

Achieving sustainable use of wrasses as cleanerfish on salmon farms

A.B. Skiftesvik, S Mortensen, T. Jørgensen,
S. Løkkeborg, K. Nedreaas, C.M.F. Durif,
A.-L. Agnalt & R.M. Bjelland



HAVFORSKNINGSINSTITUTTET
INSTITUTE OF MARINE RESEARCH

About 1000 farms



The salmon lice problem



Why use wrasses

- Salmon lice cannot become resistant to cleanerfish
- Cleanerfish delouse continuously without the need to handle the salmon
- They are environmental friendly



CLEANERFISH



Rock cook



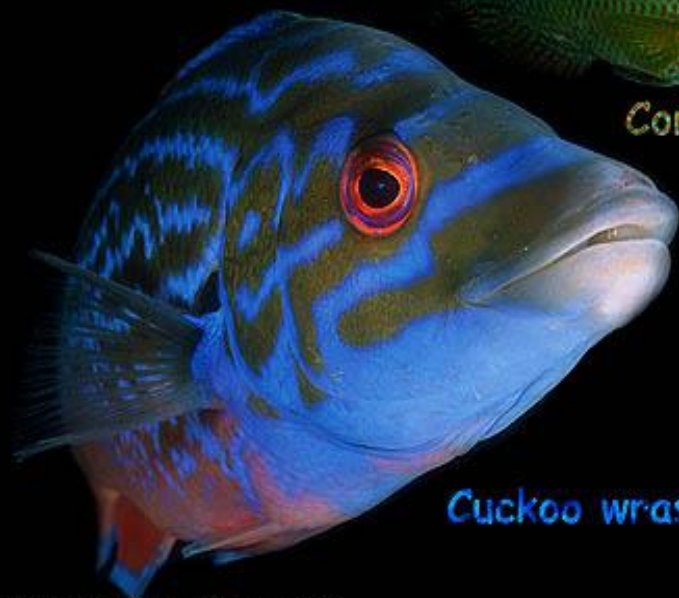
Goldsinny



Cuckoo wrasse



Corkwing wrasse



Cuckoo wrasse

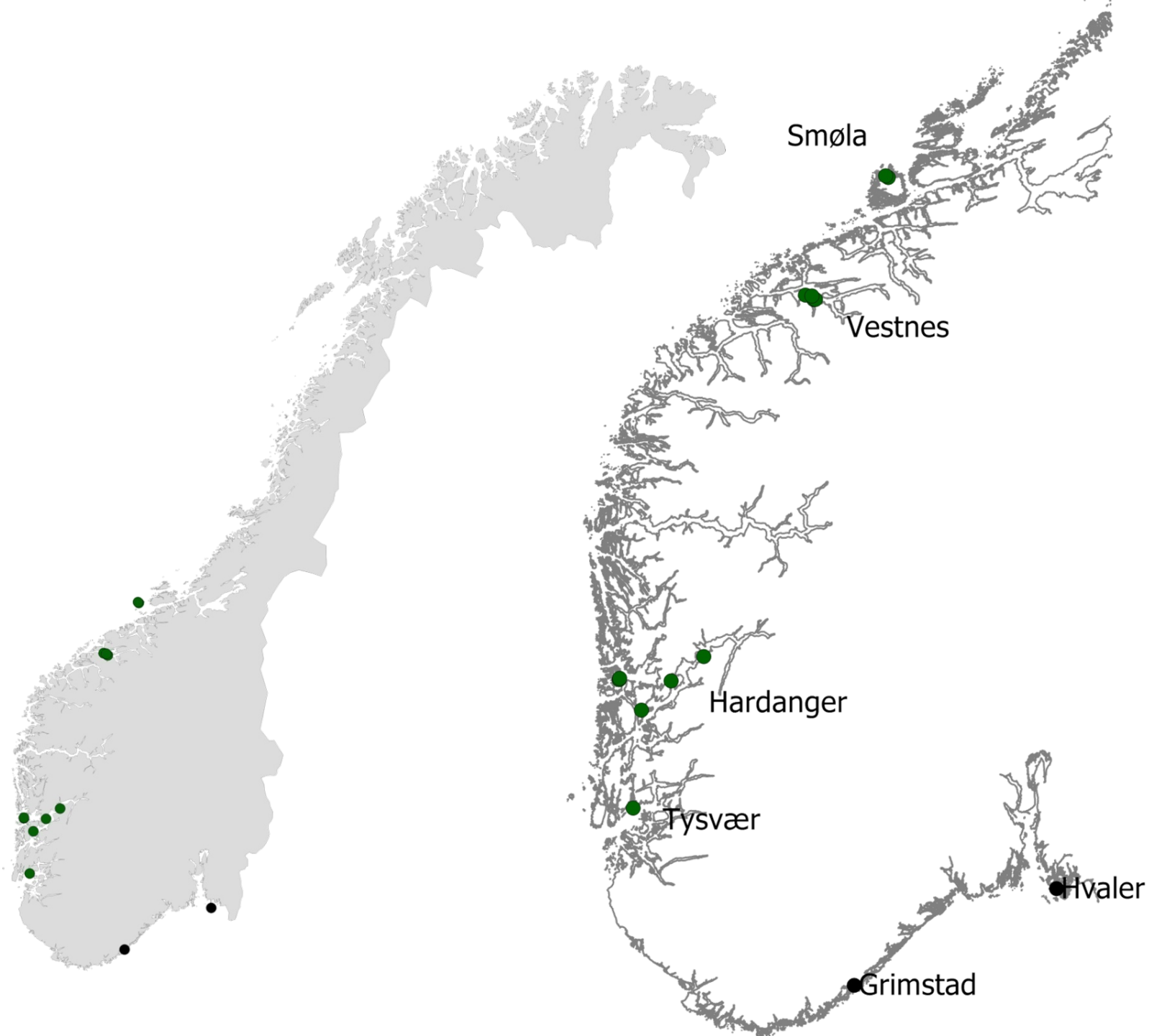


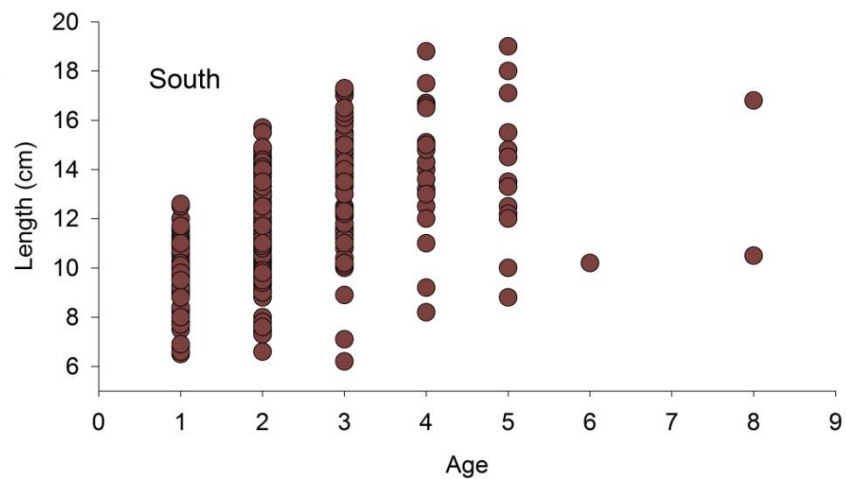
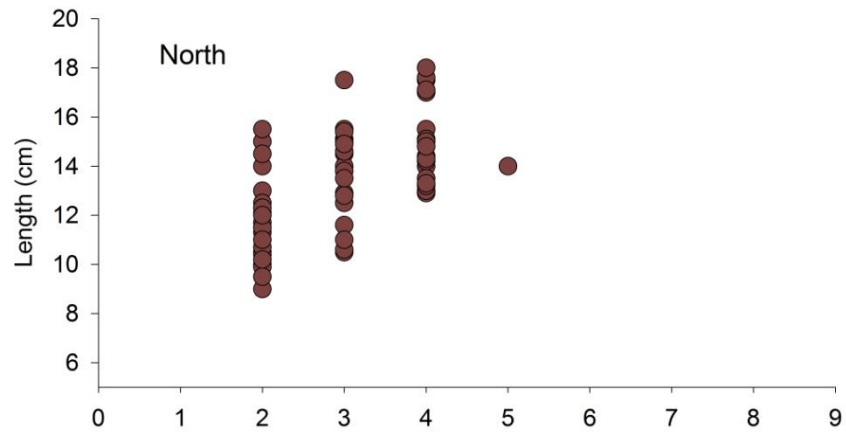
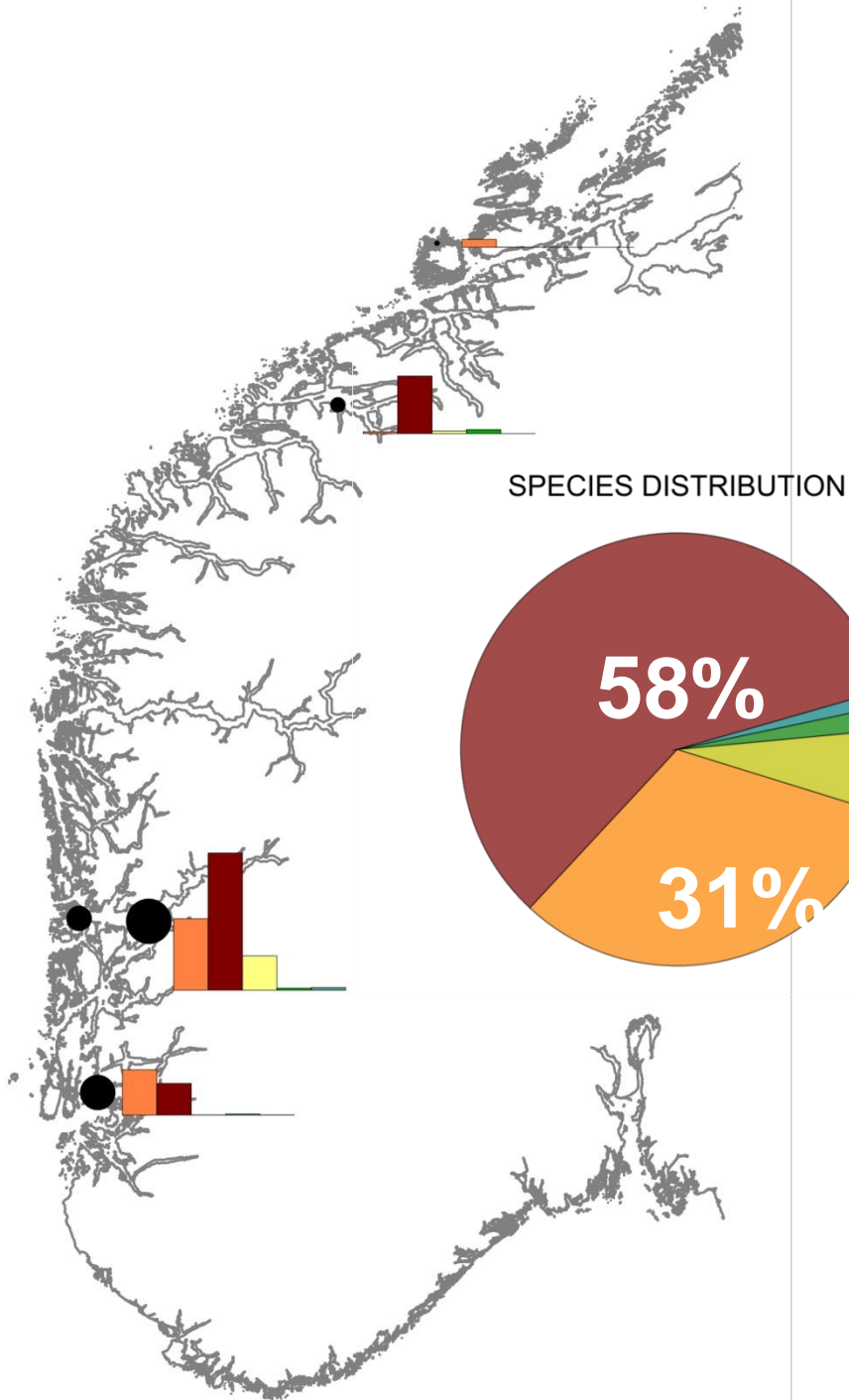
Ballan wrasse

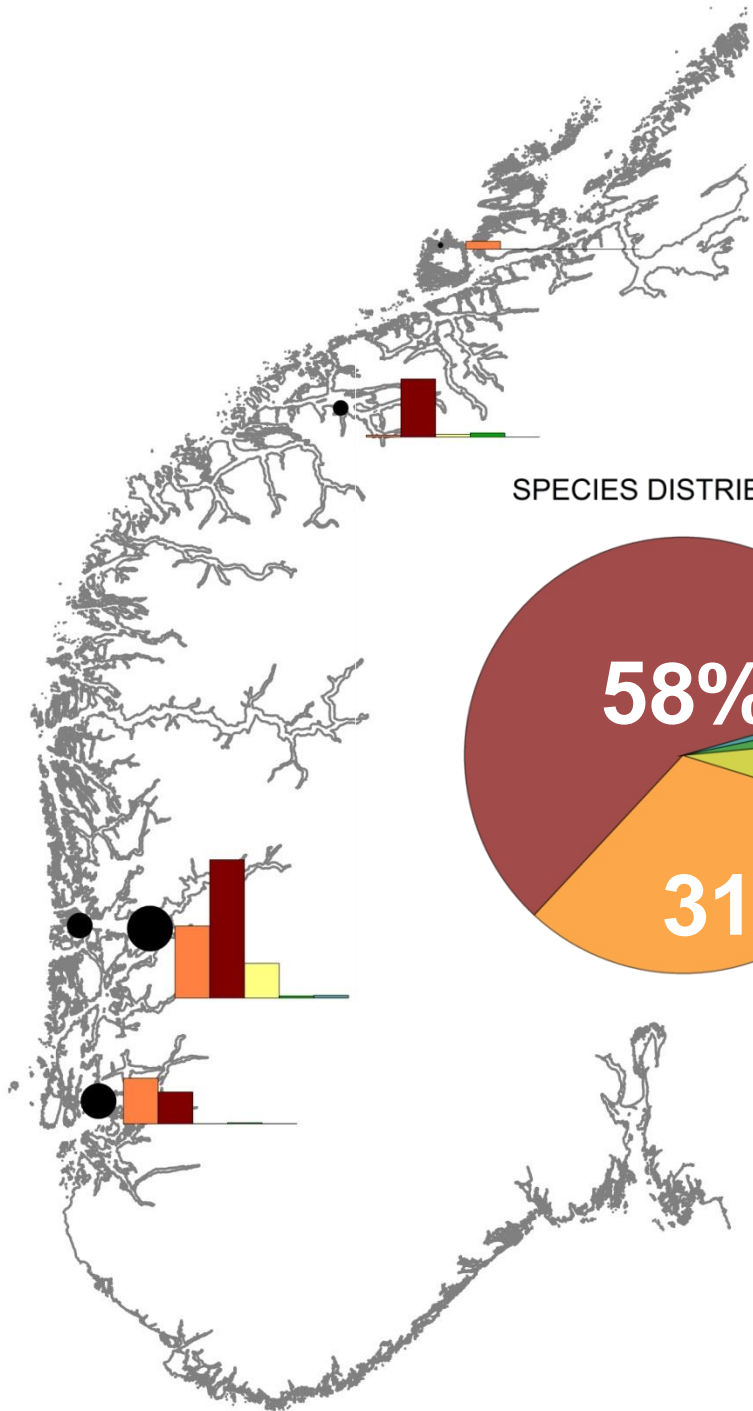
What do we need to know?

- Population sizes for the different wrasse species used and their distribution
- Growth and recruitment of each species
- Are there locally adapted populations?
- How will transporting wrasse affect their own pathogens?
- How to catch, handle, transport and maintain them in the best possible way

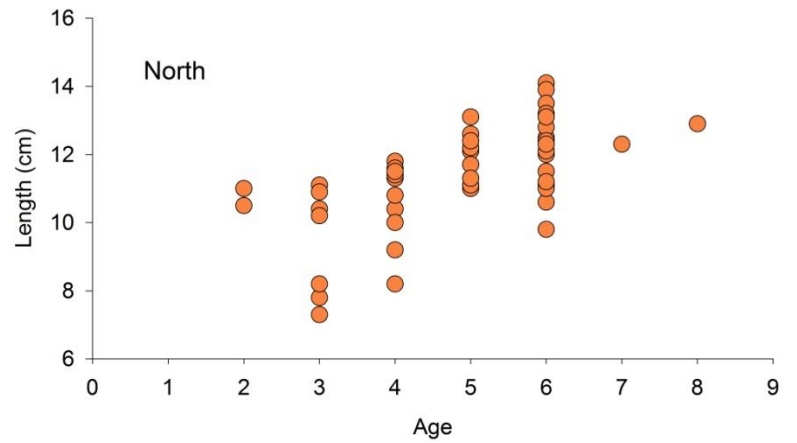
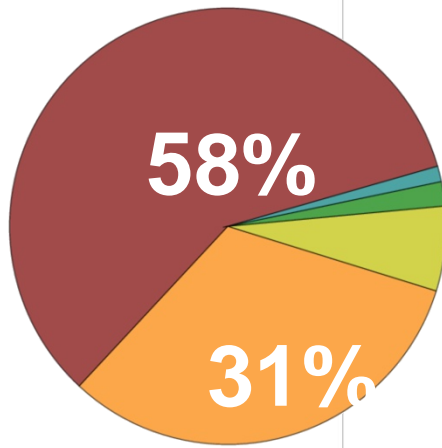




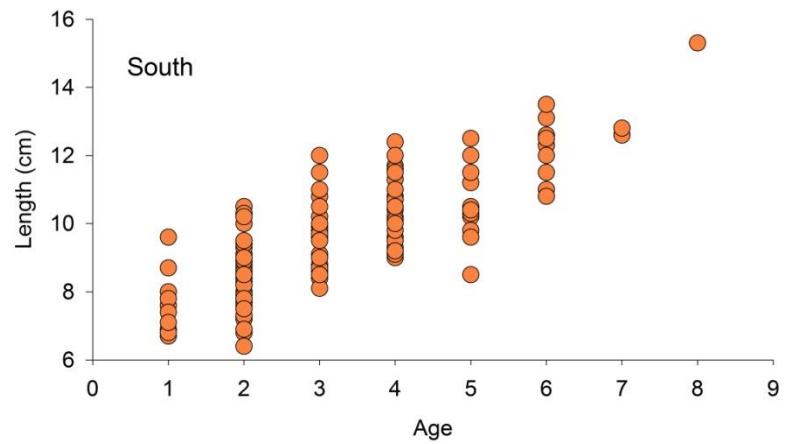




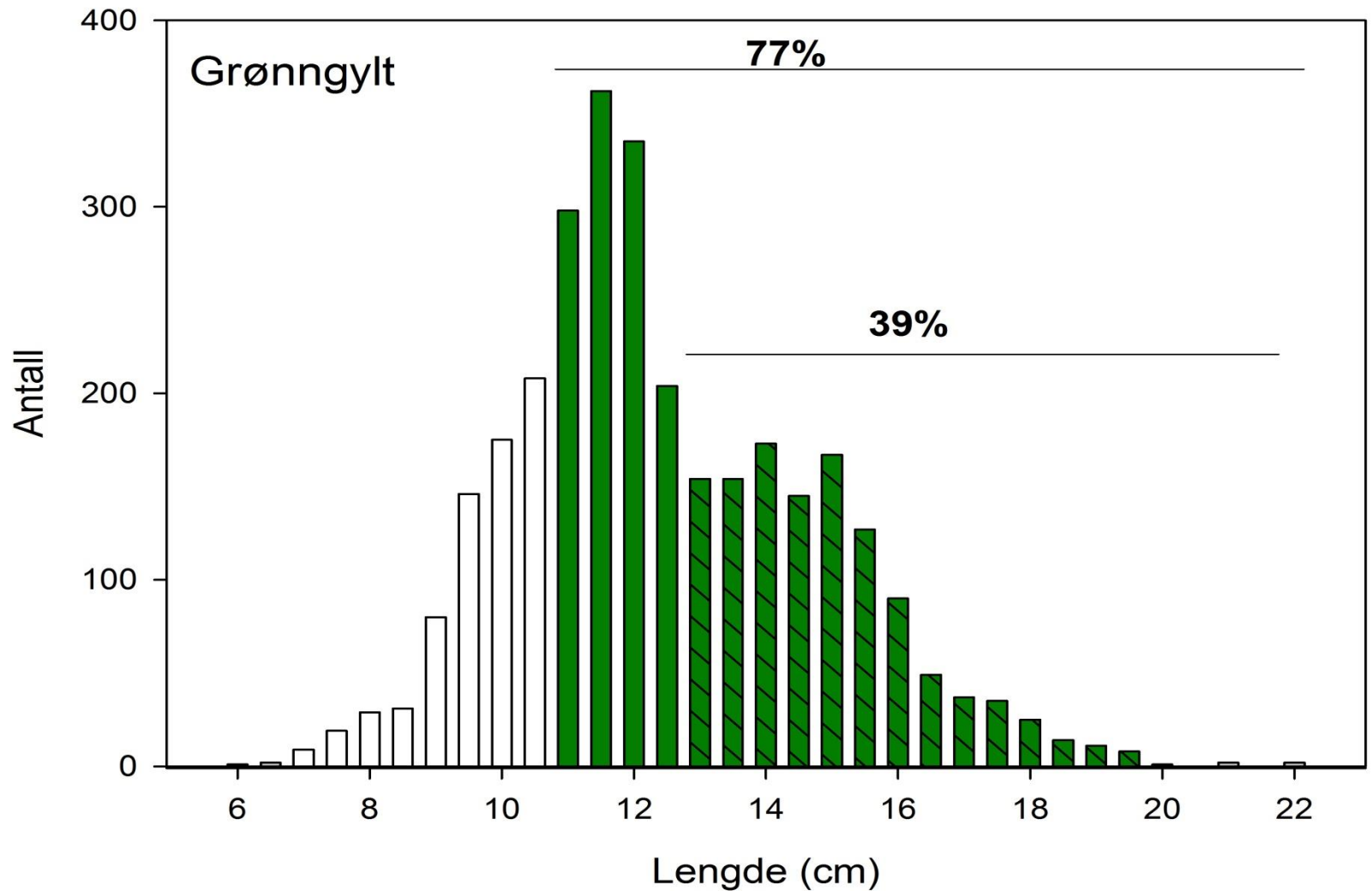
SPECIES DISTRIBUTION



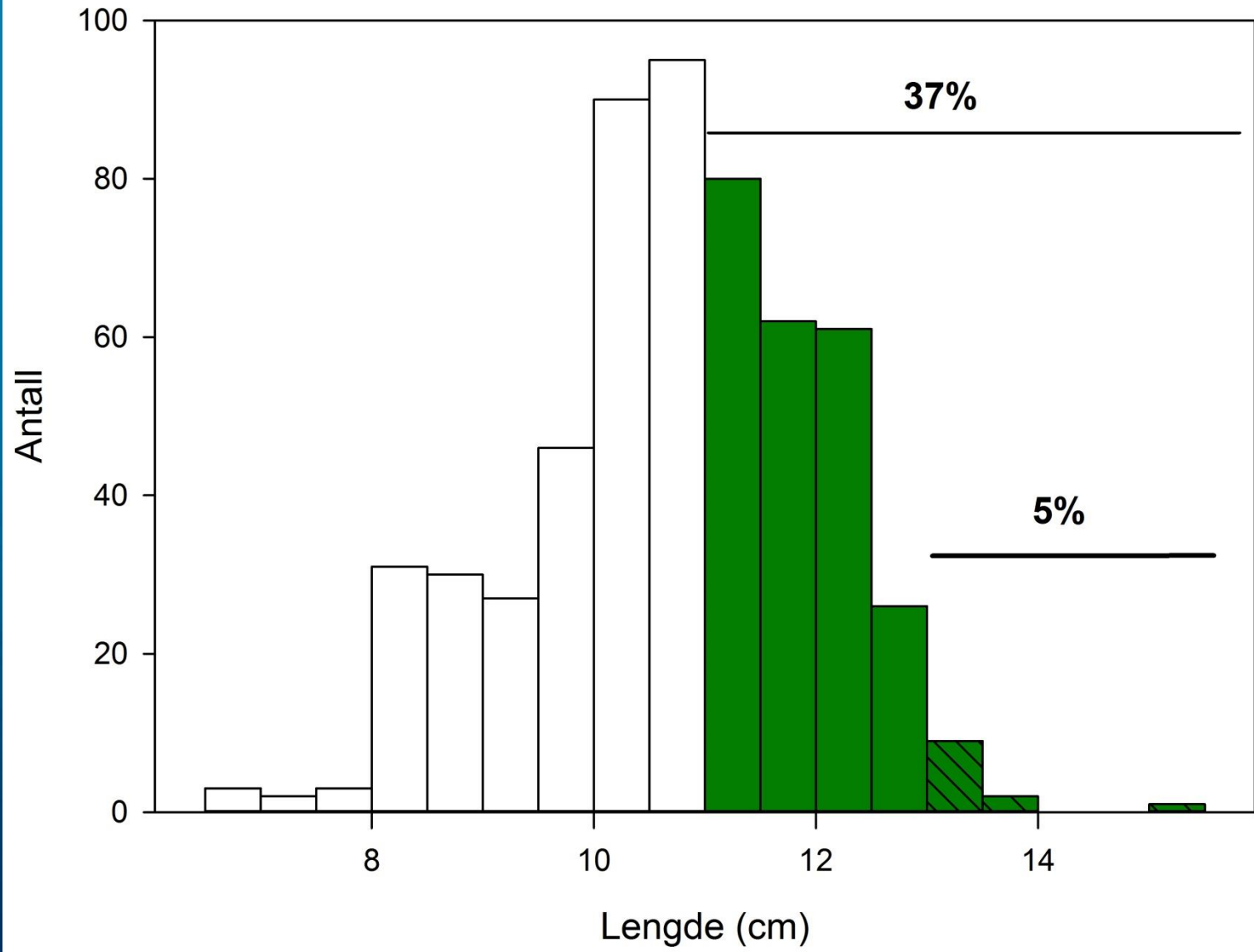
- Corkwing
- Goldsinny
- Rock Cook
- Ballan
- Cuckoo



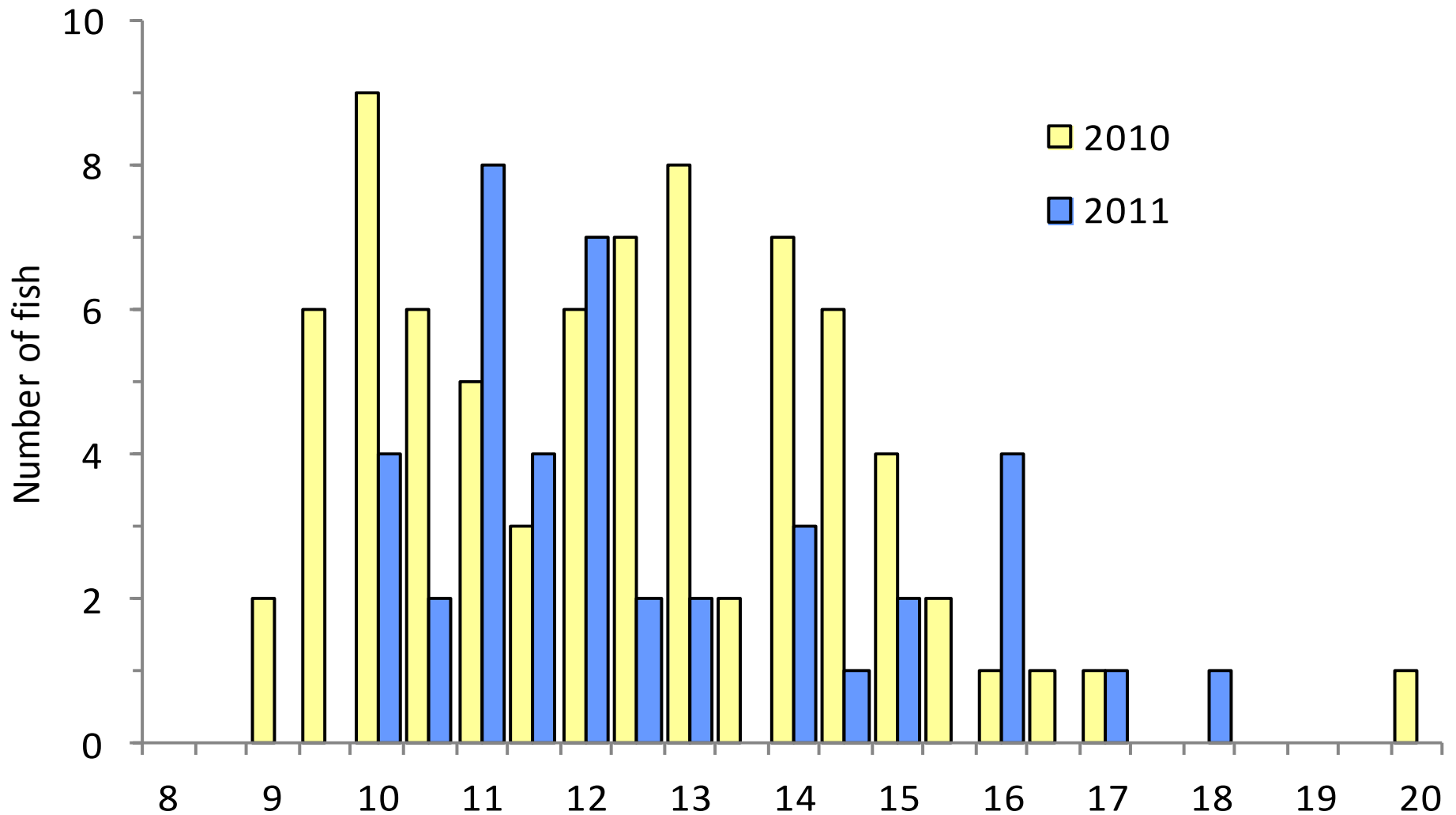
Corkwing



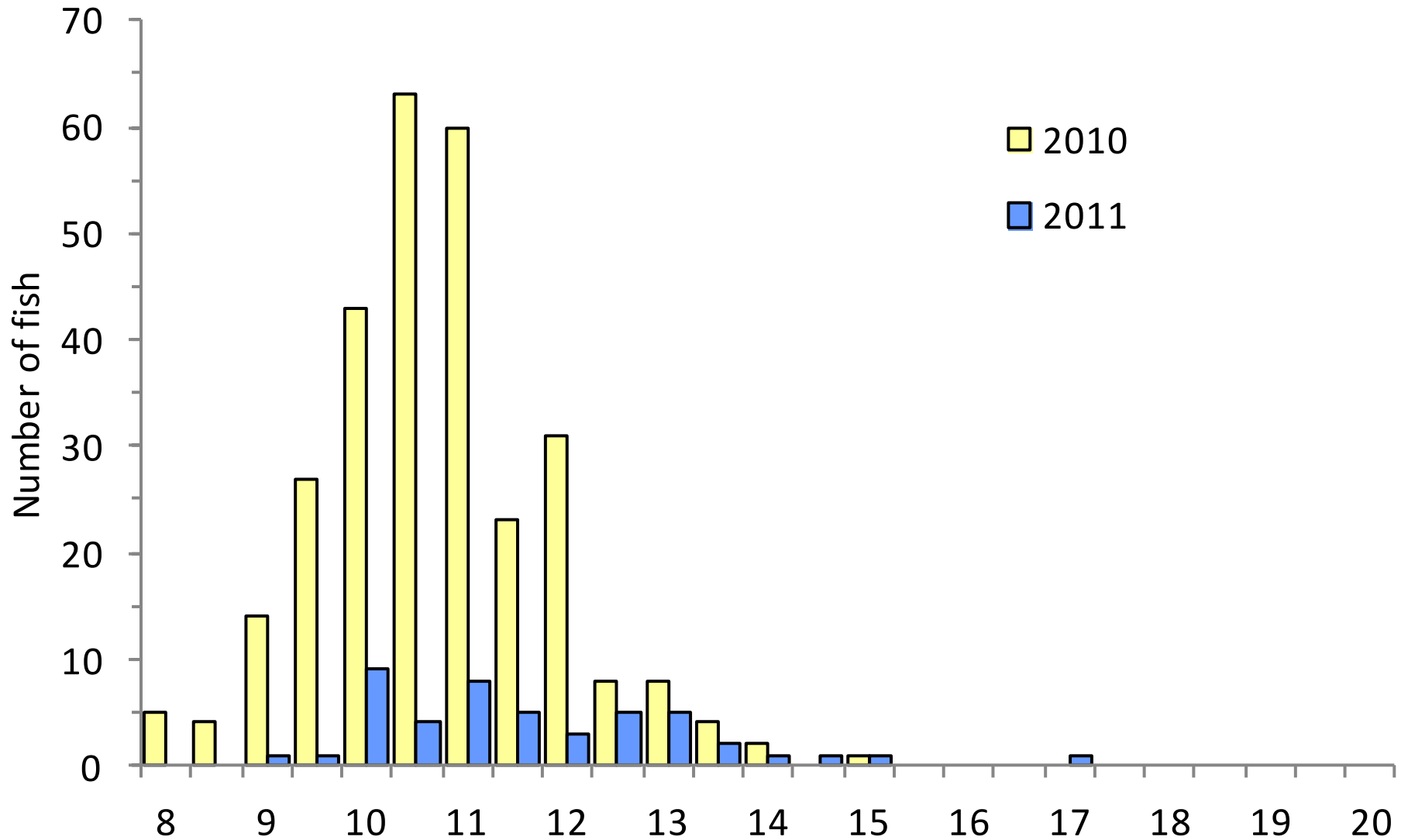
Goldsinny



Corkwing



Goldsinny



Three scenarios

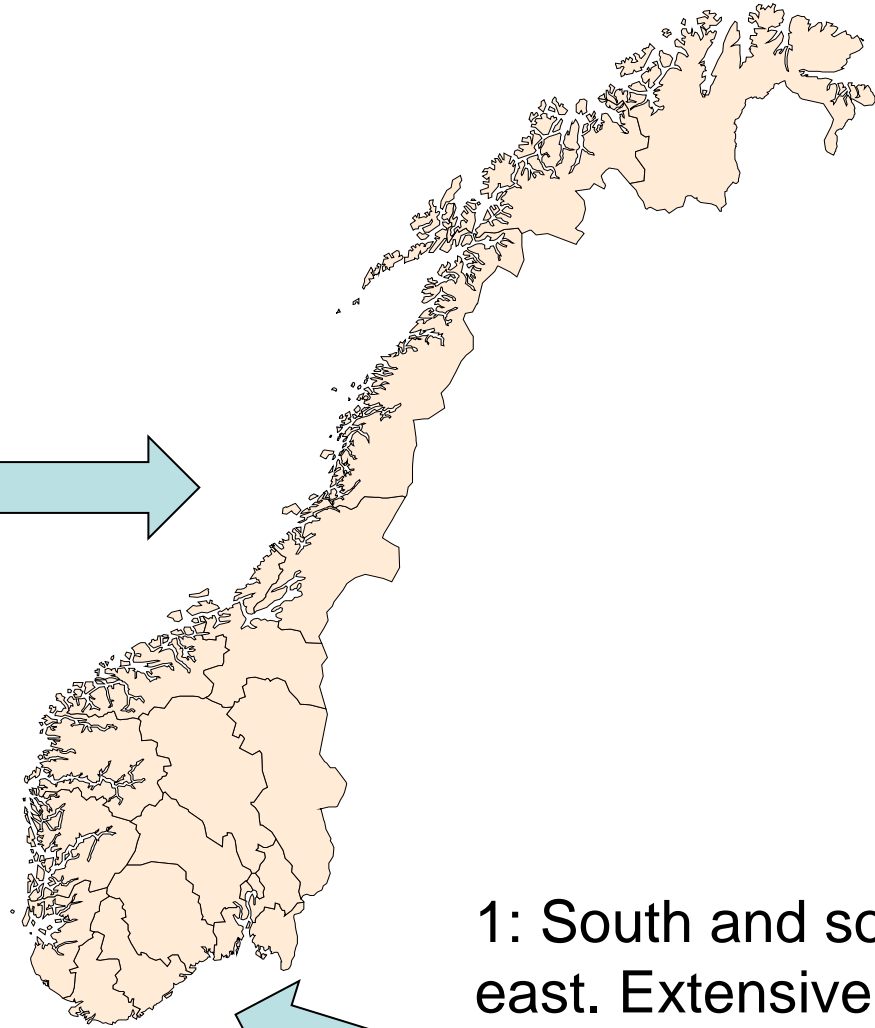
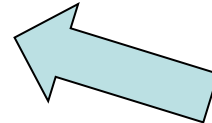
3: Mid- and northern Norway. Less wrasse available – need to "import" wrasse



2: West coast. Extensive fishery and use. May be self supplied



1: South and south-east. Extensive fishery, little or no use of wrasse. Need to "export"

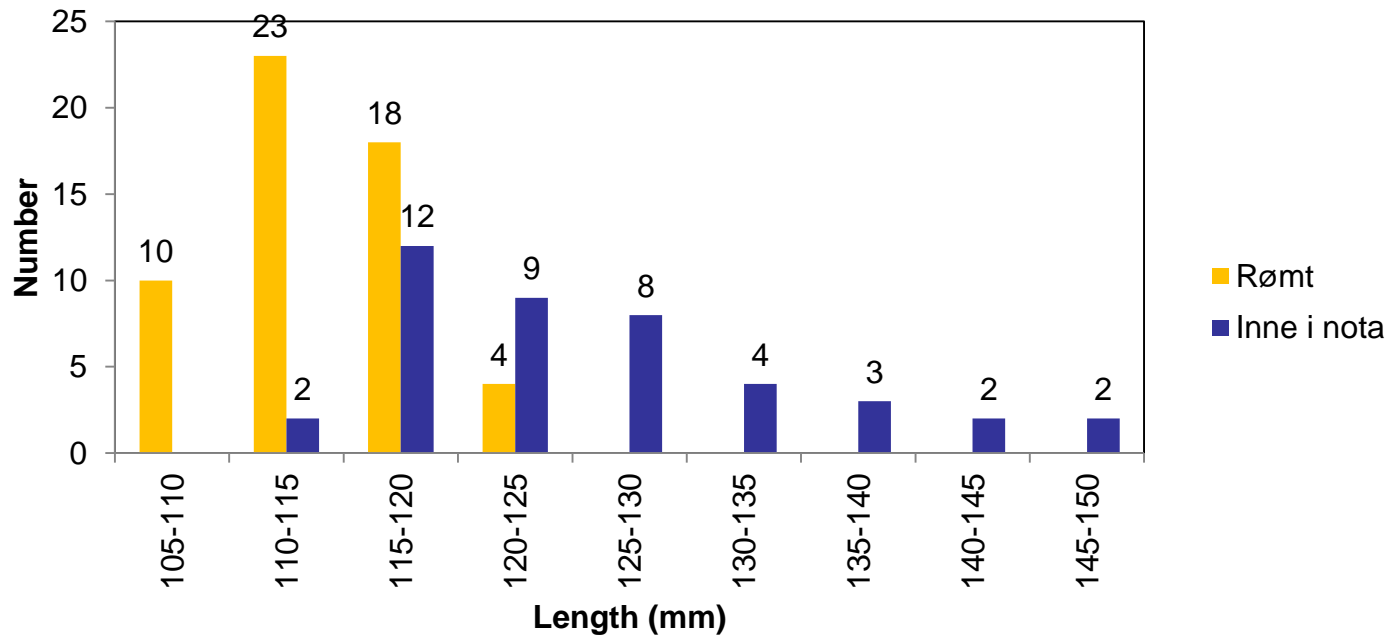




Escapes through commercial seacage nets

23 june 2012

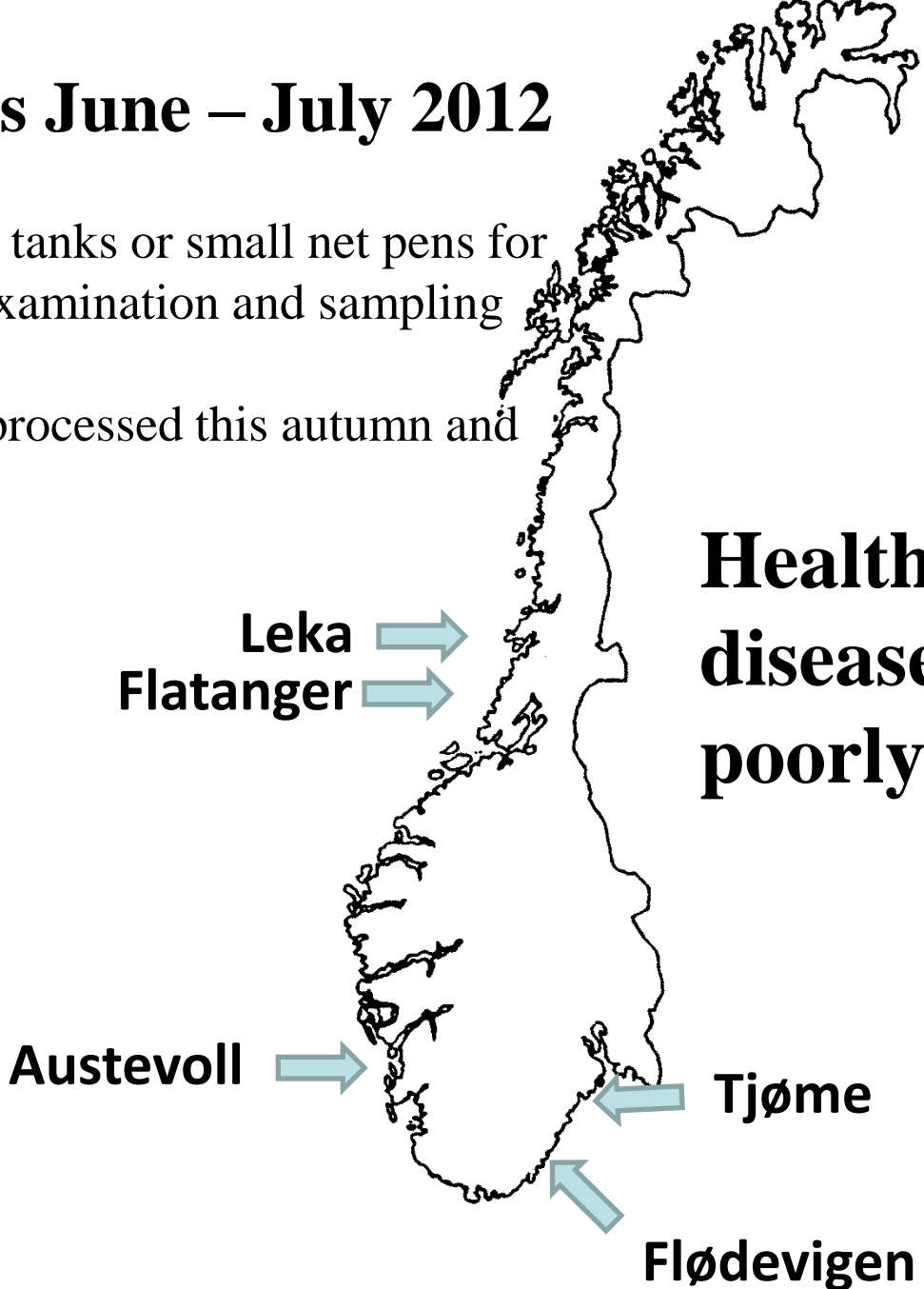
- 97 goldsinny
- 55% escaped
- k-factor mean 1,3



Sample points June – July 2012

Local catch, kept in tanks or small net pens for two weeks before examination and sampling

Samples are being processed this autumn and winter



Health status and diseases are poorly known

Austevoll



Tjøme



Flødevigen



Optimizing traps to minimize by-catch and maximize quality





Most corkwing die shortly after release in net pens if collected during the spawning season



Responsible use of wrasses

- Modified traps to avoid bycatch
- Right size
- Right time
- Hiding places for wrasse
- Locally caught wrasses



Funded by:

The Norwegian Seafood Research Fund
Research Council of Norway
&
Institute of Marine Research



INSTITUTE OF MARINE RESEARCH
HAVFORSKNINGSINSTITUTTET

