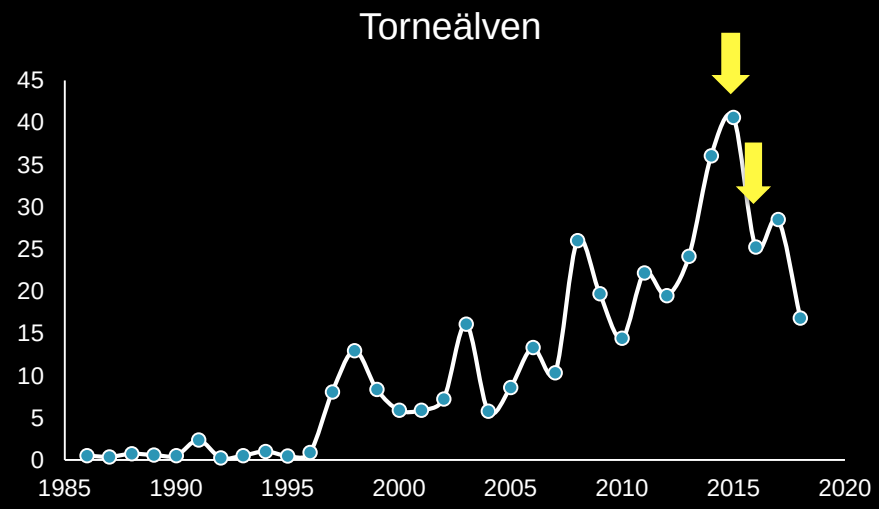
- Since 2014 (Sweden)
- Skin injuries, secondary funghi
- ”Weak” fish
- Increased mortality in brood stock (hatcheries)
- Cause?

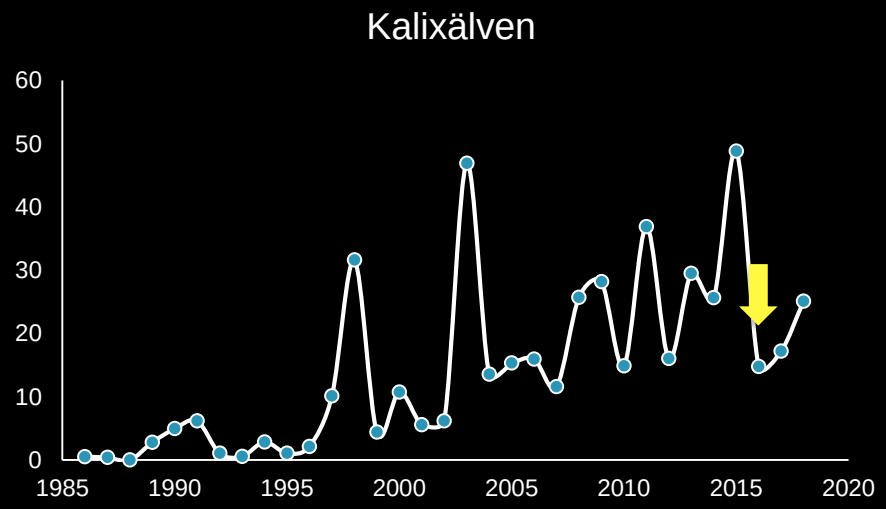
Major reports in Swedish rivers

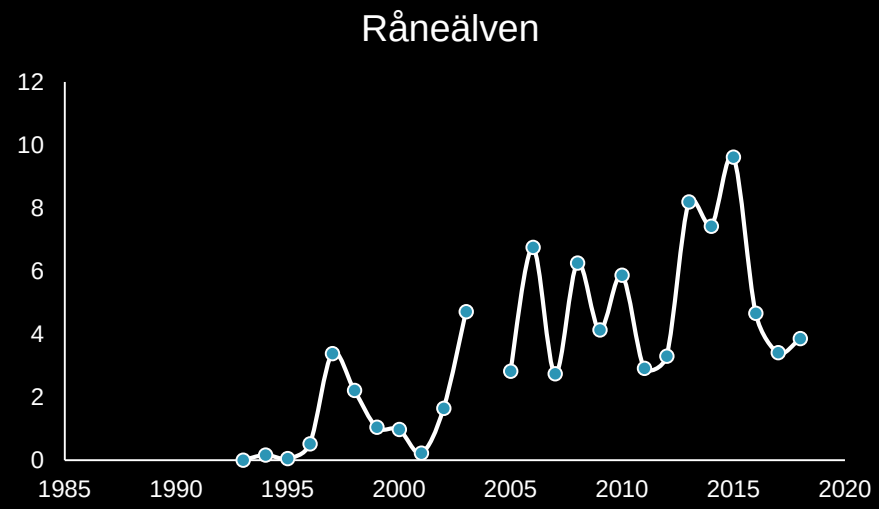
	2014	2015	2016	2017	2018
Torneälven	X	X			
Kalixälven		X			
Råneälven					
Piteälven					
Åbyälven					
Byskeälven					
Kågeälven					
Rickleån		X			
Sävarån					
Ume/Vindelälven		X	X	X	X
Öreälven					
Lögdeälven					
Ljungan			X		X
Testeboån					
Emån					
Mörrumsån	X	X	X	X	X

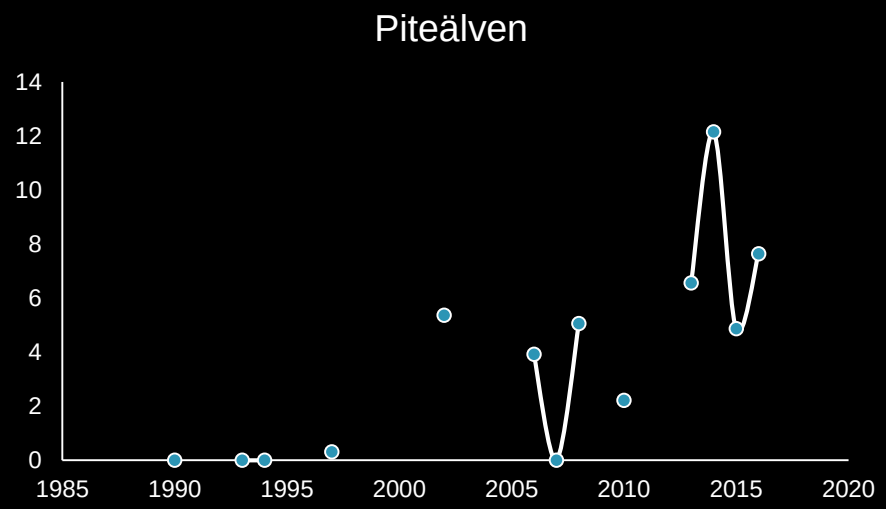
ICES WGBAST (2018) + preliminär info om 2018

Salmon juvenile (0+), densities per 100 m²



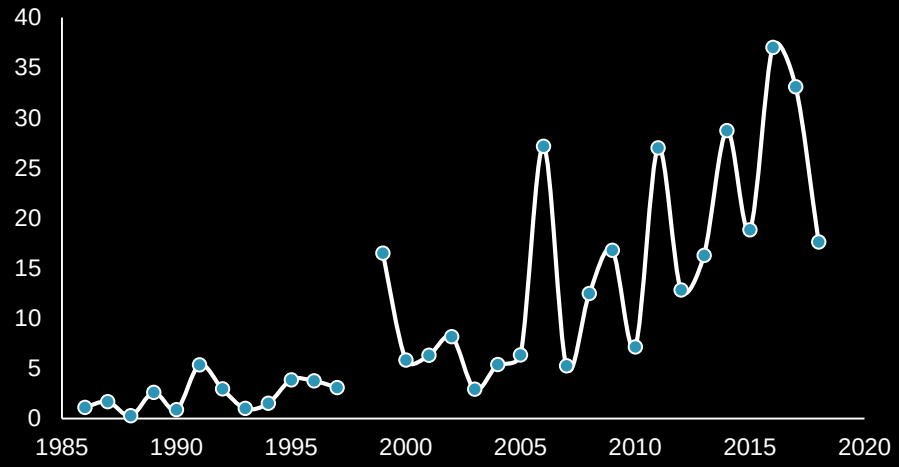




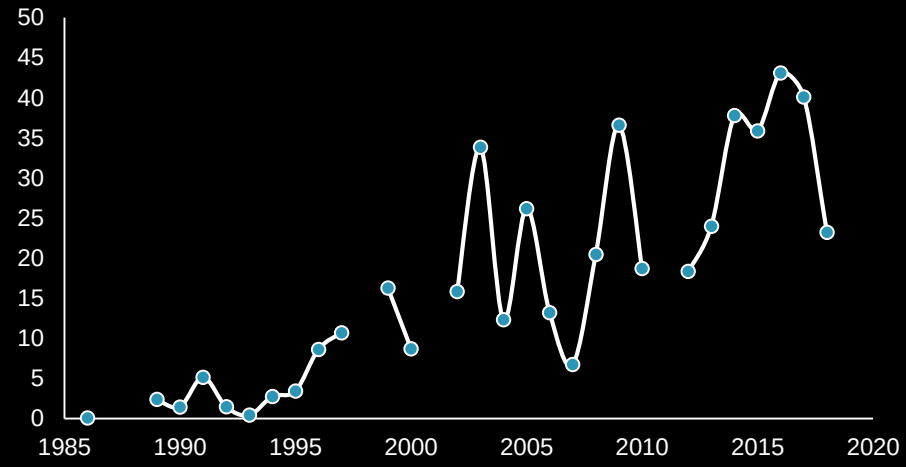


Salmon juvenile (0+), densities per 100 m²

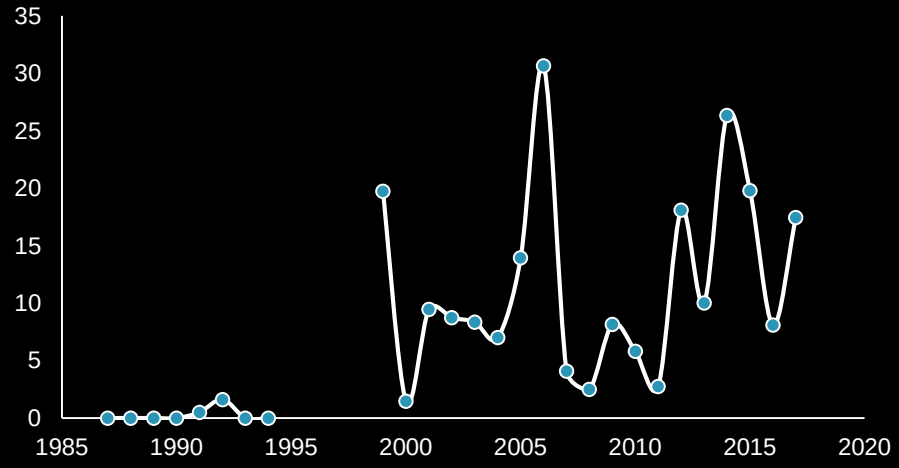
Åbyälven



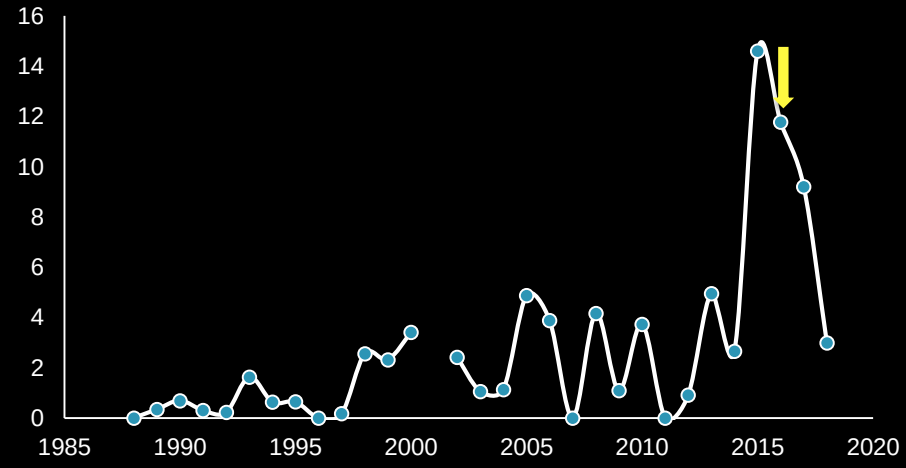
Byskeälven



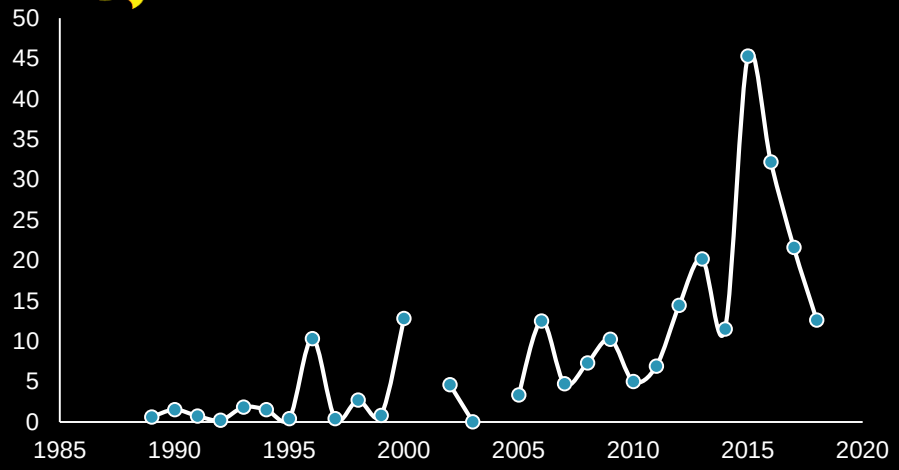
Kågeälven

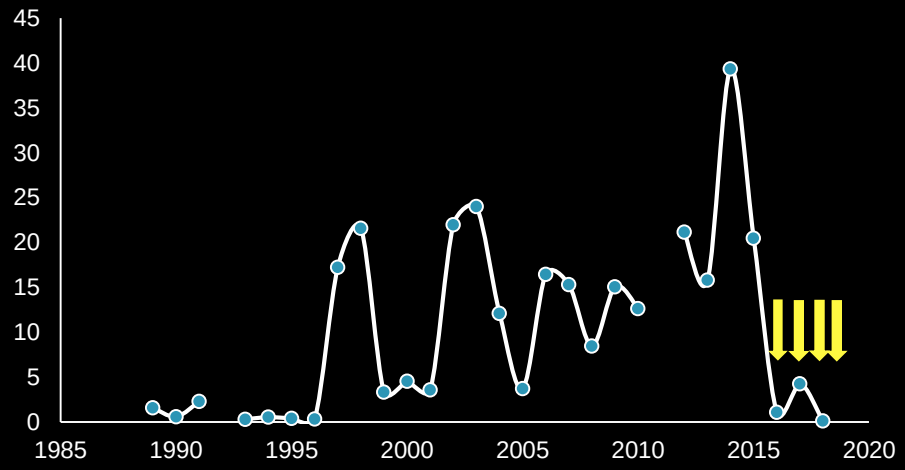


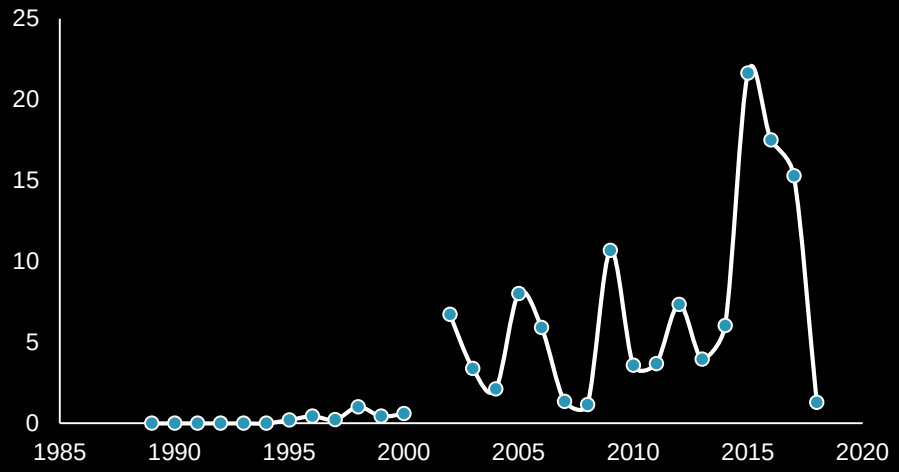
Rickleån

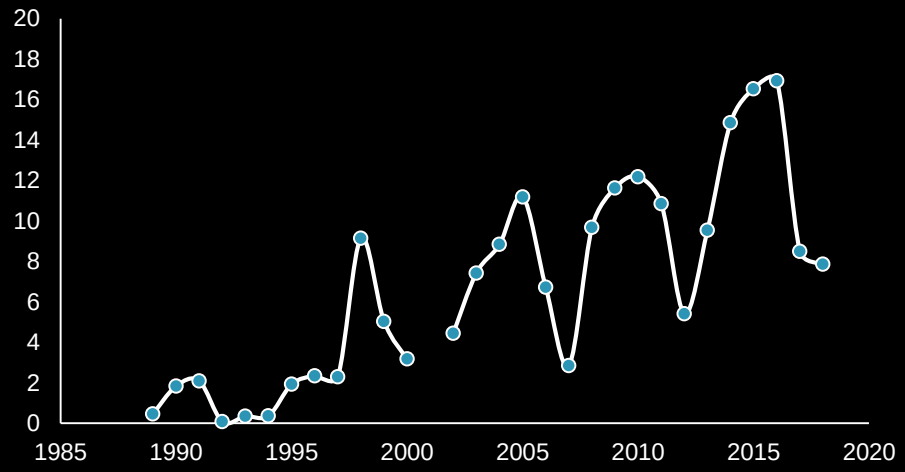


Salmon juvenile (0+), densities per 100 m²

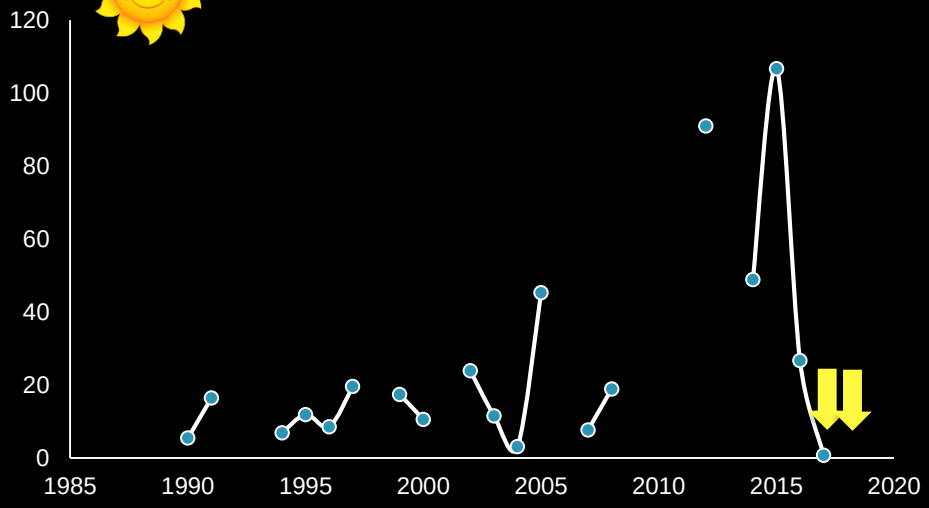


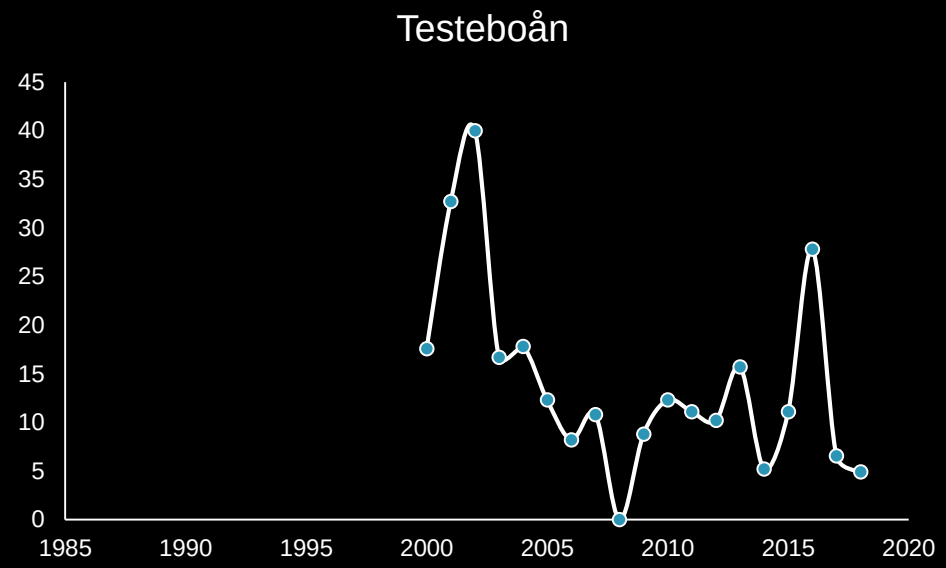


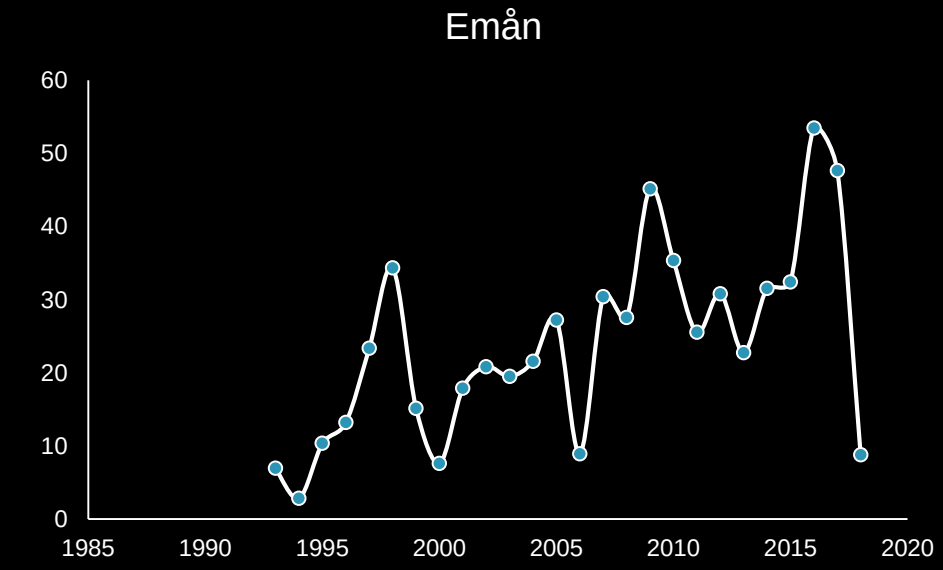


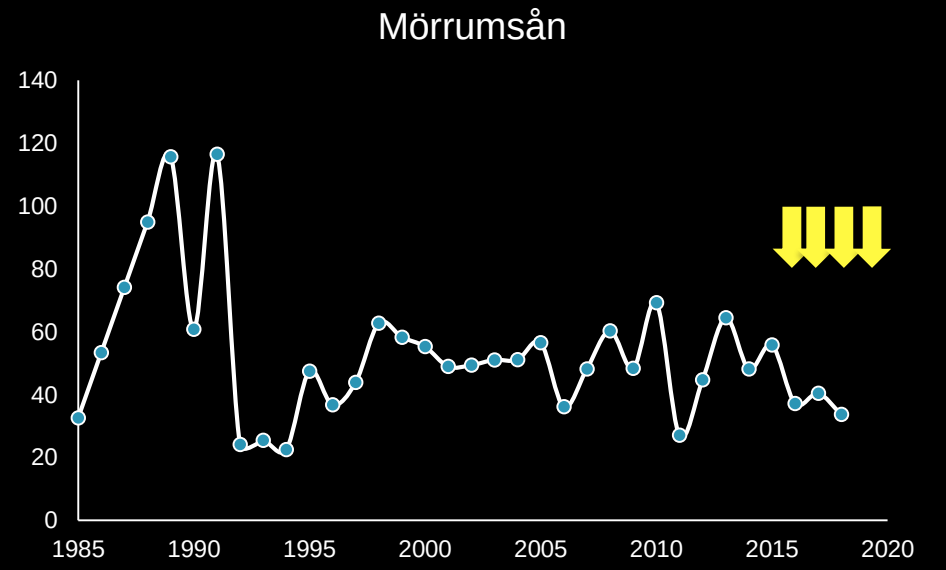


Salmon juvenile (0+), densities per 100 m²

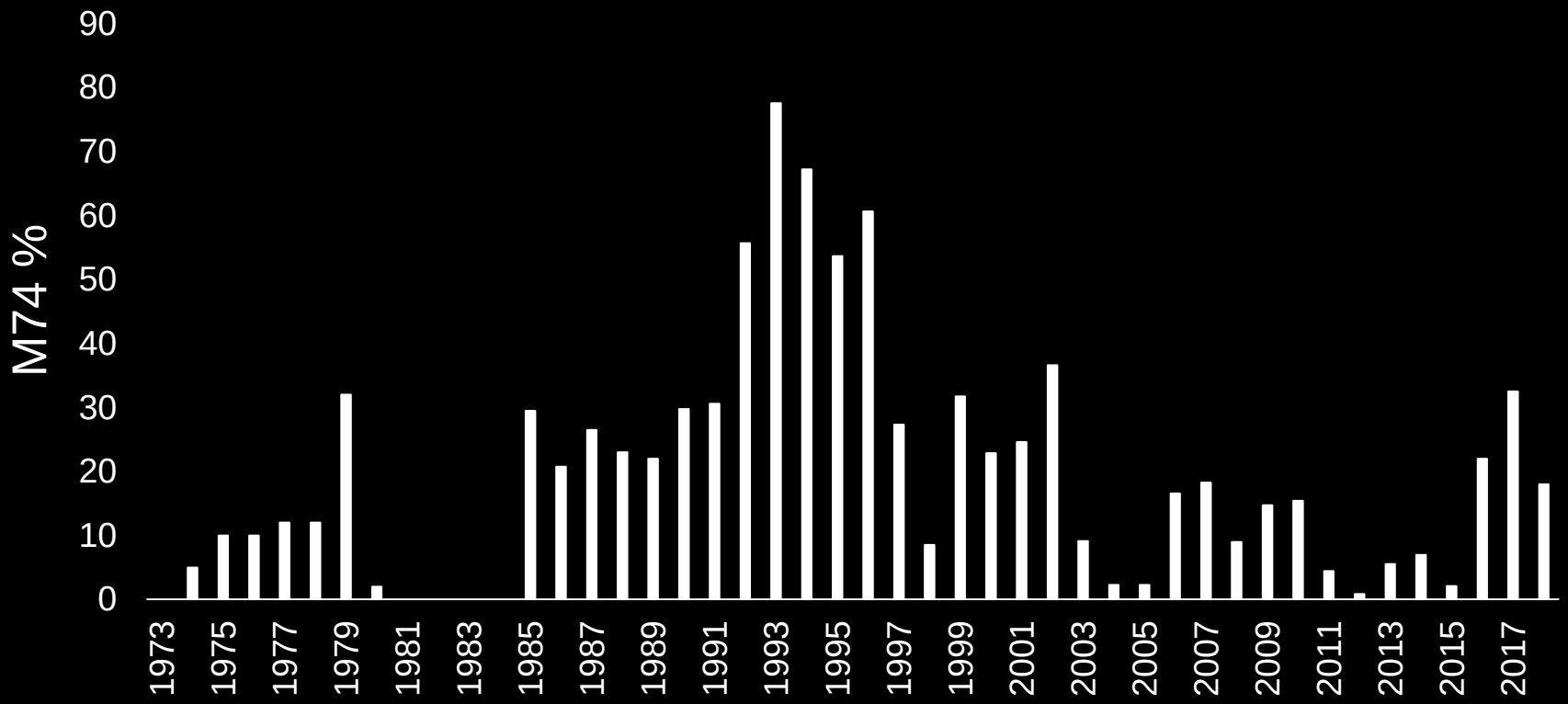








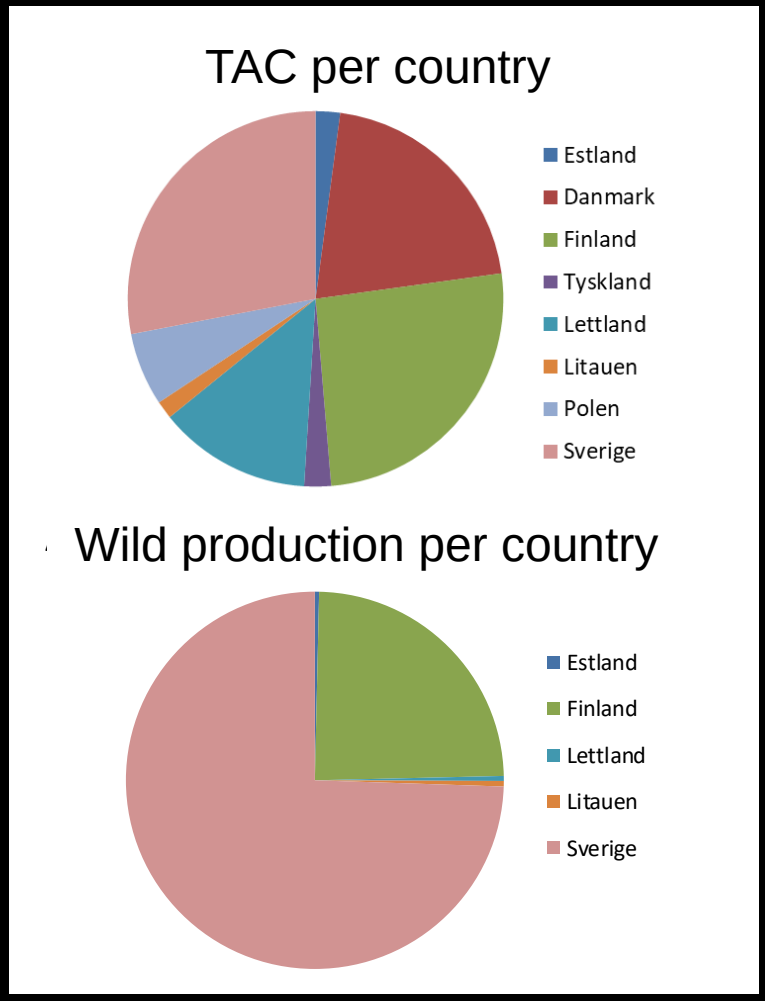
M74

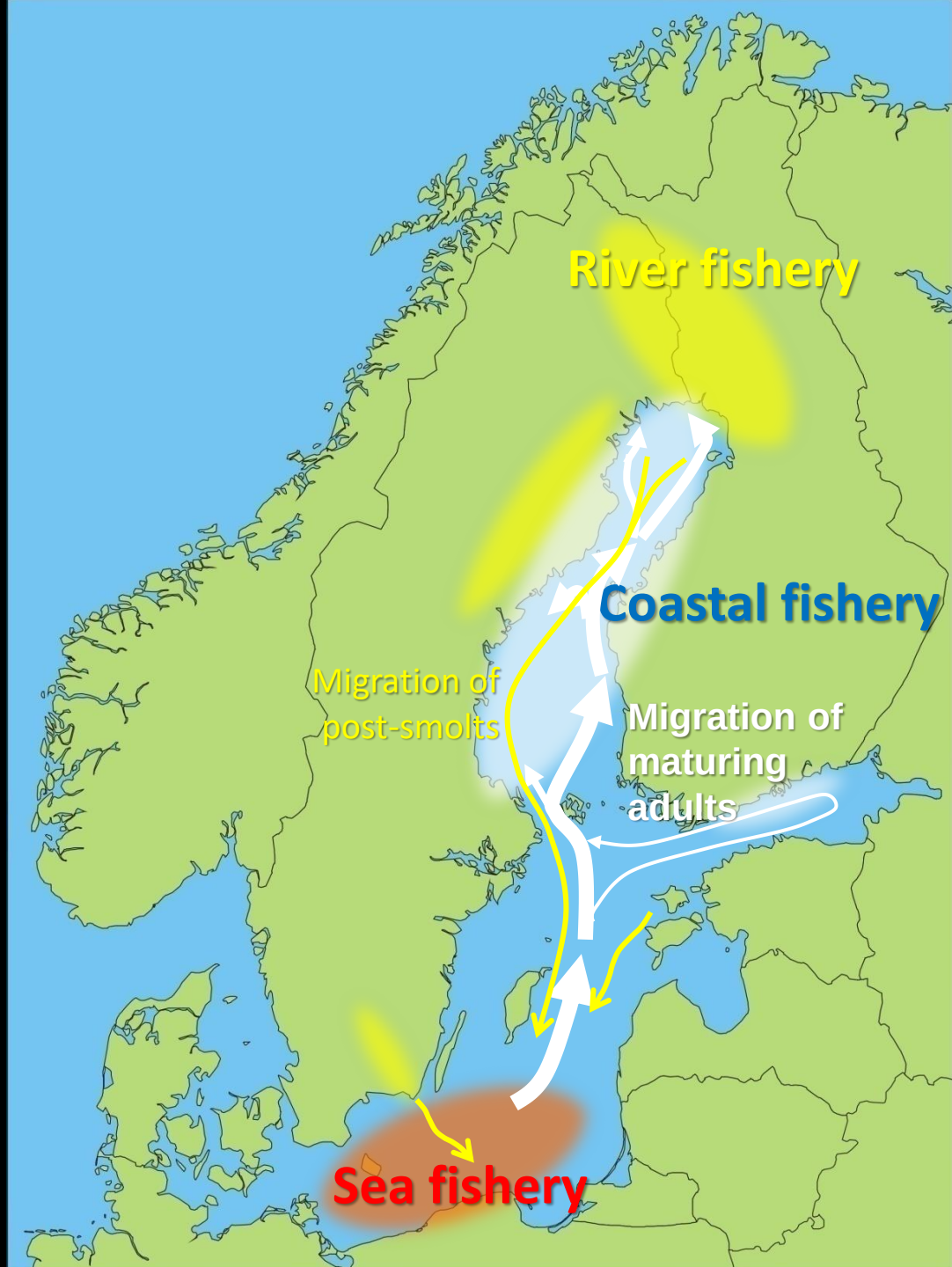

M74 %
90
80
70
60
50
40
30
20
10
0
1973
1975
1977
1979
1981
1983
1985
1987
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017

Conclusions

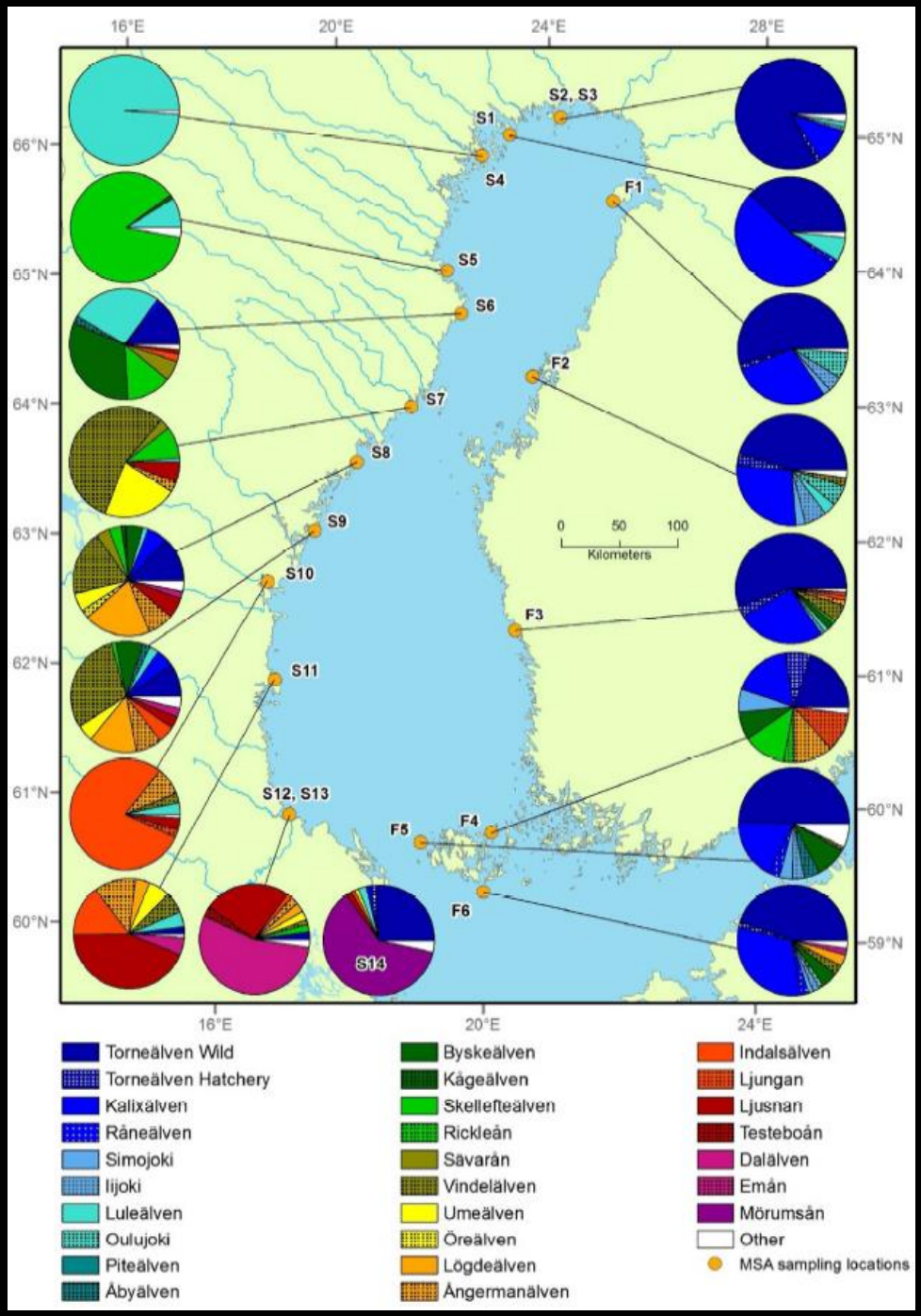
- Positive long term development, mostly northern rivers
- Health problems in some rivers, some years
- Relatively high M74-mortality 2016-18
- Likely negative effect on recruitment (0+) in many rivers (2016-18), not obvious in some rivers
- Especially problematic in Vindelälven, Ljungan, Mörrumsån, Öreälven
- Need of management action
- Important to study reasons to the health problems!

Scientific advice - a complex task

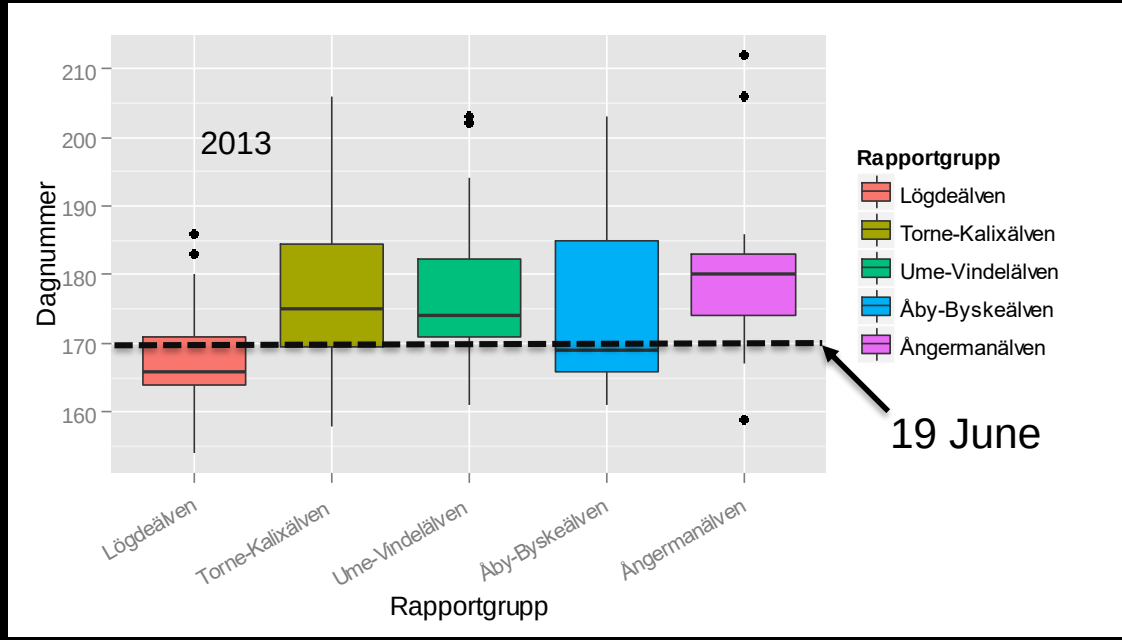


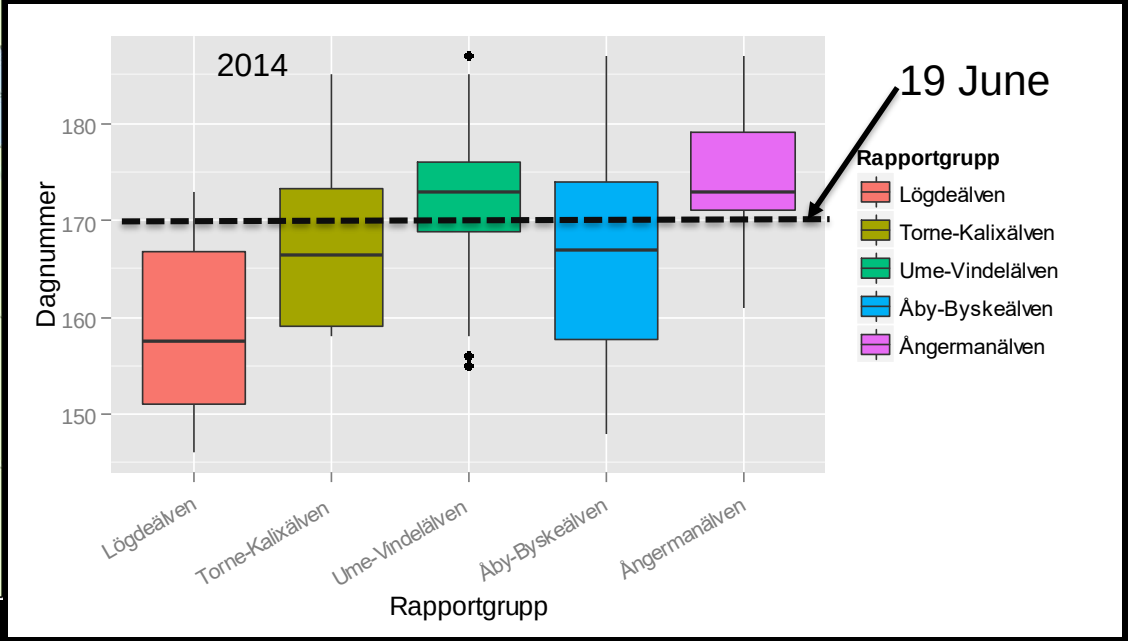


Stock specific management and ecosystem based




Fångstplats 2013
Fångstplats 2014
F1
F2
F3
F4
F5
F6
F7
F8
F10
F11
F12
F13
F14
F15
F16
F17
F18
Simojoki
Iijoki
Oulujoki
Kalixälven
Torneälven
Råneälven
Luleälven
Piteälven
Vindelälven
Skellefteälven
Byskeälven
Åbyälven
Kågeälven
Umeälven
Rickleån
Sävarån
Lögdeälven
Öreälven
Mesälven
Ångermanälven
Indalsälven
Ljungan
Ljusnan
Testeboån
Dalälven
Finska viken
Baltikum
Emån
Mörrumsån
Rönneå
0
100
200
Kilometer


2013
Dagnummer
210
200
190
180
170
160
Lögdeälven
Torne-Kalixälven
Ume-Vindelälven
Åby-Byskeälven
Ångermanälven
Rapportgrupp
Rapportgrupp
Lögdeälven
Torne-Kalixälven
Ume-Vindelälven
Åby-Byskeälven
Ångermanälven
19 June


2014
Dagnummer
180
170
160
150
Lögdeälven
Torne-Kalixälven
Ume-Vindelälven
Åby-Byskeälven
Ångermanälven
Rapportgrupp
19 June
Rapportgrupp
Lögdeälven
Torne-Kalixälven
Ume-Vindelälven
Åby-Byskeälven
Ångermanälven

The future is in our hands

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Photo: Johan Nilsson