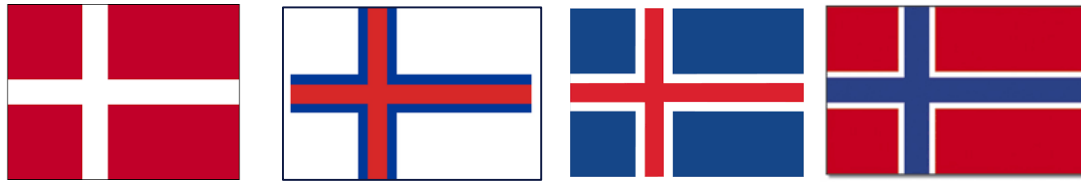


Update Europe

Anne Mette Bæk, Denmark

IFFO Madrid 2019

Update on Europe

- Production volumes
- Biological advice and decision making process
- TAC and quotas historical view
- Advice and TAC 2019 major species
- Regulatory and political environment
- Research projects

European producers are based in

- Denmark
- Faroe Islands
- Iceland
- Norway
- United Kingdom
- Ireland
- Germany/France/Spain

Total of 28 factories

European industry

- Sustaining employment in remote areas
- A modern and efficient fleet coupled with efficient fisheries management models
- Pelagic mid-water trawl and purse sein fishing with low impact on ecosystems
- Major part of fisheries are certified: MSC, IFFO RS
- Good use of rest raw material

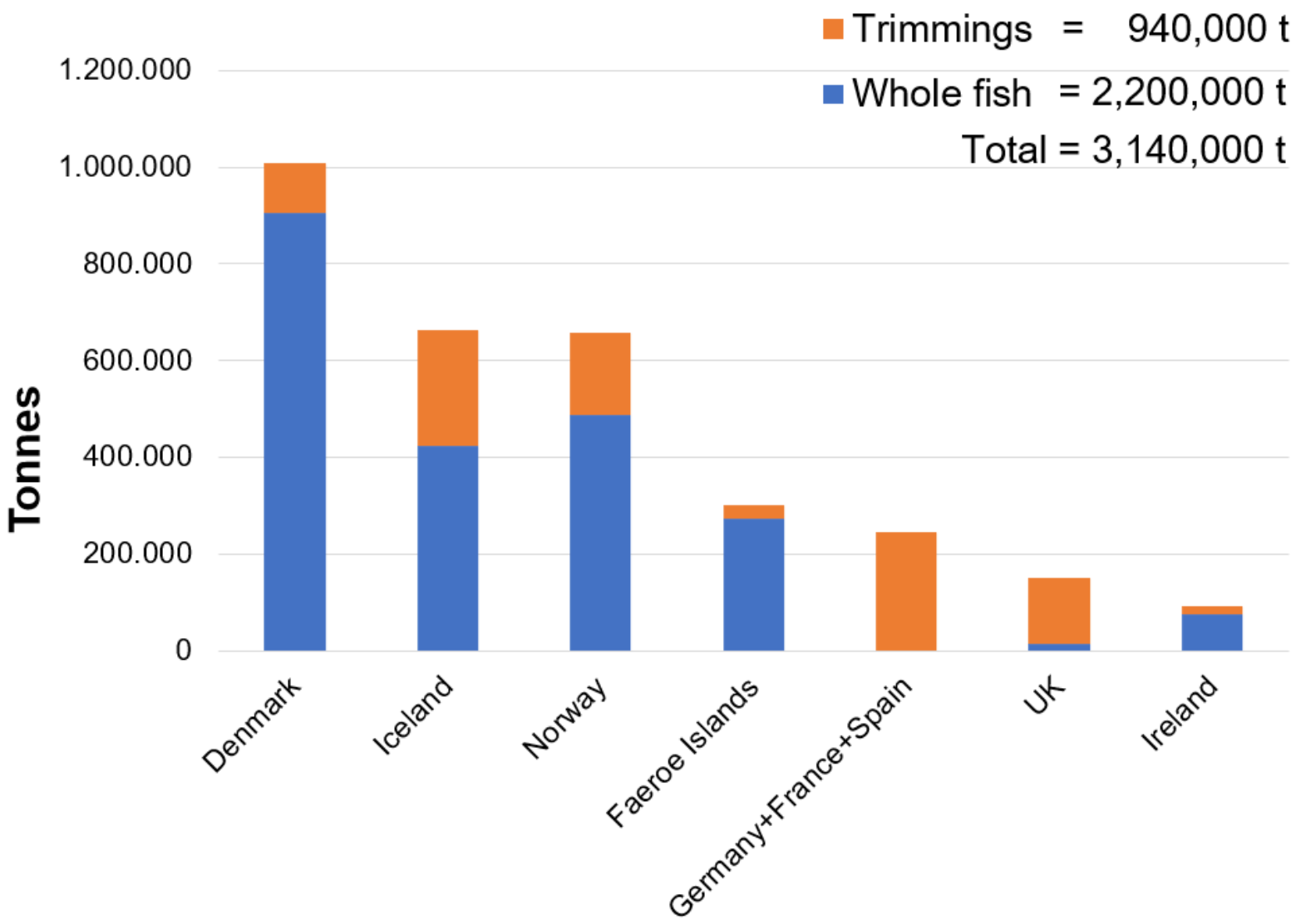
Production volumes

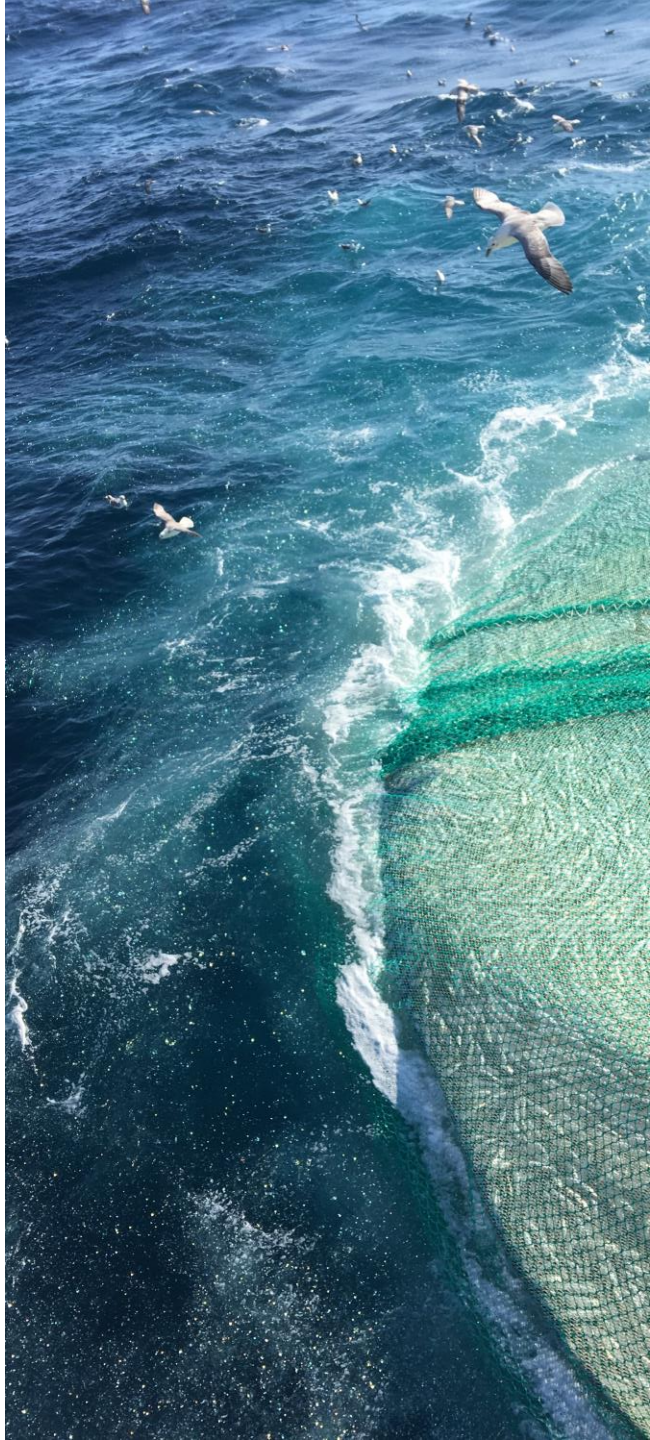
Raw material production capacity

Denmark	6.500 tonnes/day
Faroe Islands	2.400 tonnes/day
Iceland	10.700 tonnes/day
Norway	8.700 tonnes/day
UK	2.050 tonnes/day
Ireland	1.200 tonnes/day
Germany/France/Spain	1.400 tonnes/day

Total: 32.950 tonnes/day

Raw material received in 2018





European fishmeal and fish oil production

4 years average

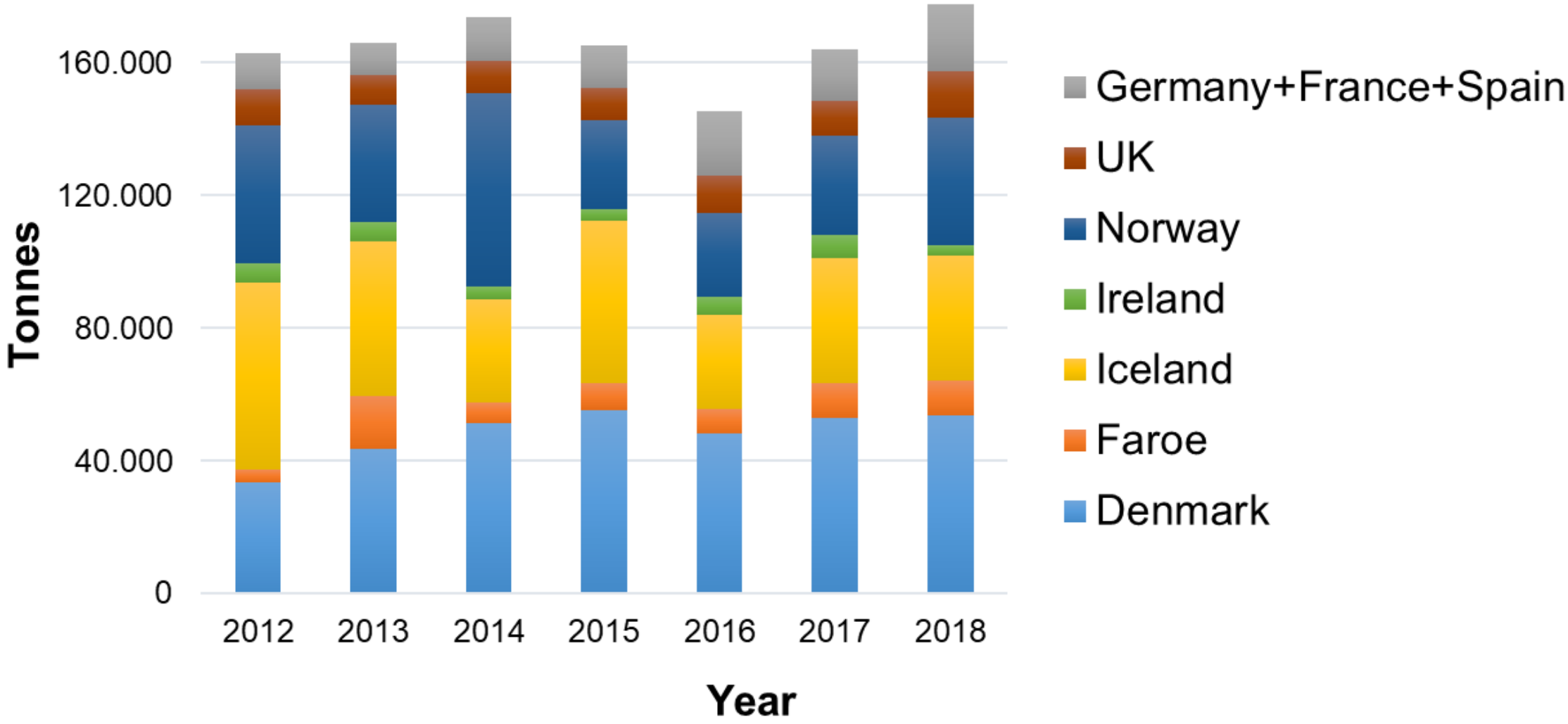
590,000 tonnes of fishmeal

165,000 tonnes of fish oil

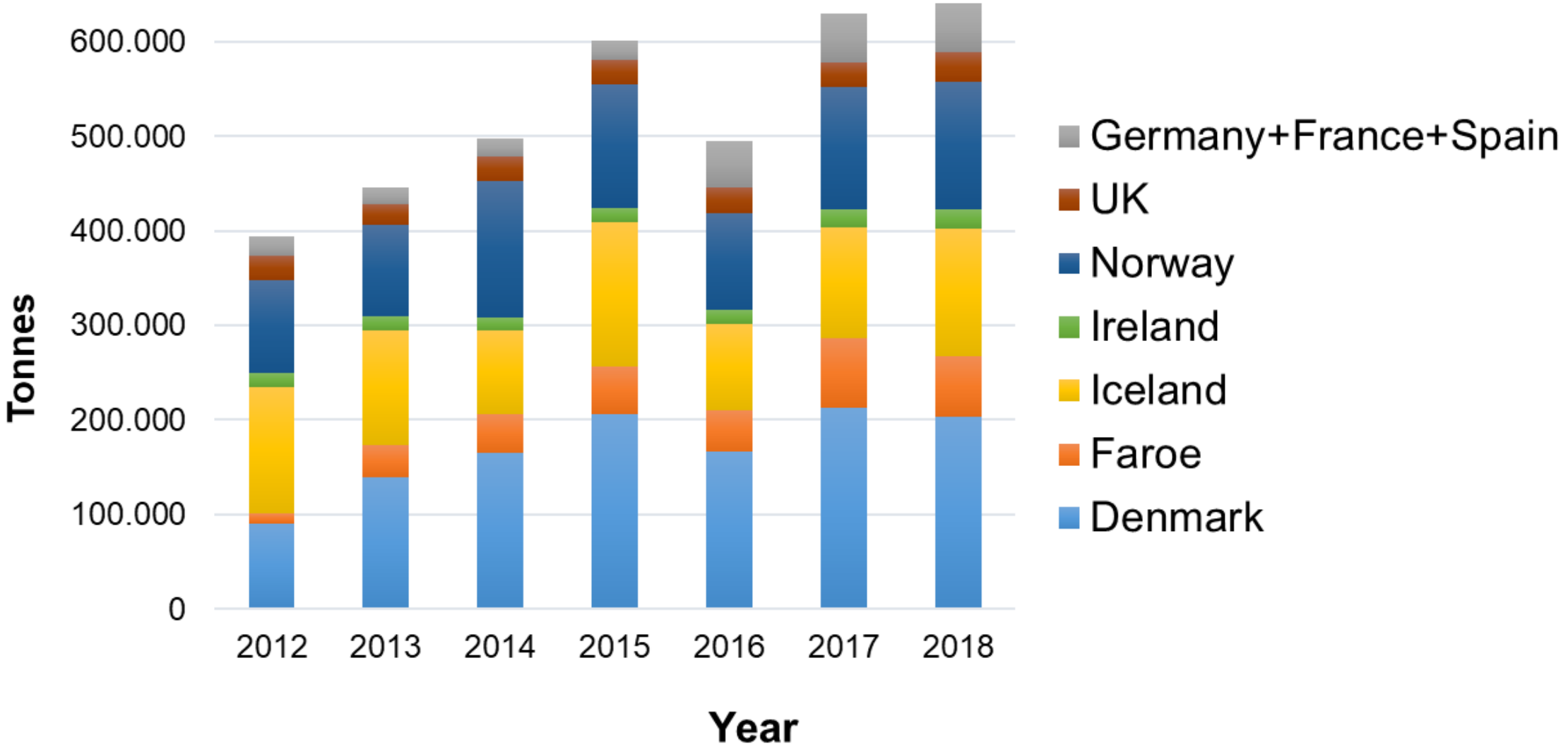
Total raw material received:

2.800.000 tonnes

Fish oil production 2012-2018, tonnes



Fishmeal production 2012-2018, tonnes



Biological advice and decision making process

TAC and quota regulation

- The major European stocks used for fishmeal and fish oil are: blue whiting, capelin, sprat, sand eel, norway pout
- Trimmings from herring, mackerel, whitefish + aquaculture
- All fish stocks used to produce fishmeal and fish oil in European countries have strict catch limitations
- The total allowable catches (TACs) are based on biological advice and under governmental regulation and control
- Principle of maximum sustainable yield (MSY).

TAC and quota regulation

Quotas are set:

- By individual countries (Norway, Iceland, Faroe Islands)
- By groups of countries (European Union)
- In annual bilateral agreements: TACs for shared stocks and mutual exchange of fishing rights (i.e. EU-Norway)
- In annual multilateral agreements for straddling/shared stocks (Coastal state agreements and NEAFC)

TAC and quota regulation – biological advice

International Council for the Exploration of the Sea (ICES) - science priorities

Ecosystem science

Advance and shape understanding of the structure, function, and dynamics of marine ecosystems – to develop and vitalize marine science and underpin its applications

Impacts of human activities

Measure and project the effects of human activities on ecosystems and ecosystem services – to elucidate present and future states of natural and social systems

Observation and exploration

Monitor and explore the seas and oceans – to track changes in the environment and ecosystems and to identify resources for sustainable use and protection

Emerging techniques and technologies

Develop, evaluate, and harness new techniques and technologies – to advance knowledge of marine systems, inform management, and increase the scope and efficiency of monitoring

Seafood production

Generate evidence and advice for management of wild-capture fisheries and aquaculture – to help sustain safe and sufficient seafood supplies

Conservation and management science

Develop tools, knowledge, and evidence for conservation and management – to provide more and better options to help managers set and meet objectives

Sea and society

Evaluate contributions of the sea to livelihoods, cultural identities, and recreation – to inform ecosystem status assessments, policy development, and management

ICES advisory process

ICES advice for individual stocks is based on peer-reviewed expert group reports, prepared in an advice drafting group and approved by the Advisory Committee (ACOM).

- Data are collected by expert groups – a first scientific/technical response is drafted
- Expert group reports are peer-reviewed by independent experts
- The expert group report together with the review is used in the advice drafting group to formulate the draft advice
- The draft advice is discussed and finally approved by the Advisory Committee (ACOM)
- The advice is delivered to the client.
- Observers can follow advice drafting groups but have no influence

TAC and quota regulation - EU

Fishing data, model data

ICES expert Working group

Assessment

Review group

Advice drafting group

ACOM
(advisory Committee)

ICES ADVICE

TAC/Quota Regulation

Advisory Committee (stakeholders)

EU COUNCIL (member states)

PROPOSAL

EU Commission

STECF
EU Scientific, Technical and Economic Committee

for Fisheries

TAC and quota regulation – Non-EU countries

Fishing data, model data

ICES expert Working group

Assessment

Review group

Advice drafting group

ACOM
(advisory Committee)

TAC/Quota Regulation

ICES ADVICE

National governmental fishery management

PROPOSAL

National advisory council with stakeholder participation

Coastal states – managing shared pelagic fish stocks

Law of the Sea

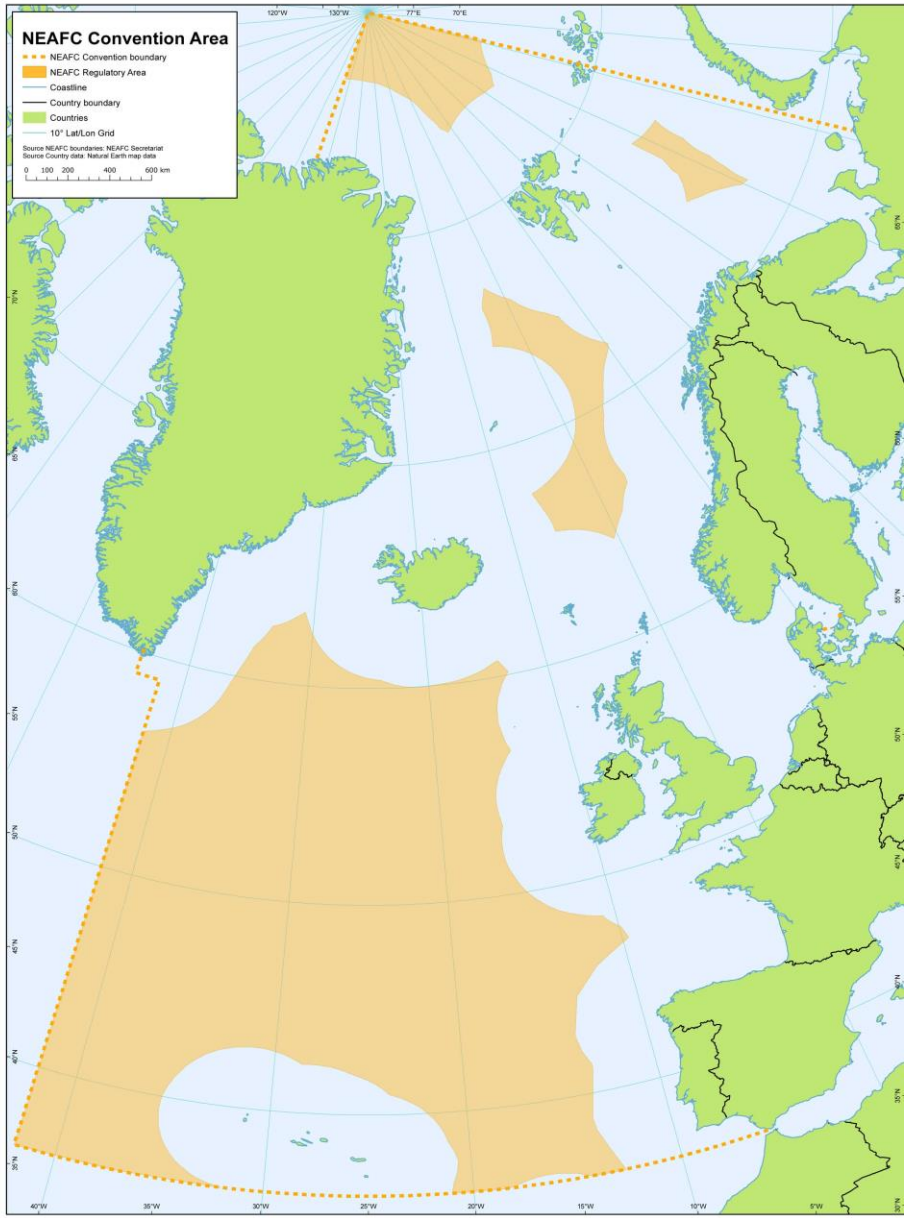
Sovereign right of exploring , exploiting, conserving and managing living marine resources

Duty to take into account best available scientific evidence, ensure their maintenance through proper conservation and management measures

Duty to apply the precautionary approach and to protect the marine biodiversity

Duty to cooperate with neighbouring coastal states on the conservation and development of shared fish stocks

Duty to cooperate with states fishing on the high seas on conservation of fish stocks occuring both within its EEZ and adjacant areas of high seas



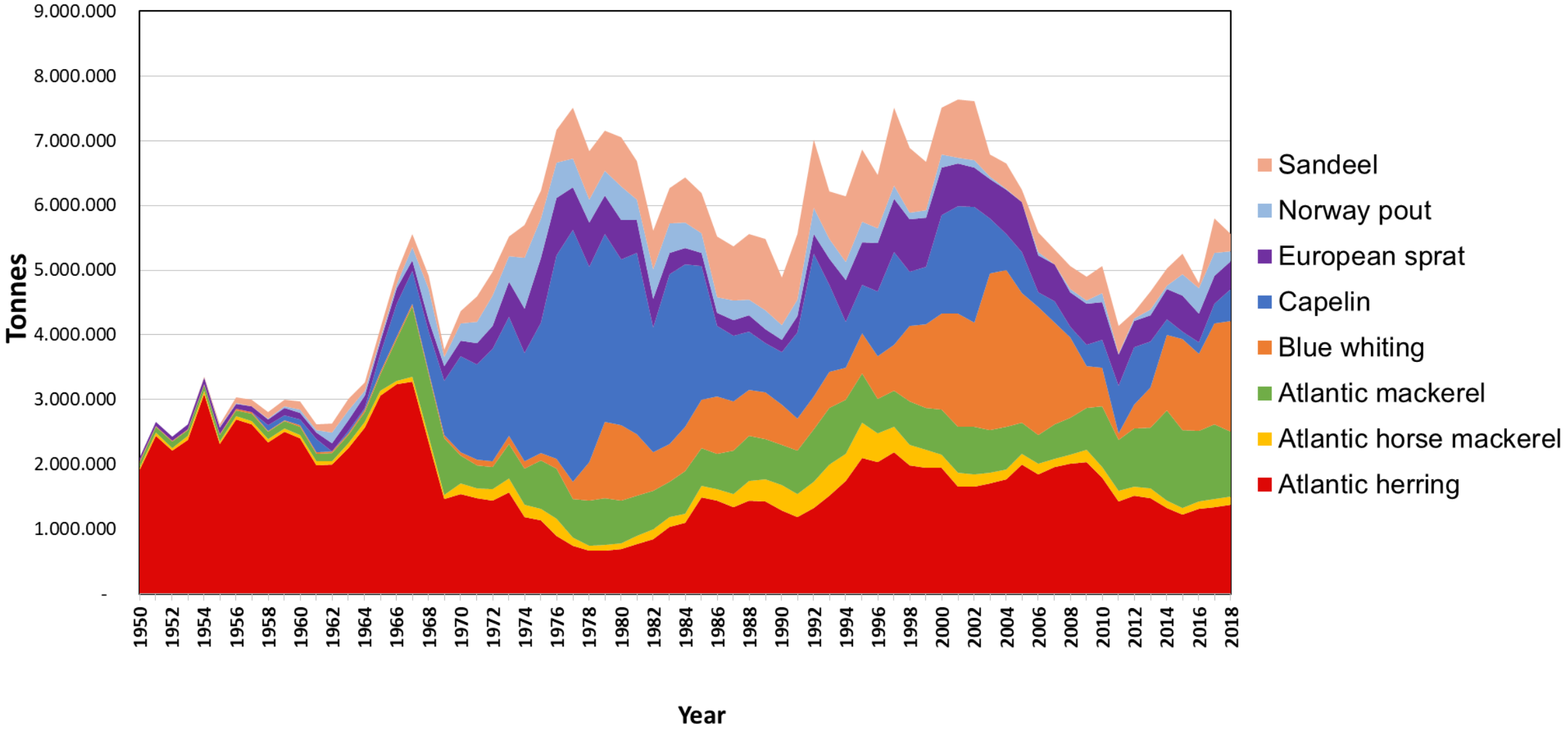
Coastal states – managing pelagic fish stocks

Blue whiting, atlanto-scandian herring, mackerel:

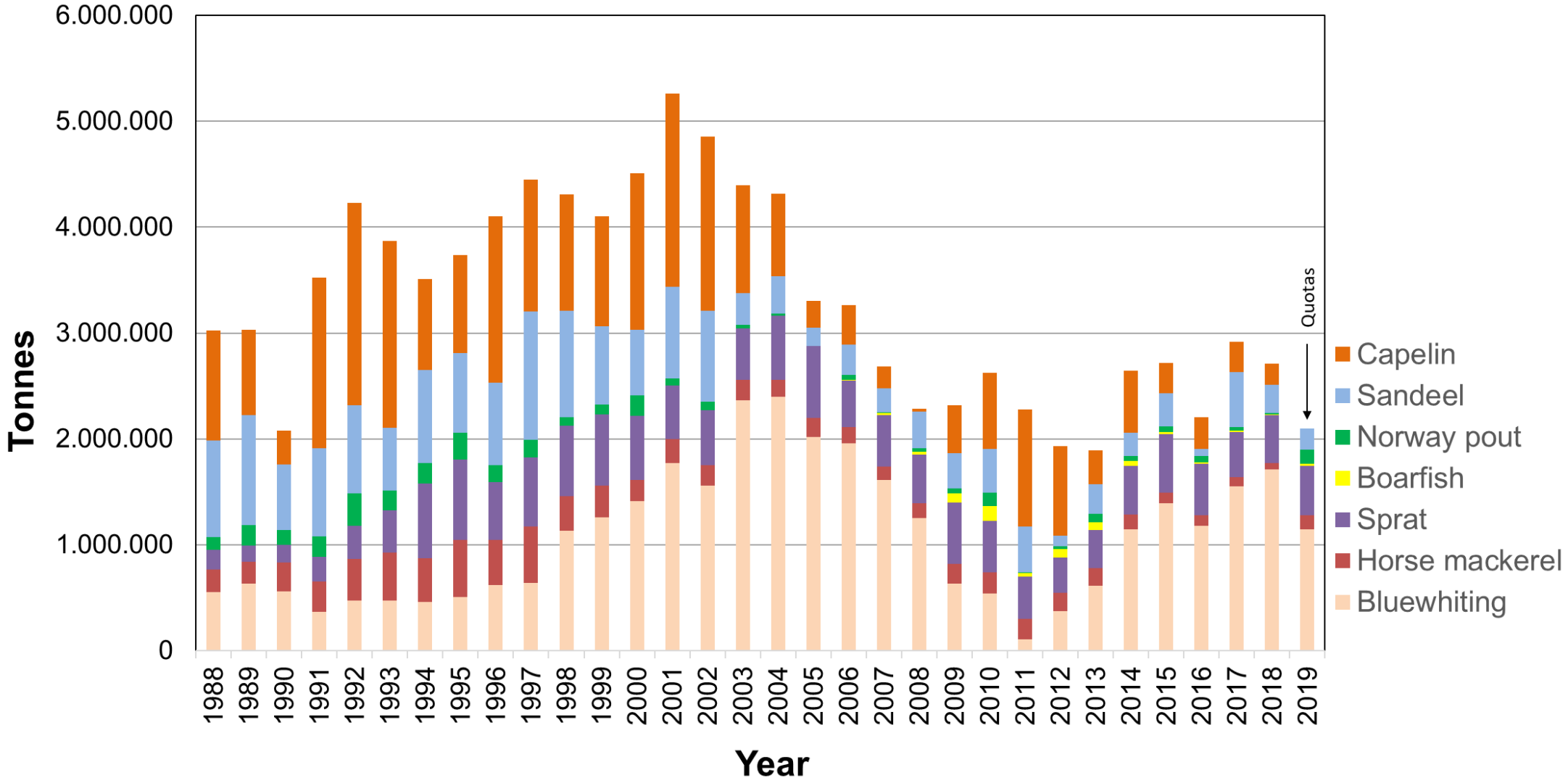
- A two step process:
  - coastal states negotiate a total allowable catch (TAC) and allocations for the stocks
- - supplementing measures are adopted through NEAFC for the high seas

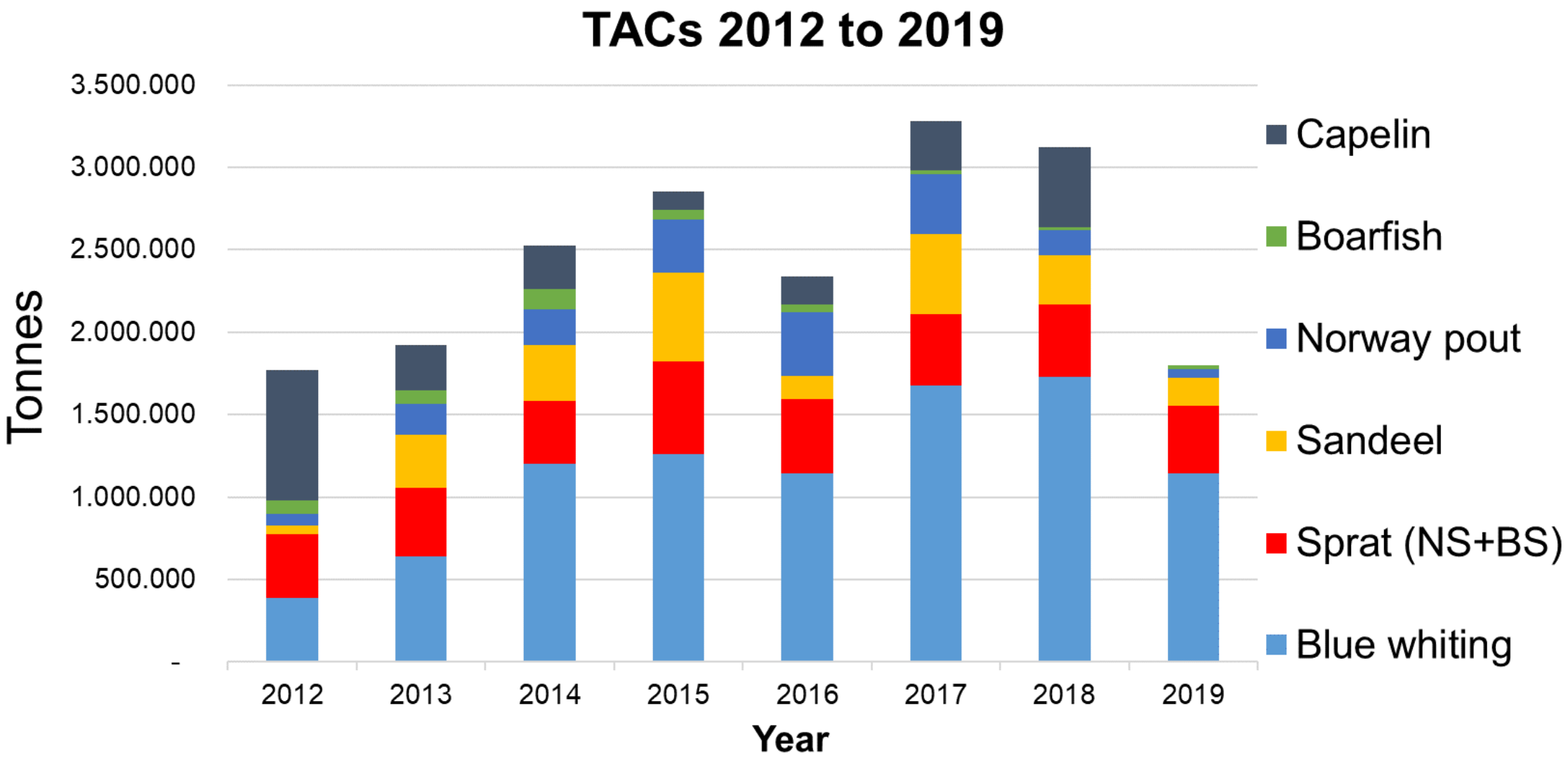
TAC and quotas historical view

Pelagic catches, North East Atlantic 1950-2018

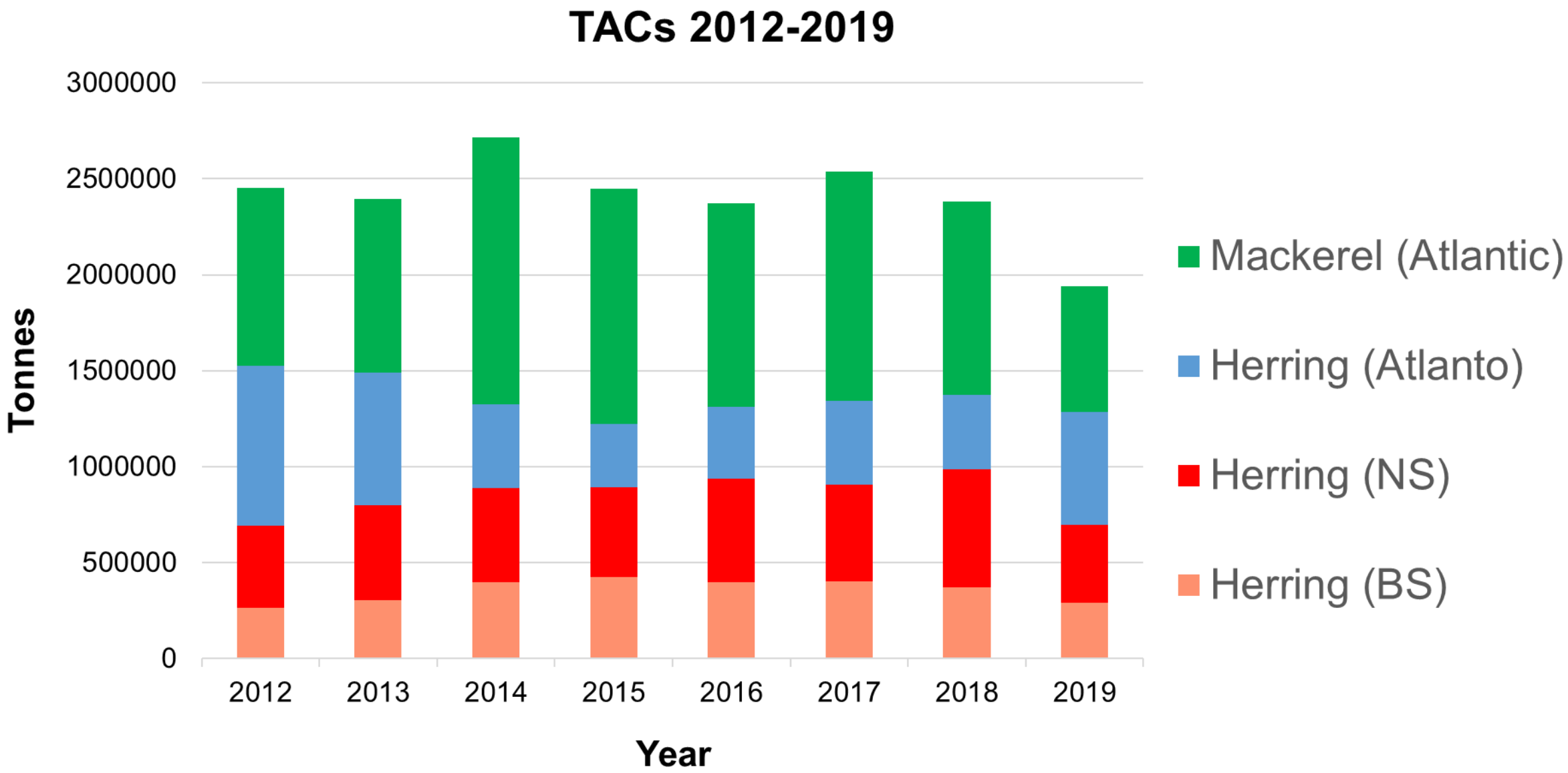


Total catches in the North East Atlantic 1988-2018 + quotas 2019





NB: Blue whiting and North Sea sprat TAC in 2019 based on ICES advice

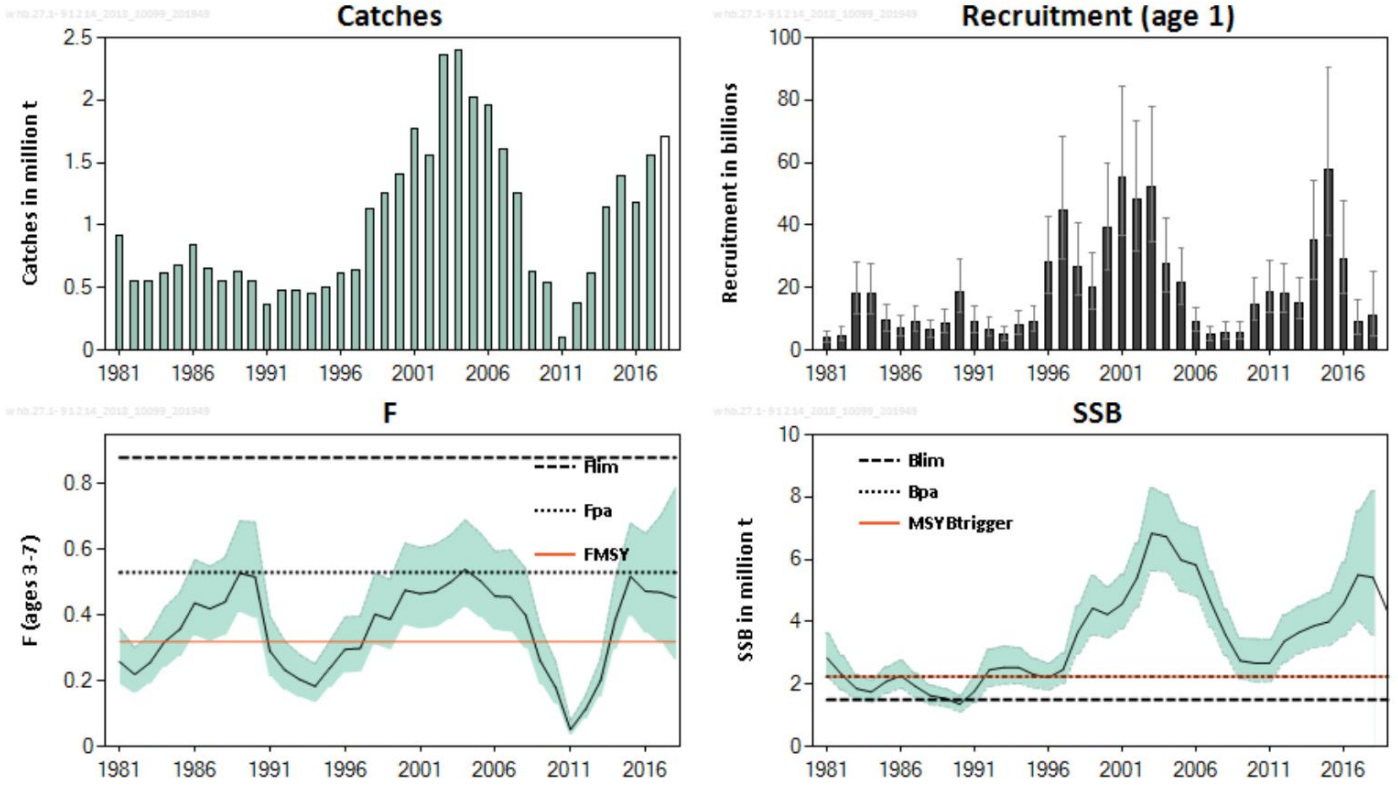


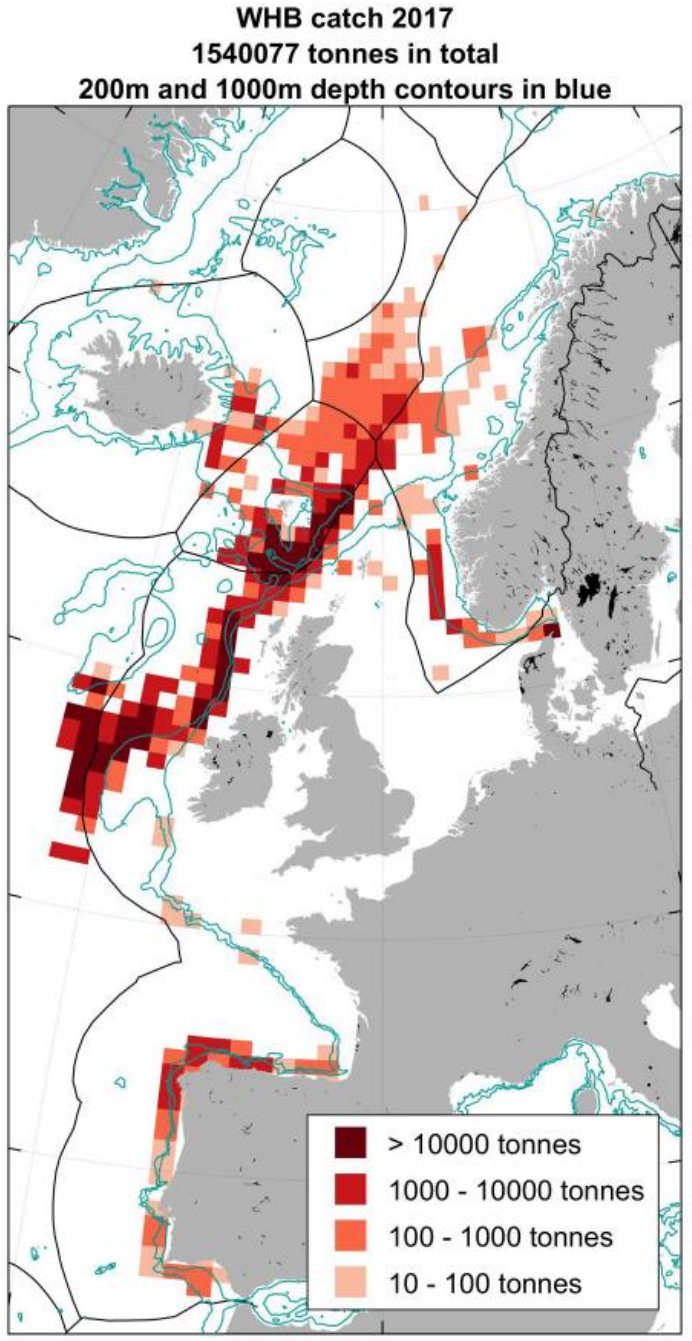
NB: No agreed mackerel quota

Advice and TAC 2019 major species

Blue whiting - Northeast Atlantic

ICES advice for 2019: **1.143.629 t**
- 20%
Coastal states agreement on TAC
(=ICES advice) but no agreement on allocation





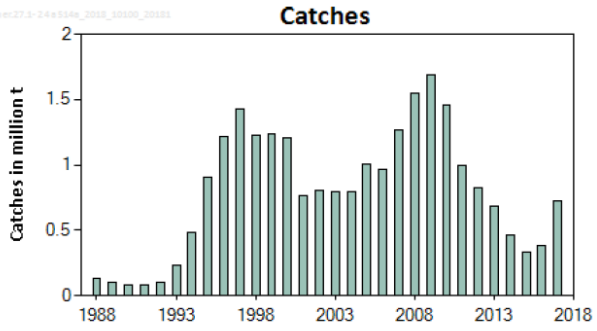
Norwegian spring-spawning herring, Northeast Atlantic and the Arctic Ocean

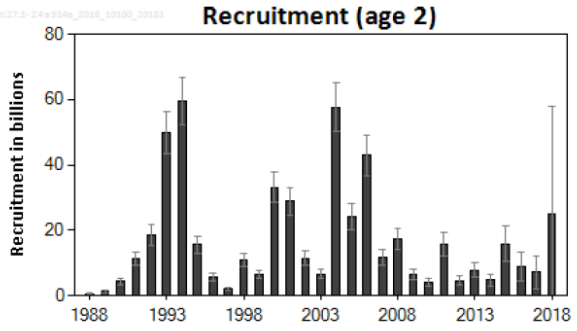
ICES advice for 2019: **588.562 t**

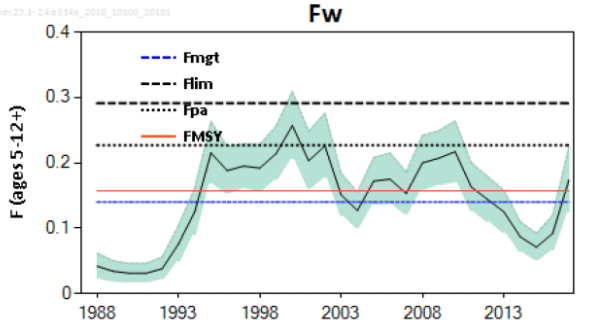
+36 %

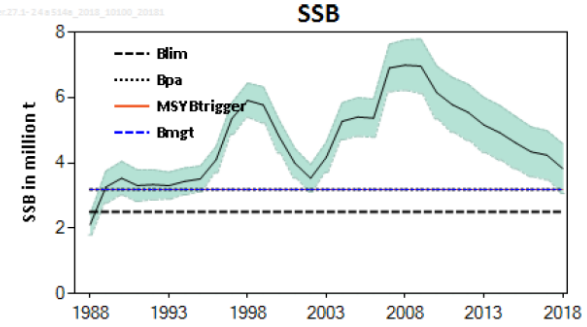
Coastal states agree on TAC (=ICES advice)

but no agreement on allocation

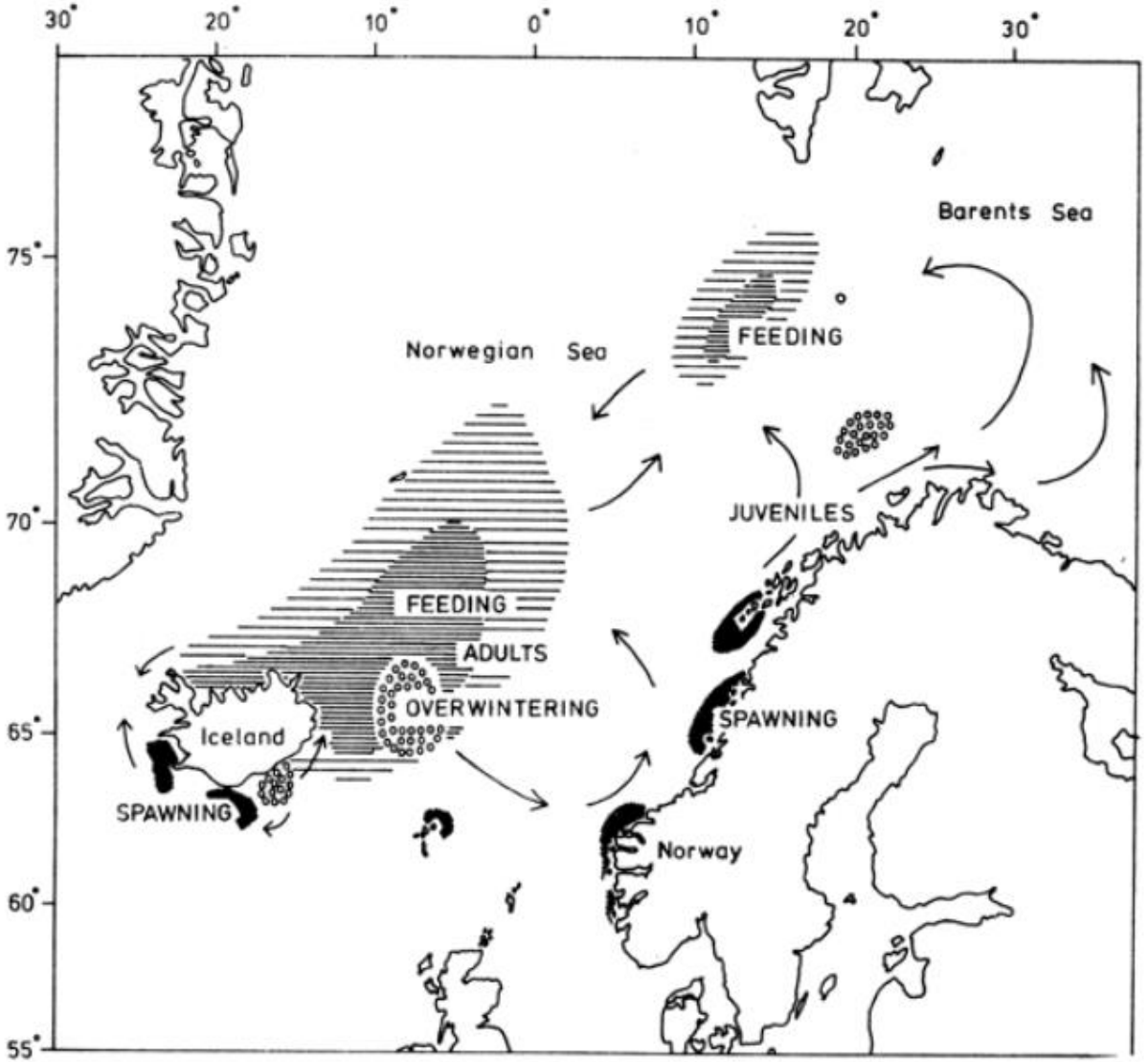








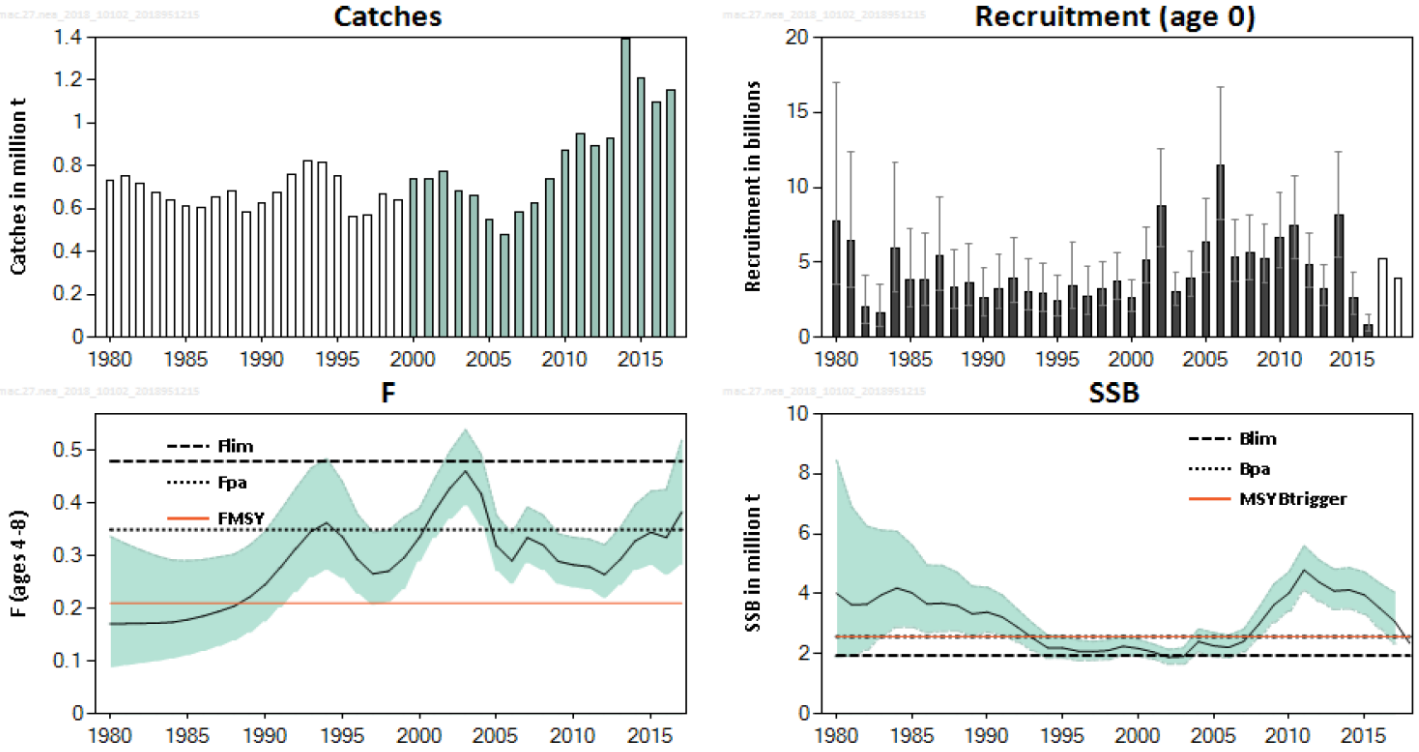
Spawning grounds and migration routes for NSS herring



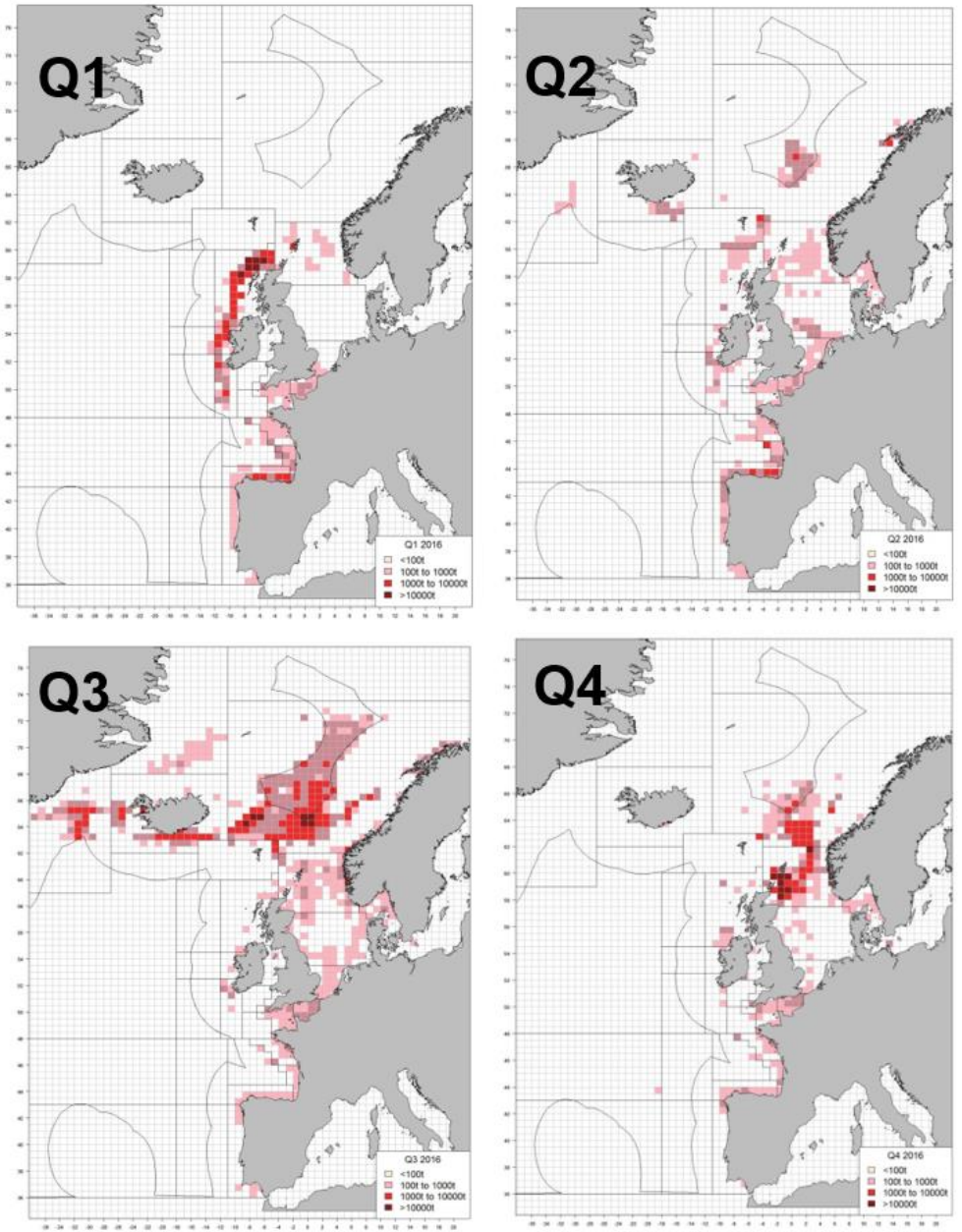
ICES, 2018

Mackerel in the Northeast Atlantic

ICES advice for 2019: **318.403 t**
3 of 6 Coastal states agree on TAC and allocation of 653.438 t
-20%



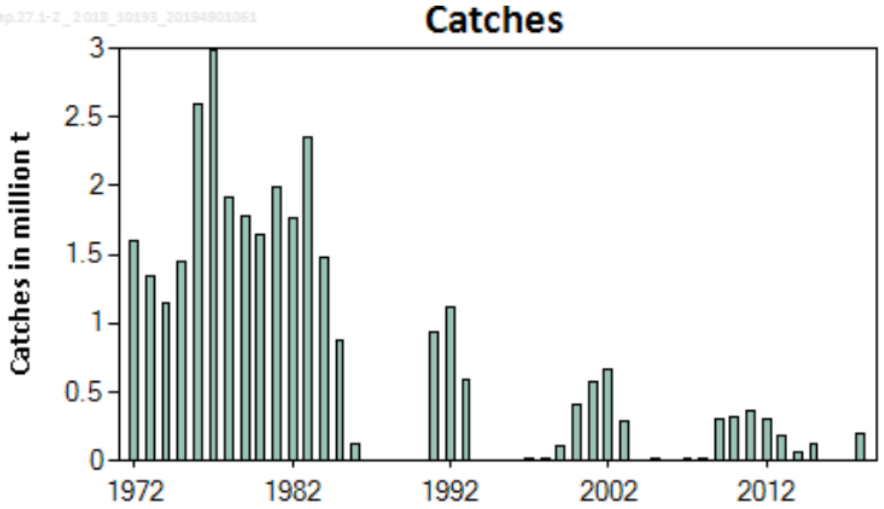
Inter-benchmark (2019) show stock is under estimated in the ICES advice for 2019

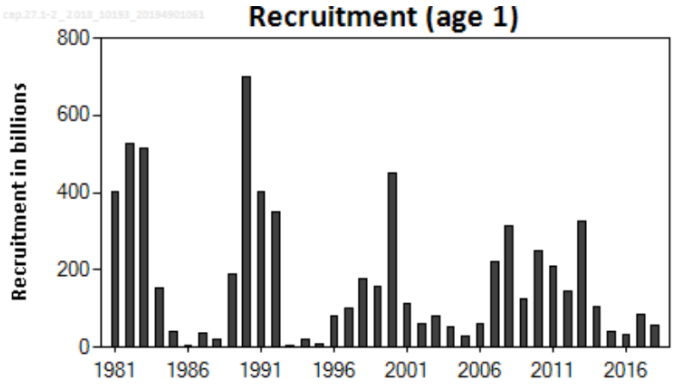


Catch locations by quarter, ICES WGWIDE

Capelin in Northeast Arctic (Barents Sea)

ICES advice for 2019: zero catches
TAC: zero catches
-100%





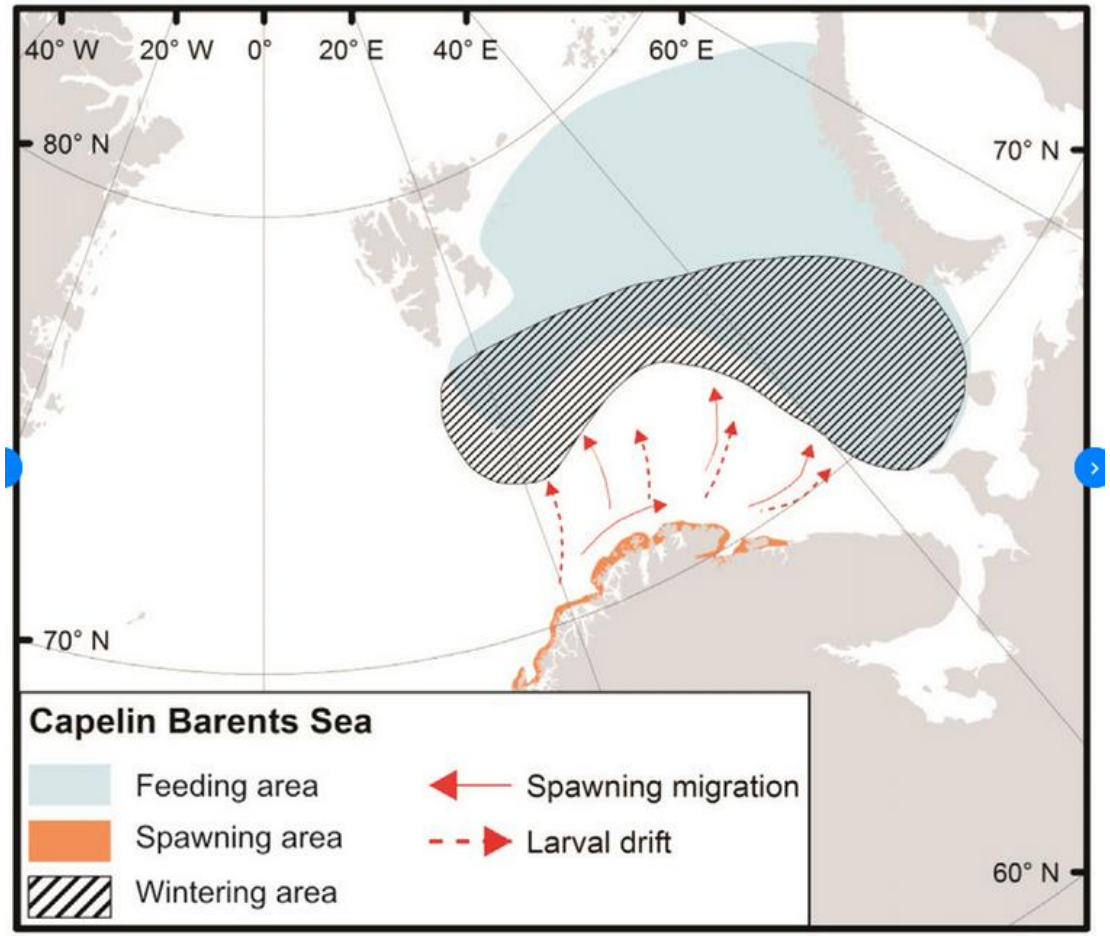
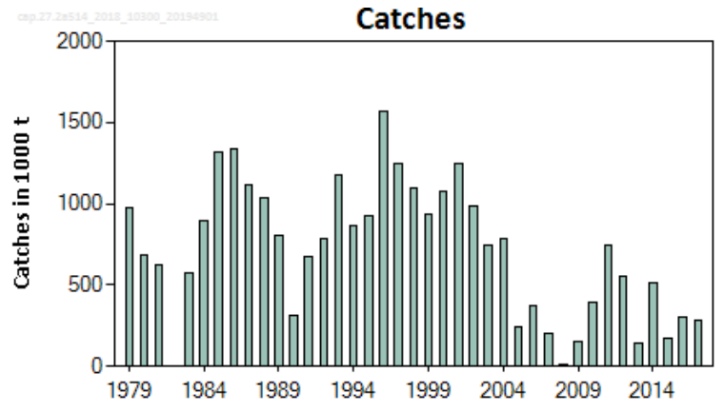
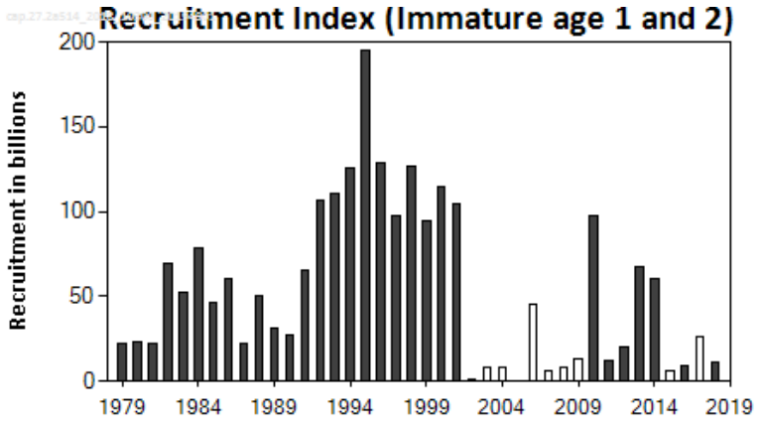


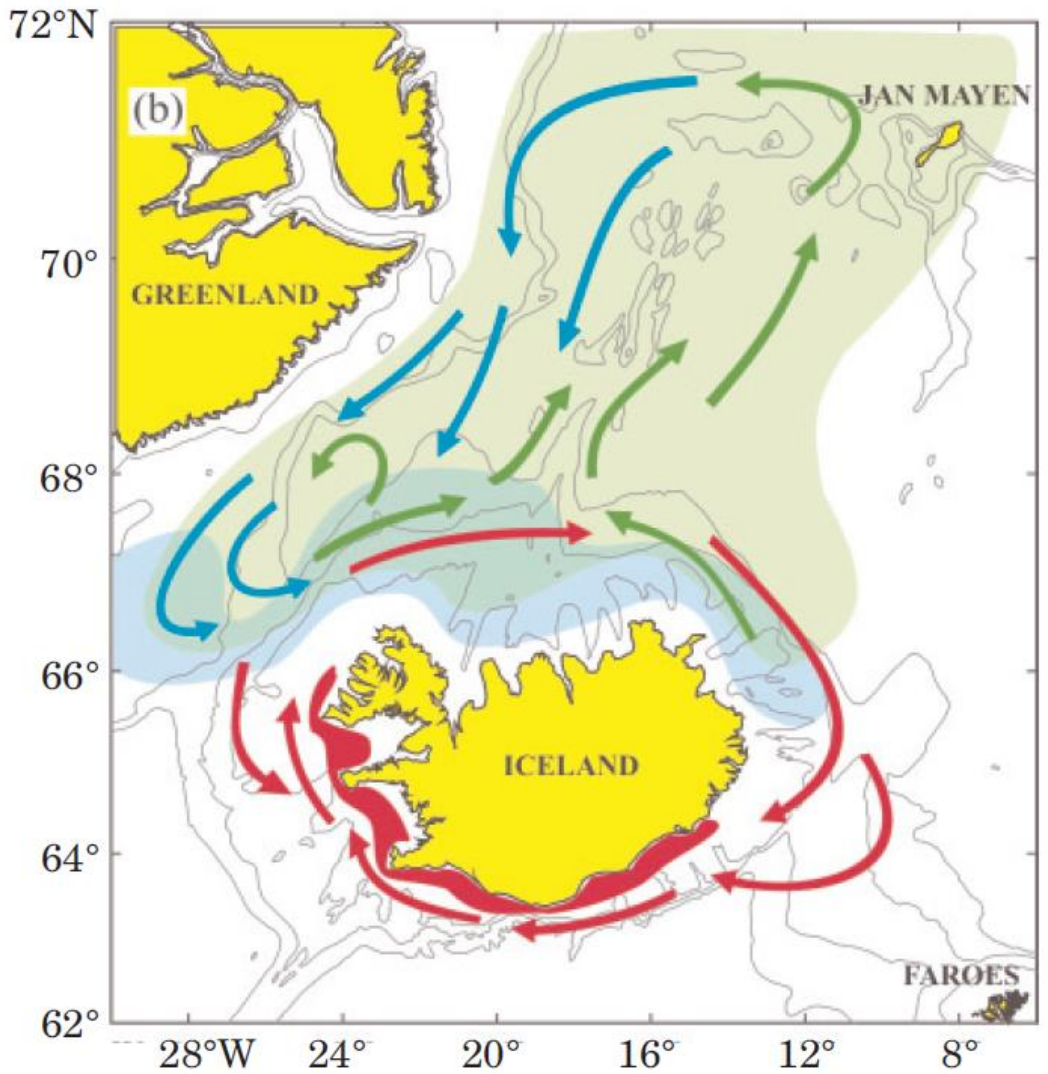
Figure from Haug et al. 2017

Capelin in Iceland and Faroes grounds, East Greenland, Jan Mayen

ICES advice for 2019:
TAC: zero catches
-100%

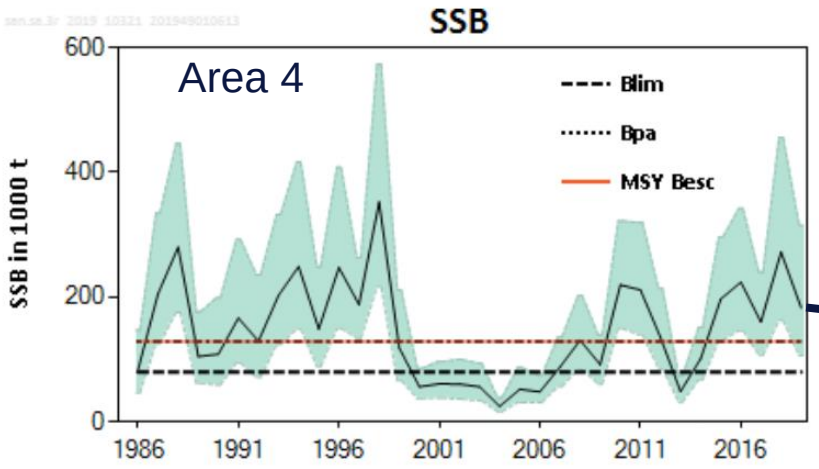


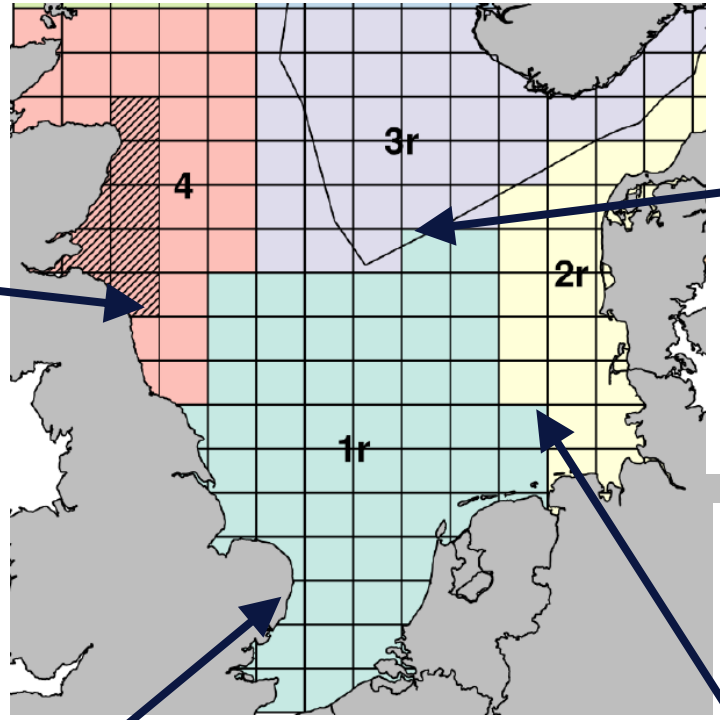


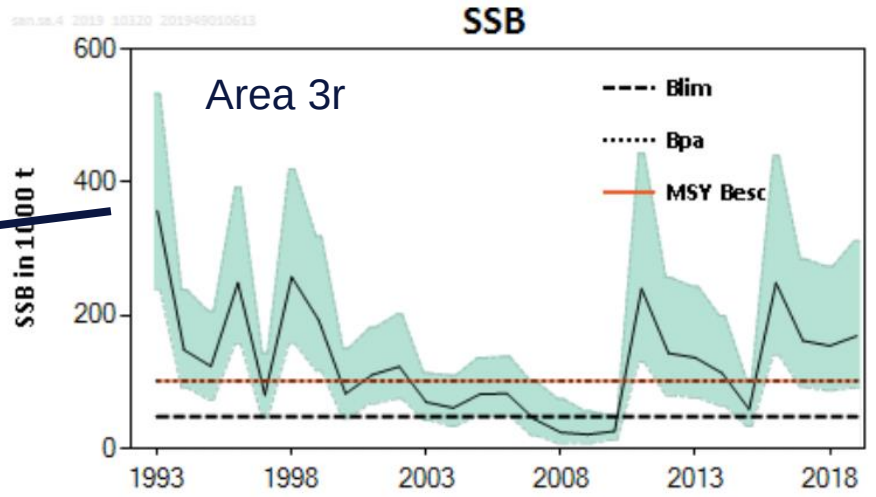


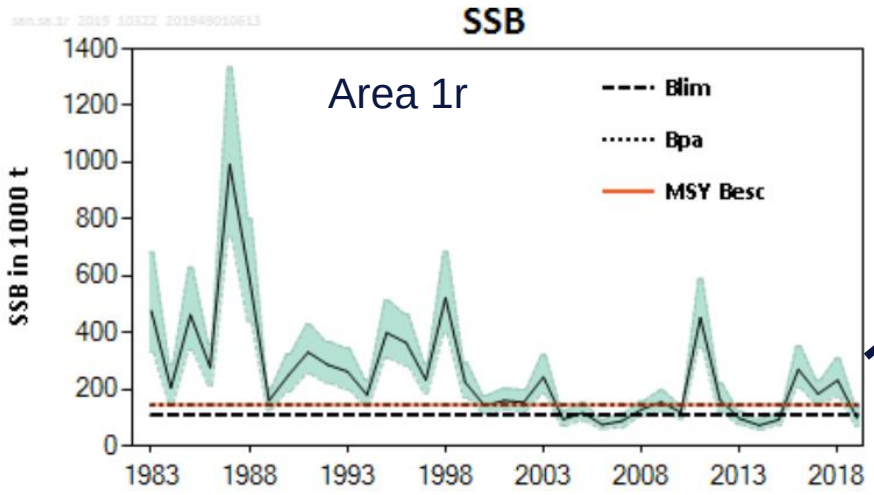
Distribution and migrations of capelin in the Iceland–East Greenland–Jan Mayen area. Red, spawning grounds; green, adult feeding area; blue, distribution and feeding area of juveniles; green arrows, adult feeding migrations; blue arrows, return migrations; red arrows, spawning migrations. Vilhja´lmsson, H. 2002.

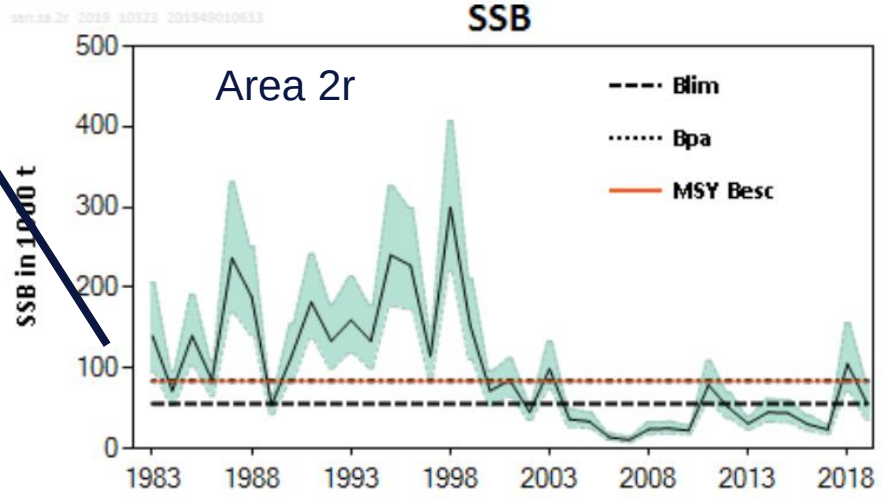
Sandeel in the North Sea – Area 1r, 2r, 3r and 4









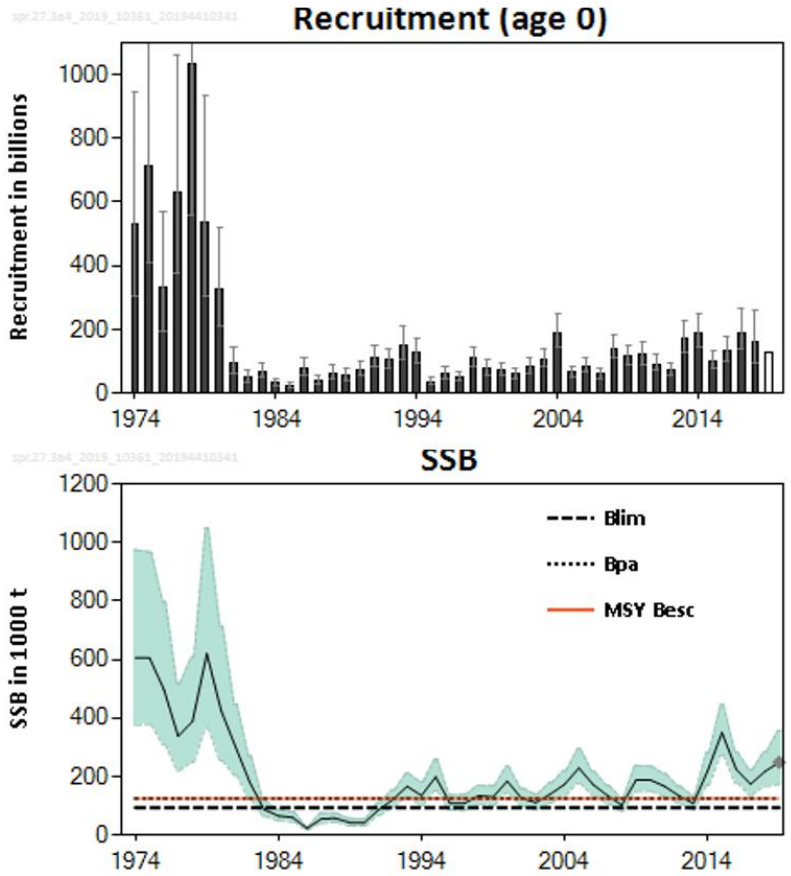


ICES advice for 2019:
Area 1r = 91 916 t
Area 2r = 5 000 t
Area 3r = 133 619 t
Area 4 = 5 000 t
EU TAC: 112.780 t (initial without flex)
- 46%

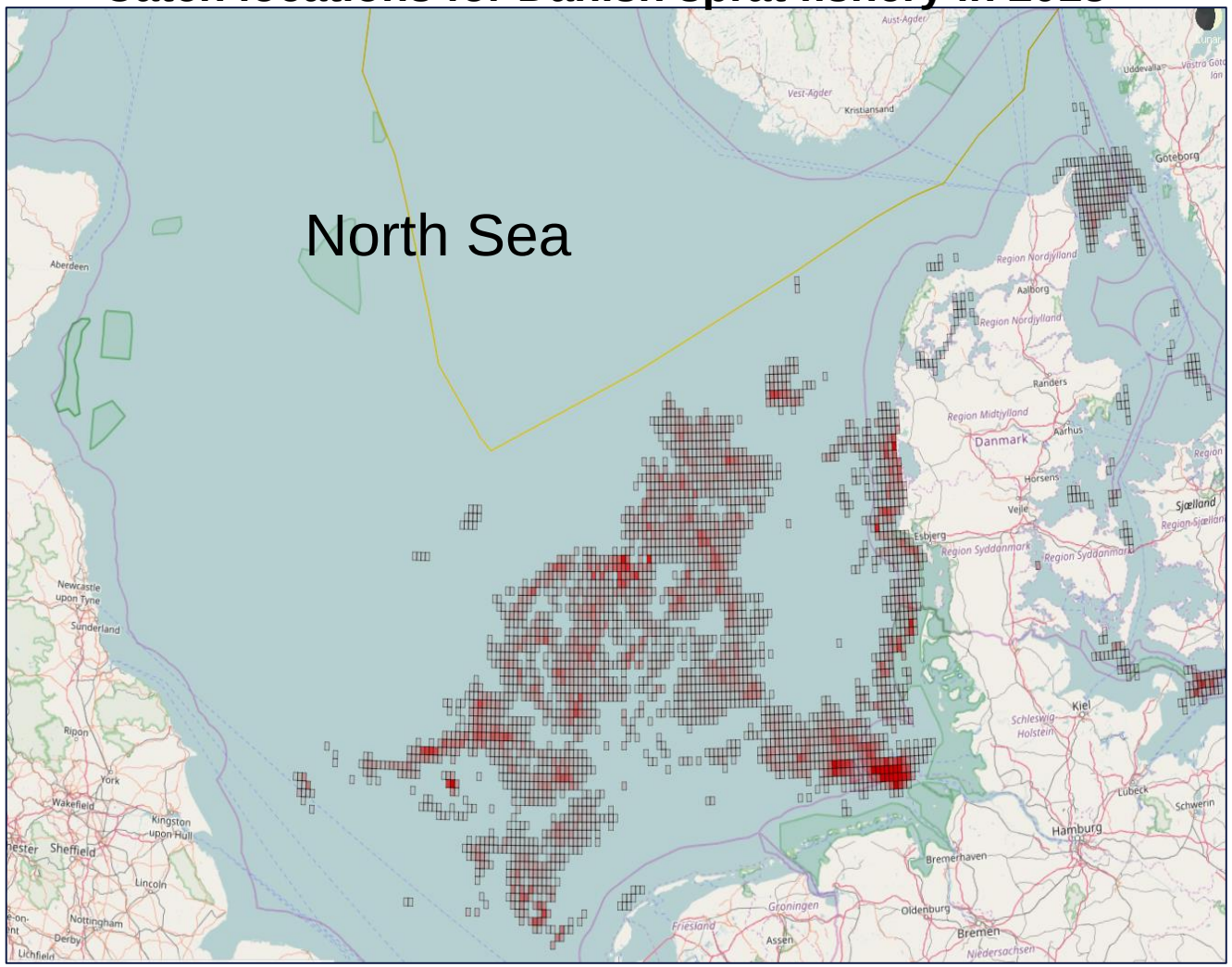
ICES, 2019

Sprat in Skagerrak, Kattegat, and North Sea

ICES advice for 2019-20: **138.726 t**
- 30 %
TAC not yet decided

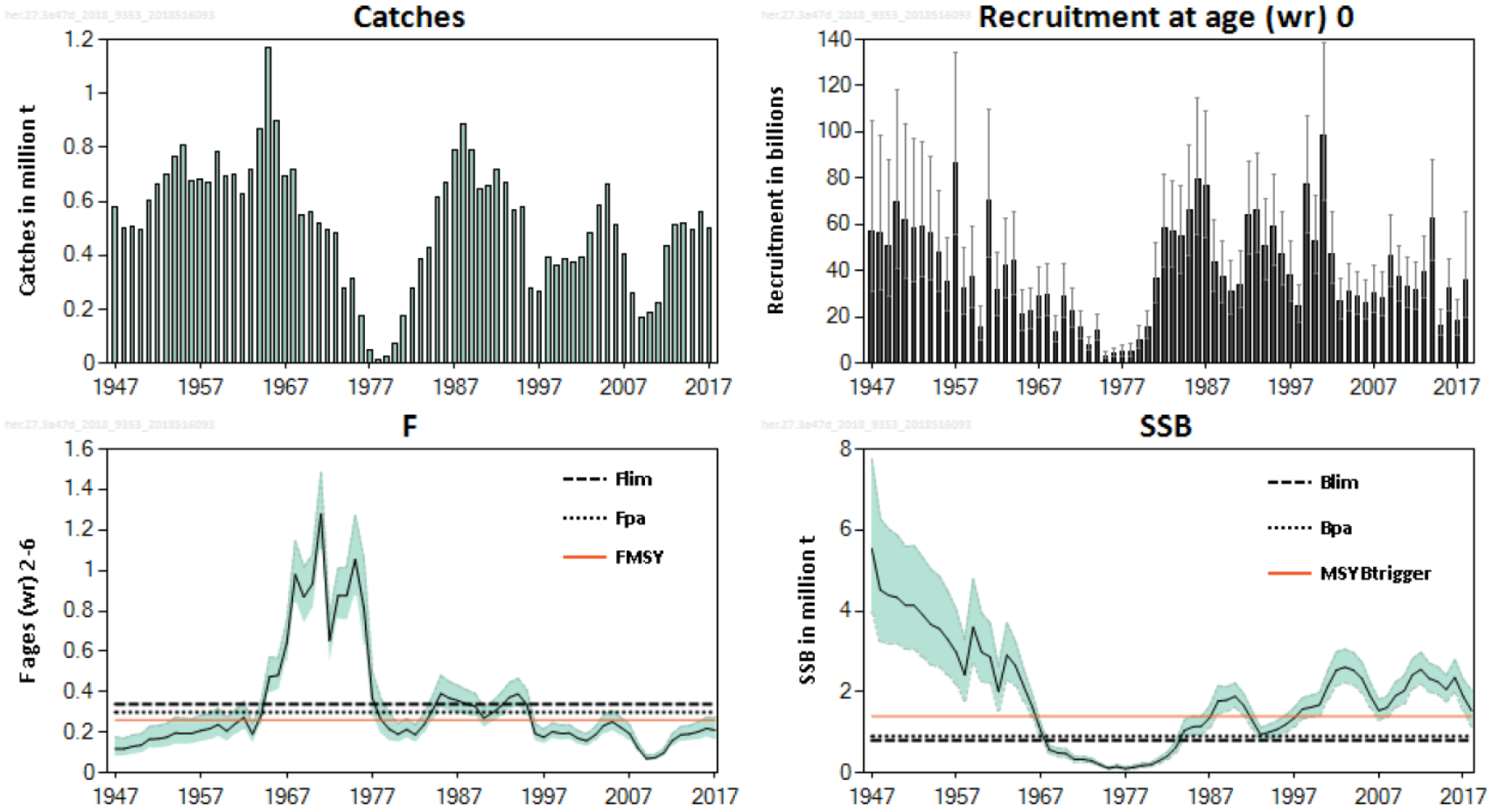


Catch locations for Danish sprat fishery in 2018



Herring in North Sea, Skagerrak and Kattegat, eastern English Channel

ICES advice for 2019: 311.572 t
TAC: 385.008 t
- 36%



ICES, 2018

TAC and quotas overview

Quota (Wet weight tonnes)	Change 2018-2019	2019				
Species/Area	% plus minus	TAC	EU	Faroe Islands	Iceland	Norway
Sandeel						
North Sea, Skagerrak, Kattegat	46%	112.780	112.780			
Norwegian Waters	NA					55.000
Sprat						
North Sea	30%	139.000	139.000			
English Channel	20%	2.637	2.637			
Skagerrak- 3a	0%	26.624	24.627			
Blue whiting						
EU, Norwegian, Faeroe and International water	20%	1.143.629	319.727	406.307	245.812	356.251
Norway pout						
North Sea, Skagerrak, Kattegat	0%		55.000			
Norwegian waters						82.230
Herring (by-catch)						
North Sea	36%	13.190	13.190			
Skagerrak/Kattegat	0%	6.659	6.659			
Herring						
North Sea (Skagerrak)	36%	385.008	230.782	250		114.677
North of Scotland	0%	4.170	4.170			
Irish Sea	2%	6.896	6.896			
Celtic seas and the southwest of Ireland	62%	4.742	4.742			
Norwegian spring-spawning herring (Northeast	36%	588.562	38.315	4.500	98.242	429.650
Icelandic Waters	2%				38.572	
Mackerel						
Northeast Atlantic Total	20%	653.438	322.077	82.339	?	152.811
Horse mackerel						
North Sea	0%	15.179	12.629			2.550
Norwegian and International waters	23%					64.991
Union and international waters	18%	119.118	117.518	1.600		
Capelin						
Iceland-Greenland waters	100%	0				
Barents Sea	100%	0				

Certifications

Certificering MSC & IFFO RS						
	MSC =					
	IFFO RS =					
Species/Country	Denmark	Faroe Islands	Iceland	Ireland	Norway	UK
Sandeel						
North Sea, Skagerrak, Kattegat						
Norwegian Waters						
Sprat						
North Sea						
Skagerrak- 3a						
Blue whiting						
EU, Norwegian, Faeroe and International waters						
Norway pout						
North Sea, Skagerrak, Kattegat						
Norwegian waters						
Boarfish						
West of the British Islands						
Herring						
North Sea (Skagerrak)						
Norwegian spring-spawning herring (Northeas						
Icelandic Waters						
Mackerel						
Northeast Atlantic						
Horse mackerel						
North Sea						
Norwegian and International waters						
Capelin						
Iceland-Greenland waters						
Barents Sea						

Regulatory and political environment

Brexit – will Britain leave the EU and how?

- Fisheries at heart of brexit
- Allocation of more than 100 shared stocks
- Access to historical fishing grounds
- Access to markets
- Uncertainty now prolonged till October 31st

ETS reform – carbon leakage list

- New agreement on EU's "Emission Trading System" (ETS) of CO2 quotas decided in February 2018
- Industries with high energy and trade intensity (Carbon Leakage risk) are compensated for cost of CO2 quotas
- CL-list reduced from 150 to 50 industries
- New criteria for obtaining free quotas 2021-2030
- Fishmeal production will fall out
- Considerable economic loss to the industry
- Investigating possibility of national compensating measures
- Politicial pressure; EU hearings and letter to Commissioner Vestager (competition)

The Industrial Emissions Directive - revision of BREF documents

- EU legal framework for permitting industrial installations – regulates all emissions – to air, water, dust, noise ecc.
- Main purpose: to create level playing field for environmental proctection within EU
- Every industry in the EU/EEA has a BREF Reference document of Best Available Techniques (BAT).
- BREF works as guideline and documentation of the best technical, environmental, manufacturing, production, etc. techniques and methods.
- Fishmeal production in the Slaugtherhouse and animal by-products BREF

EU revision of BREF documents

- Revision of BREF Slaughterhouses and animal by-products kick-started July 2018
- New legislation directly binding to industry – much at stake
- Industry directly engaged in revision process
- 4 years to implement the new regulation
- Revision process carried out by EU Commissions joint-research center in Sevilla, EIPPC
- We´re actively involved

Production of HC fish oil

European producers have since 2016 worked to obtain acceptance from the EU Commission that existing regulation allows processing of products for human consumption (HC) and feed (NHC) in the same etsablishments when seperating production in time.

Still working on it with support from Danish and Norwegian authorities:

However, we do not see any indication that the same establishment could not at the same time be approved according to Regulation (EC) No 1069/2009 on animal by-products and based on raw materials not fit for human consumption produce and store fish oil and fish meal not intended for human consumption in the same establishment. Of course the establishment must make sure there is no risk for contamination of the HC fish oil or risk of confusion between HC fish oil and oil not intended for human consumption.

Optimizing sustainable fishing yields – ecosystem and management perspectives.

The FMSY PROJECT

- Fish stocks in the North Atlantic are rebuilding
- Requires exploitation patterns that ensures ecological, social and economic sustainability
- Rethinking how maximum sustainable yield (MSY) reference points should be estimated;
- ***"Ecosystem based management suggest that higher yield is possible for many fisheries"***
- Experts from the Nordic Marine Think Tank has evaluated this question, which was presented in Copenhagen in October 2018.
- Project and report to be finalized by May 2019.

Ministry of Environment and Food of Denmark

European Union
European Maritime and Fisheries Fund

Nordic Council of Ministers

INSTITUTE OF MARINE RESEARCH

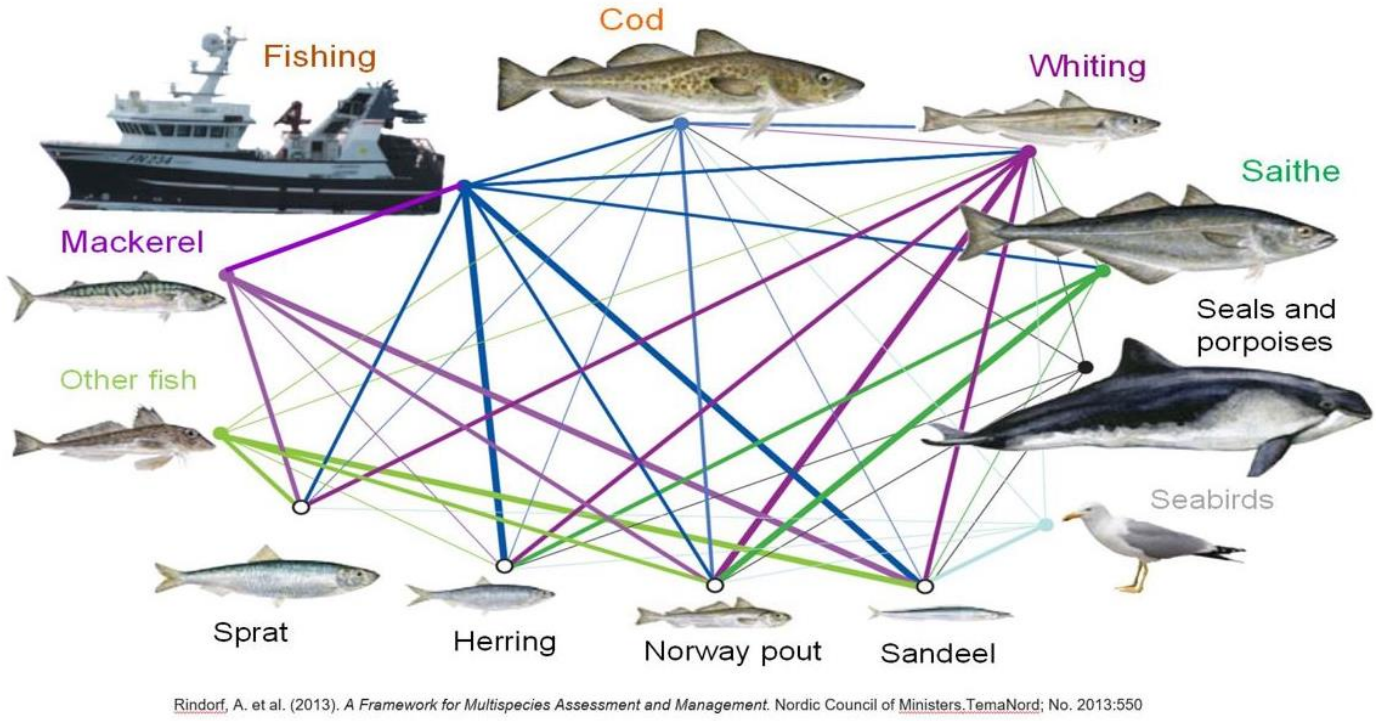
Nordic Network of Excellence in fishmeal and fish oil

Objectives:

- Improve the knowledge of the nutritional value of fishmeal and fish oil
- Meet the needs and demands of the industry & customers through a literature study
- Creation of road map for future industry driven research in the field

- Participants: Matis (Iceland), DTU Aqua (DK), DTU Food (DK), Nofima (Norway) and EUfishmeal (Coordinator)

forage fish, marine mammals and optimal fisheries yields,



Rindorf, A. et al. (2013). *A Framework for Multispecies Assessment and Management.* Nordic Council of Ministers.TemaNord; No. 2013:550

- Forage fish populations support large scale fisheries and are key components of marine ecosystems, linking secondary production to higher trophic levels.
- Conference 2018 with presentations from scientists from University of British Colombia, Institute of Marine Research Norway, DTU Aqua, ICES and others
- Discussions on the most recent studies on changes in optimal fisheries yields in a changing ecosystem and the impact of marine mammals on the fish stocks.


Thank you