

The 2016 ICES Coordinated Acoustic Survey in the Skagerrak, Kattegat, North Sea and Malin Shelf.



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marinescotland
science

HERAS 2016

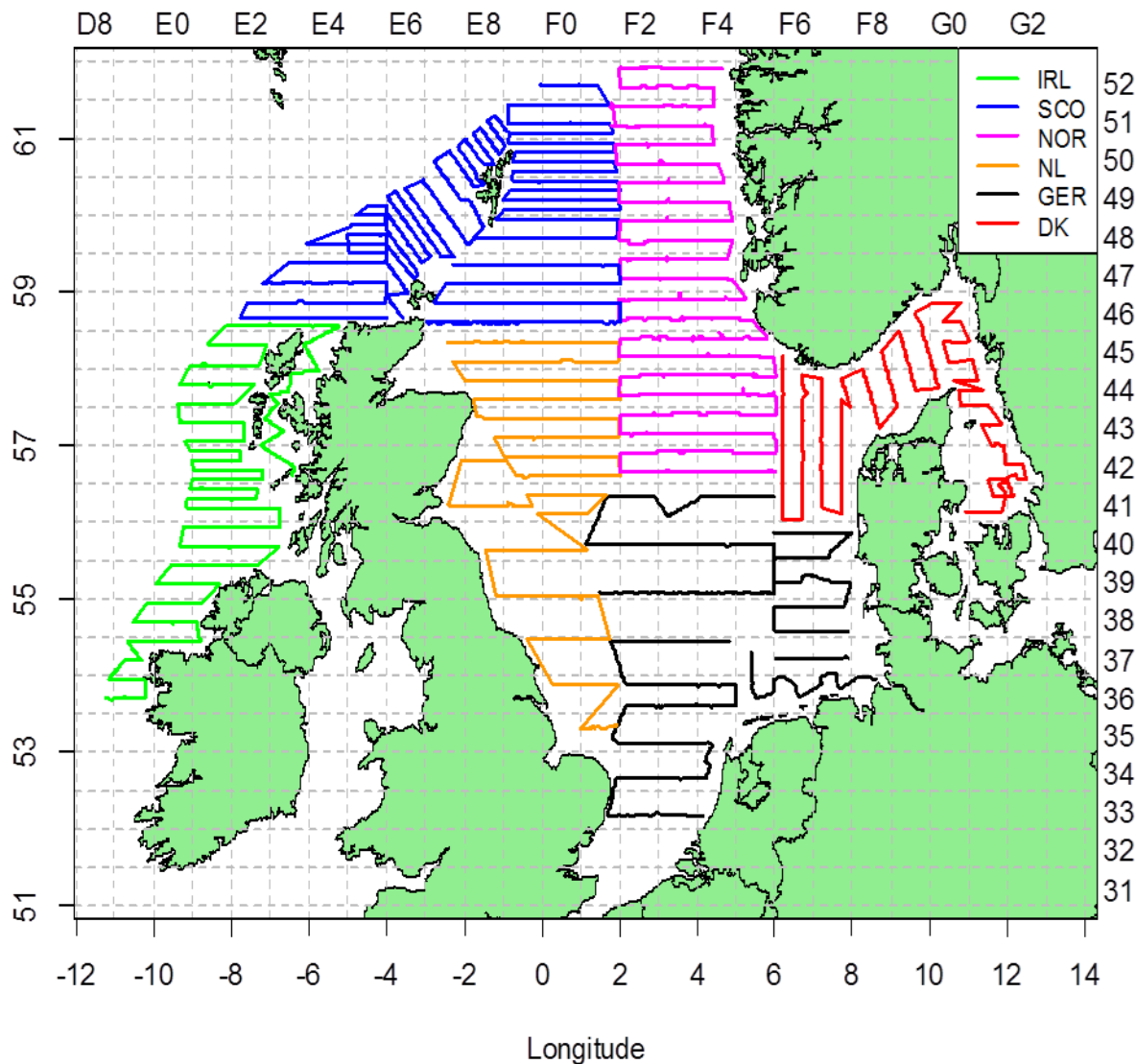
Aims

- Age disaggregated abundance indices, distribution and fishery independent population parameters (mean weight, maturity ogive) for assessments of:
 - North Sea Autumn Spawning herring (NSAS – IV,III,VIIId)
 - Western Baltic Spring Spawning herring (WBSS)
 - **West of Scotland herring (WoS - VIaN)**
 - **Malin Shelf herring (MSHAS - VIaN-S and VIIb,c)**
 - Sprat in the North Sea
 - Sprat in IIIa

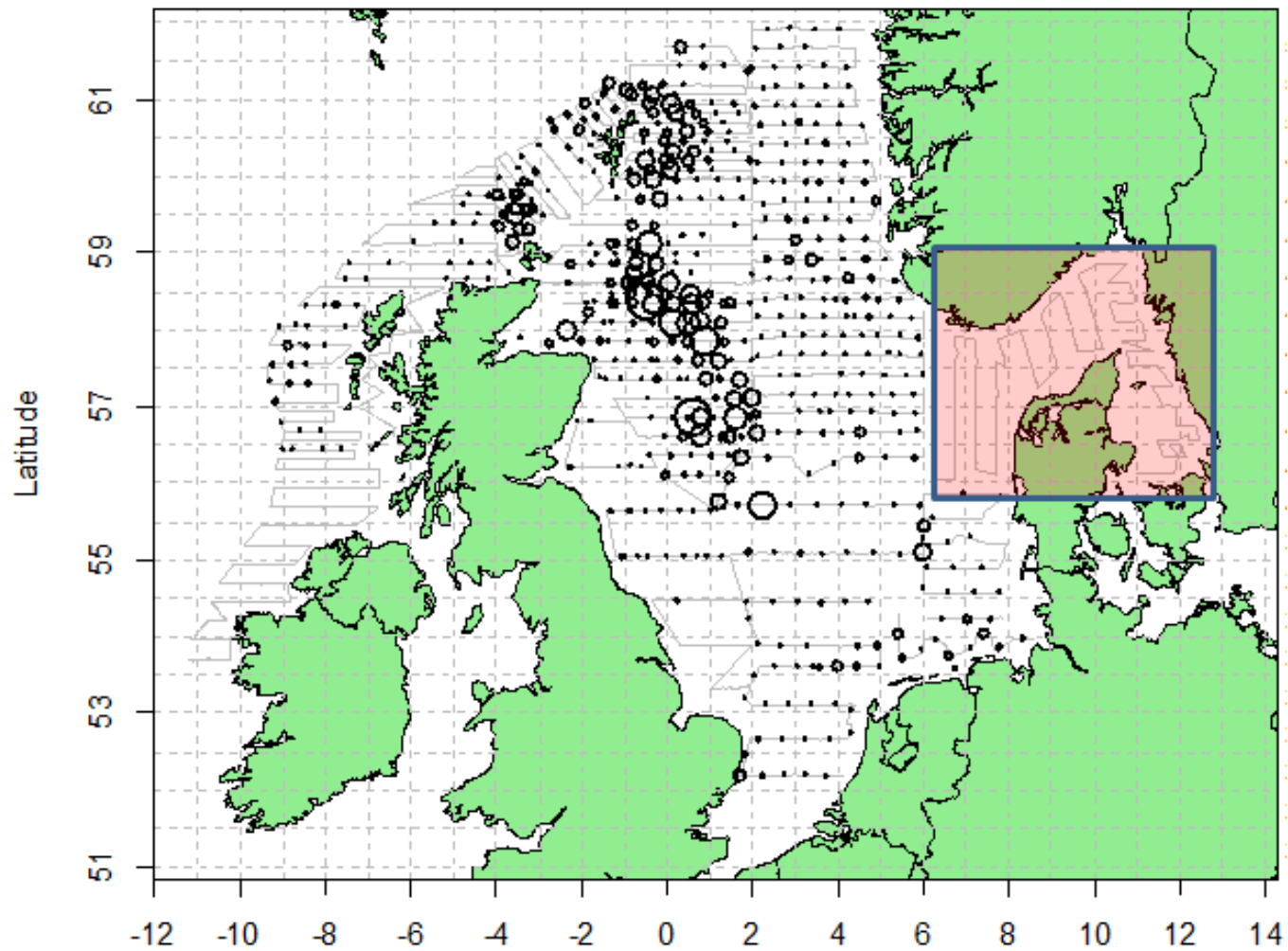
2016 Survey

Norway
Denmark
Germany
Netherlands
Ireland
Scotland

Last week of June
to
Third week of July

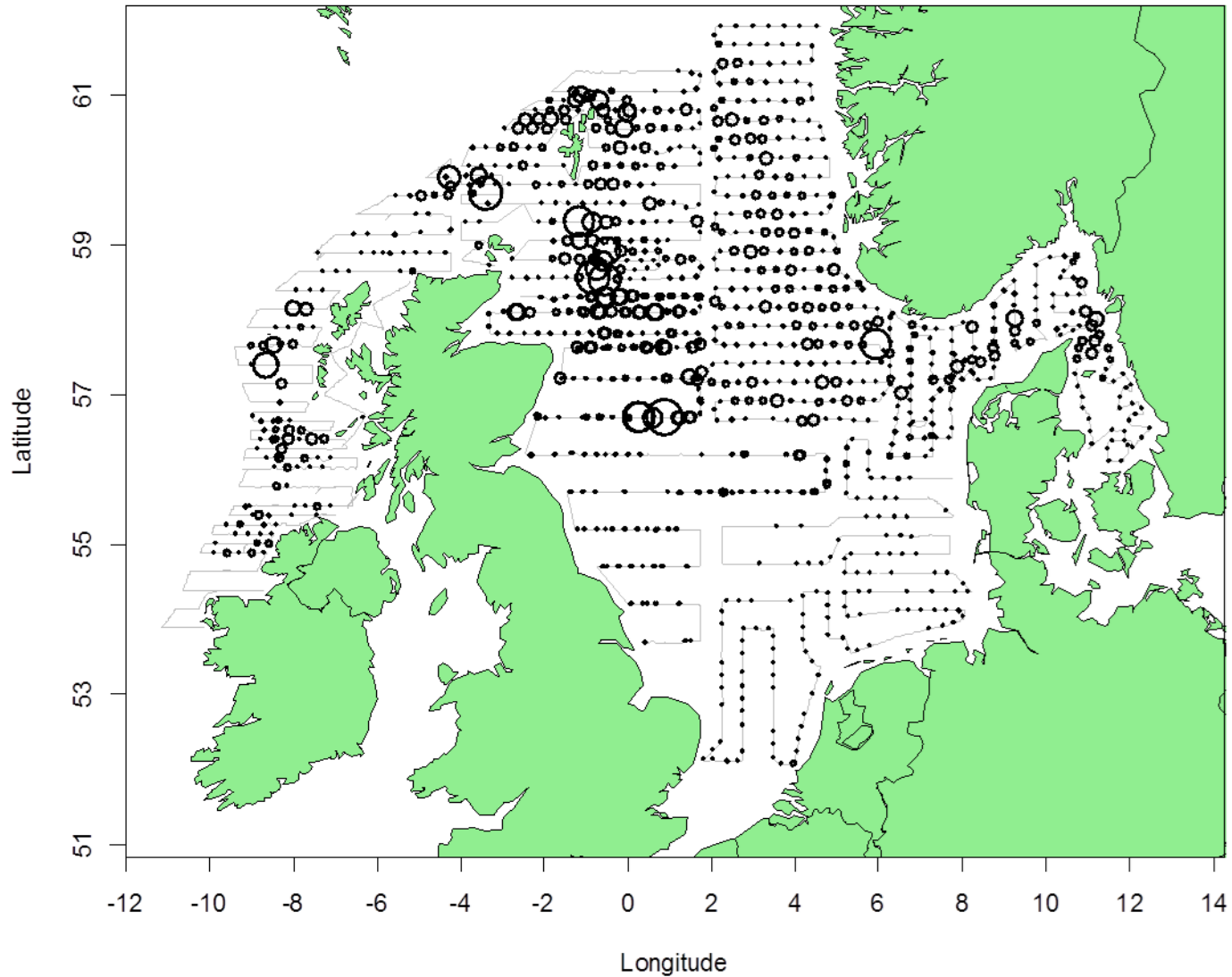


Distribution 2016

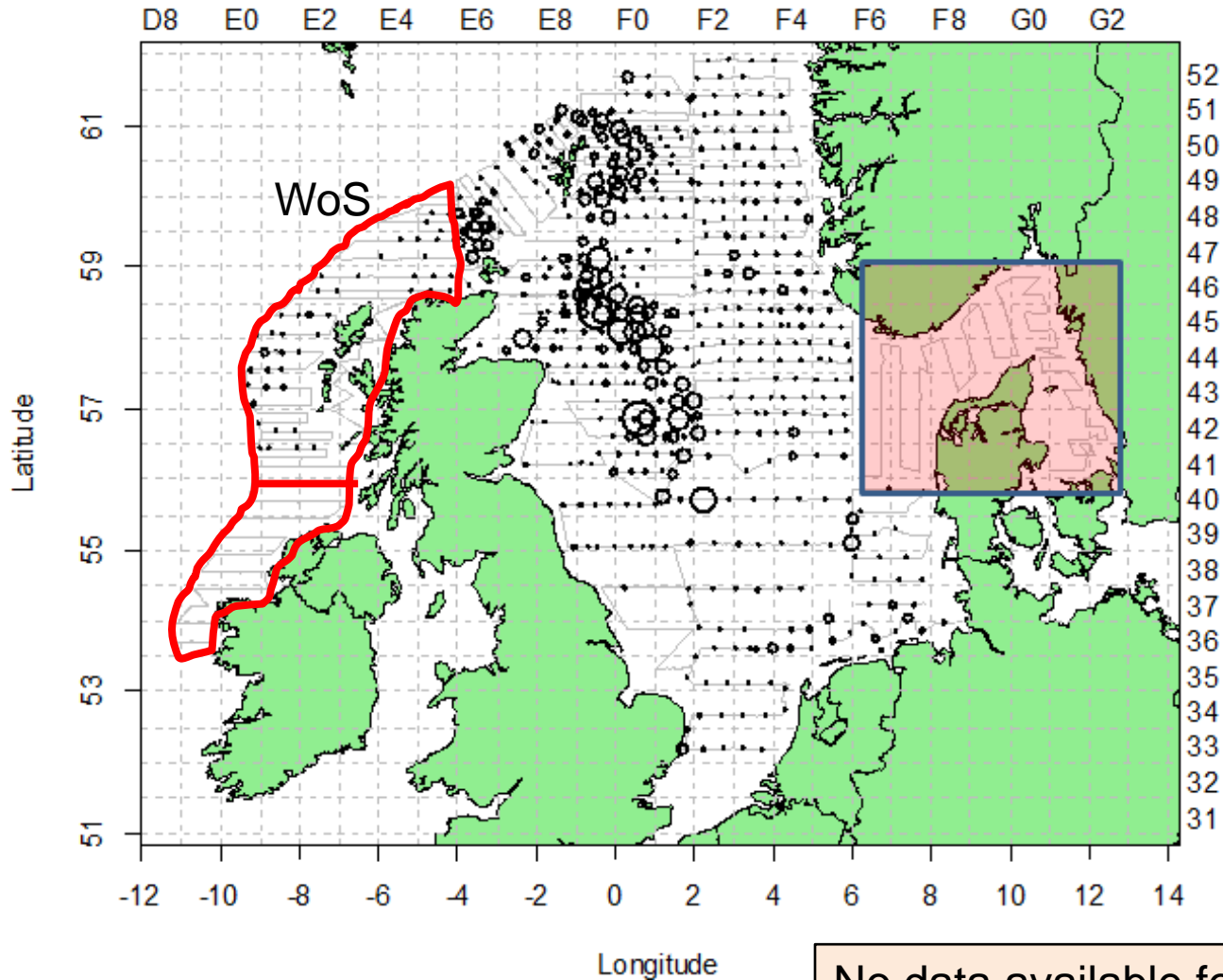


No data available for mapping
in the red shaded area

Distribution 2015



Malin Shelf and WoS Index



Purely geographic:
All west of 4W

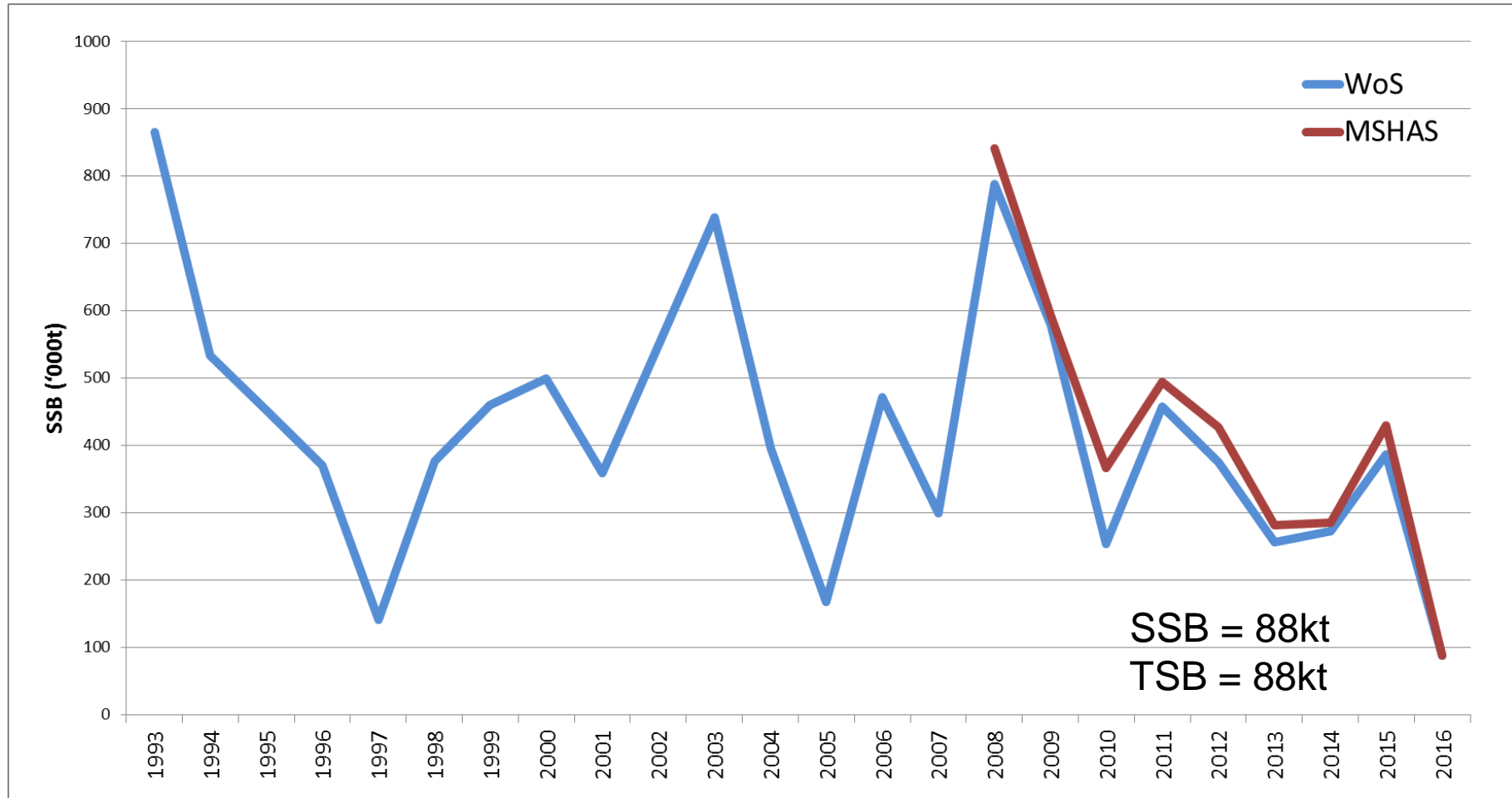
SCO and IE data
only

Geographic subset
(north of 56N) gives
WoS herring.

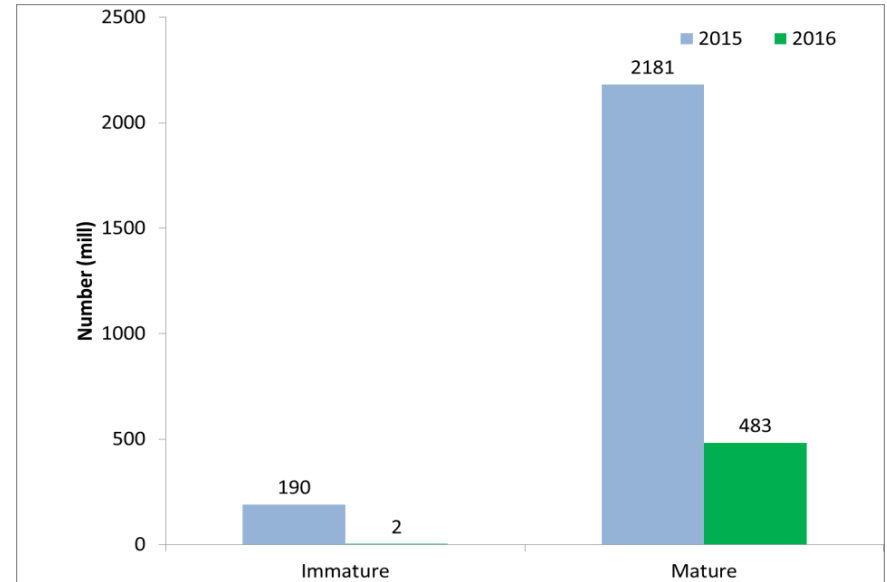
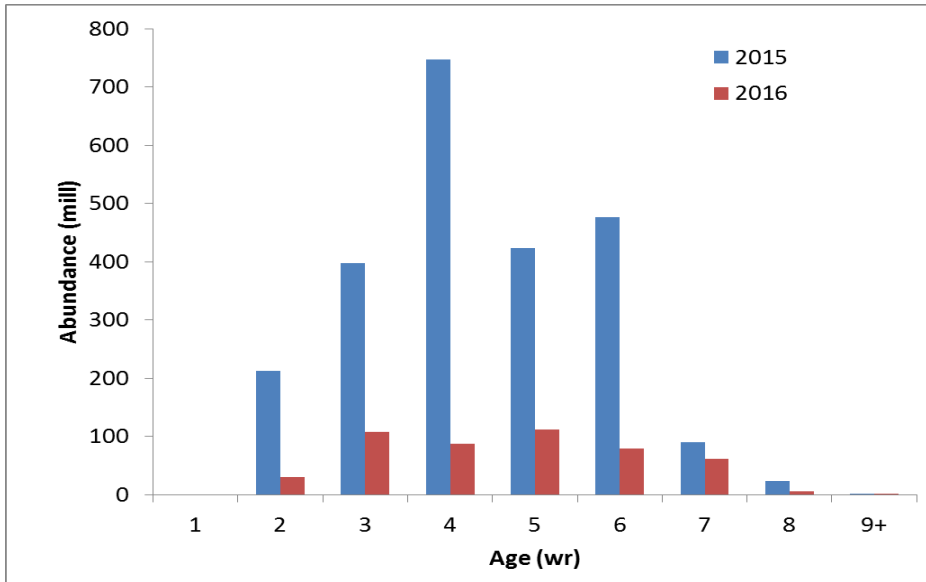


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MSHAS and WoS – time series



MSHAS - Results



Age (ring)	2015	2016	% change
1			
2	140	137	-2%
3	177	140	-21%
4	193	175	-9%
5	202	202	0%
6	210	208	-1%
7	216	209	-3%
8	214	210	-2%
9+	220	242	10%
Immature	131	119	-9%
Mature	197	182	-8%

