

NORSK-ÍSLENSK VORGOTSSÍLD

NORWEGIAN SPRING-SPAWNING HERRING

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RÁÐGJÖF – ADVICE

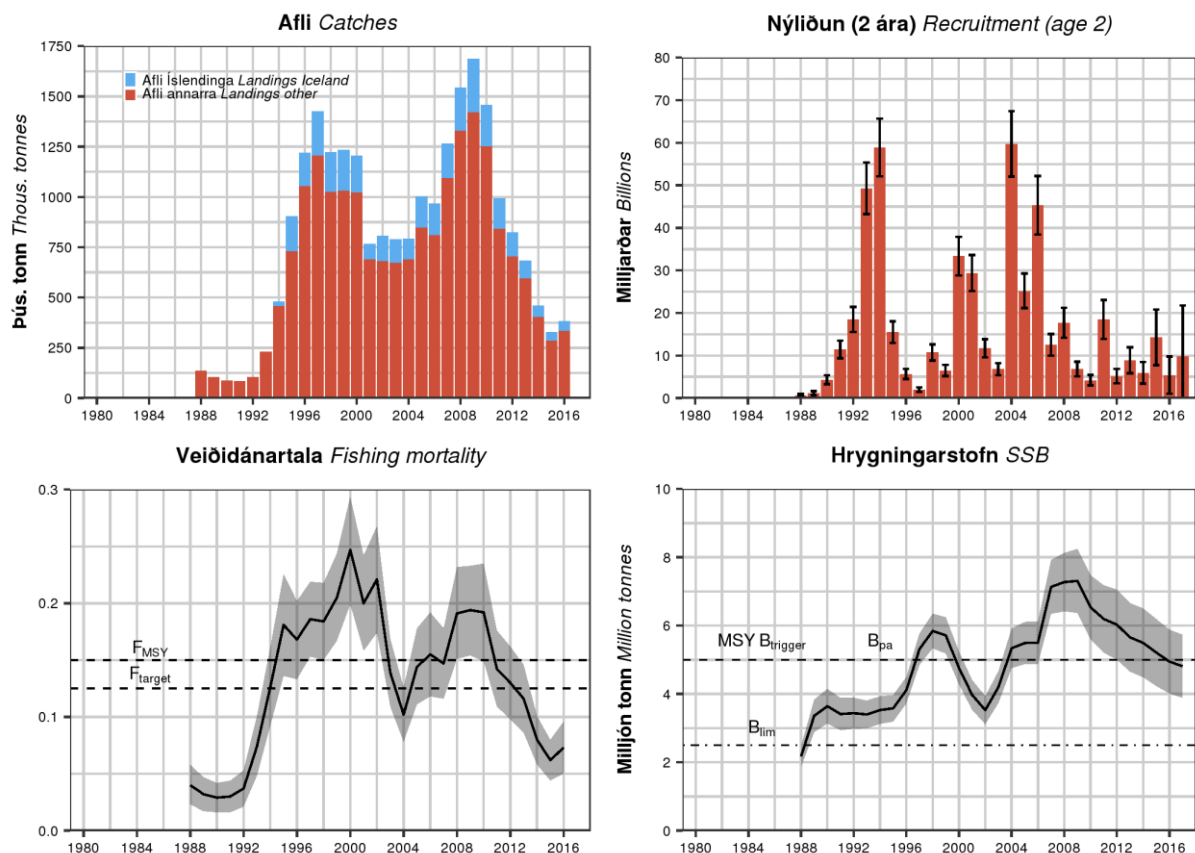
Alþjóðahafrannsóknaráðið (ICES) ráðleggur í samræmi við samþykktu aflareglu strandríkja að afli ársins 2018 verði ekki meiri en 546 472 tonn.

ICES advises that when the EU, Faroe Islands, Iceland, Norway, and Russia management plan is applied, catches in 2018 should be no more than 546 472 tonnes.

STOFNÞRÓUN – STOCK DEVELOPMENT

Fiskveiðidauði hefur farið lækkandi frá 2010 og var vel undir F_{MSY} árið 2016. Hrygningarstofninn hefur farið minnkandi og er nú metinn vera undir aðgerðarmörkum ($MSY B_{trigger}$). Stofninn hefur getið af sér fjóra stóra árganga síðan 1998 (árgangar 1998, 1999, 2002 og 2004), en allir árgangar frá 2005 hafa verið undir meðalstærð eða litlir.

Fishing mortality has had an overall declining trend since 2010 and was well below F_{MSY} in 2016. The stock is declining and estimated to be below $MSY B_{trigger}$ in 2017. Since 1998, four large year classes have been produced (1998, 1999, 2002, and 2004). All year classes since 2005 are estimated to be average or small.



Norsk-íslensk vorgotssíld. Afli, nýliðun 2 ára, veiðidánartala og hrygningarstofn. Stofnmat keyrt frá 1988, eftir að stofn tók að stækka aftur eftir hrún á sjöunda áratug síðustu aldar.

Norwegian spring-spawning herring. Catches, recruitment at age 2, fishing mortality and spawning stock biomass (SSB). Assessment run starts in 1988, when the stock has started to rebuild after collapse in the 1960s.

STOFNMAT OG VIÐMIÐUNARMÖRK – BASIS OF ASSESSEMENT AND REFERENCE POINTS

Forsendur ráðgjafar <i>Basis of the advice</i>	Aflaregla <i>Management plan</i>
Aflaregla <i>Management plan</i>	Langtímaafaregla sem var fyrst samþykkt árið 1999 (ICES 2014). <i>A long-term management plan agreed in 1999 (ICES 2014).</i>
Stofnmat <i>Assessment type</i>	Tölfræðilegt stofnmatslíkan (XSAM; ICES 2017) sem notar aflagögn í stofnmati og framreikningum ásamt óvissumati á afla og fjöldavísitölum. <i>Statistical assessment model (XSAM; ICES, 2017) that uses catches in the model and in the forecast, and includes error structures in catches and abundance indices.</i>
Inntaksgögn <i>Input data</i>	Fjöldi eftir aldri úr afla (meðalþyngdir í stofni eftir aldri frá leiðöngrum, en aflagögnum frá 2009). Aldursvísitölur frá þremur leiðöngrum: Norska bergmálsleiðangrinum á hrygningarslóð í feb./mars (1994–2005, 2015–2017); Alþjóðlega vistfræðileiðangrinum í Austurdjúpi í maí sem nær yfir fullorðna hluta stofnsins í Noregshafi (1996–2017) og yngri aldurshópa í Berentshafi (1991–2017). Stofnstærðarháð mat á kynþroskahlutfalli eftir aldri. Fastur náttúrulegur dauði ákvarðaður frá eldri gögnum (settur 0.9 fyrir tveggja ára og 0.15 fyrir eldri en tveggja ára). <i>Commercial catches-at-age (stock weight-at-age from surveys and since 2009 from catch sampling). Three survey indices: Norwegian acoustic survey on spawning grounds in February/March (NASF, 1994–2005, 2015–2017); International Ecosystem Survey in the Nordic Seas (IESNS) covering the adult stock in the Nordic seas (1996–2017) and the juvenile stock in the Barents Sea (1991–2017). Maturity ogive variable by year-class strength. Natural mortalities are fixed values from historical analyses (age 2 = 0.9, ages greater than 3 = 0.15).</i>

Nálgun <i>Framework</i>	Viðmiðunarmörk <i>Reference point</i>	Gildi <i>Value</i>	Grundvöllur <i>Basis</i>
MSY nálgun <i>MSY approach</i>	MSY $B_{trigger}$	5 000 000 t	B_{pa}
	F_{MSY}	0.15	Byggt á hermunum. <i>Stochastic simulation</i>
Varúðarnálgun <i>Precautionary approach</i>	B_{lim}	2 500 000 t	Ásættanleg lágmarksstærð hrygningarstofns <i>Minimum biological acceptable level (MBAL)</i>
	B_{pa}	5 000 000 t	$B_{lim} \times \exp(0.4 \times 1.645)$
	F_{pa}	0.15	Byggt á hermunum. <i>Based on medium-term simulations</i>
	F_{target}	0.125	Samþykkt aflaregla. <i>Agreed management plan</i>

HORFUR – PROSPECTS

Stofnmatið sýnir áframhaldandi minnkun stofnstærðar þótt aflareglu verði fylgt árið 2018.

The assessment indicates that SSB will continue to decrease even if the management plan will be followed in 2018.

Norsk-islensk síld. Áætluð þróun stærðar hrygningarstofns (tonn) miðað við veiðar samkvæmt aflareglu.

Norwegian spring-spawning herring. Projection of SSB (tonnes) based on adopted harvest control rule.

2017		2018			2019
Áætlaður afli <i>Estimated catches</i>	F	Aflamark skv. aflareglu <i>TAC based on management plan</i>	Hrygn. stofn <i>SSB</i>	F	Hrygn. stofn <i>SSB</i>
805 142	0.163	546 472	4 364 000	0.106	4 132 000

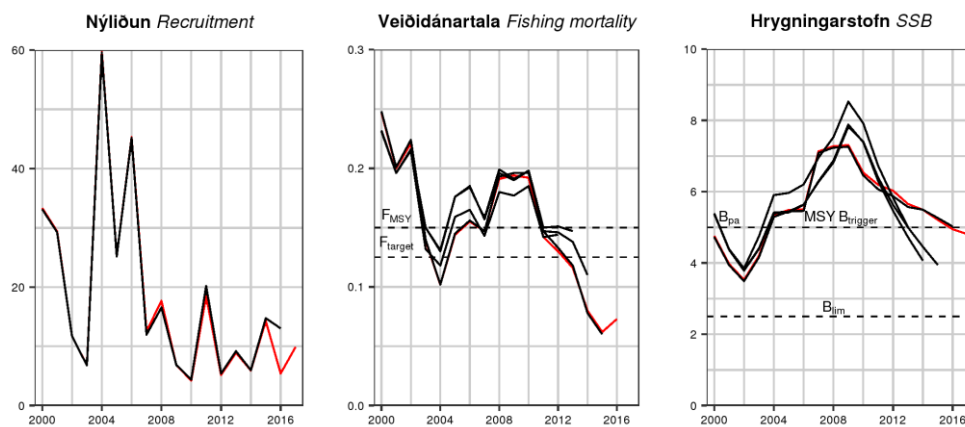
GÆÐI STOFNMATS – QUALITY OF THE ASSESSEMENT

Niðurstöður stofnmatsins í ár eru sambærilegar við mat síðasta árs. Þá er mat á stofnstærð frá öðrum stofnmatslíkönum innan skekkjumarka þess sem ráðgjöfin byggir á.

Framreikningar til grundvallar ráðgjöfinni fyrir 2018 eru frábrugðnir fyrra ári að einu leyti. Þegar aðferðinni frá 2016 var beitt þá gerði líkanið ráð fyrir allmiklum og óraunhæfum breytingum á veiðmynstri fyrir árin 2017 og 2018. Í framreikningum er því gert ráð fyrir sambærilegu veiðimynstri og verið hefur undanfarin ár.

The perception of the stock has not changed since last year's assessment. The stock estimates for recent years from exploratory runs with other models are within the confidence intervals of the current assessment.

This year's forecast deals with the intermediate year (2017) in a different way from what was done in 2016. This is because the approach used in 2016 was forecasting substantial change in the selection pattern for the intermediate and forecast years relative to what had been estimated for the final years in the assessment, and it was unclear if such a change was realistic.



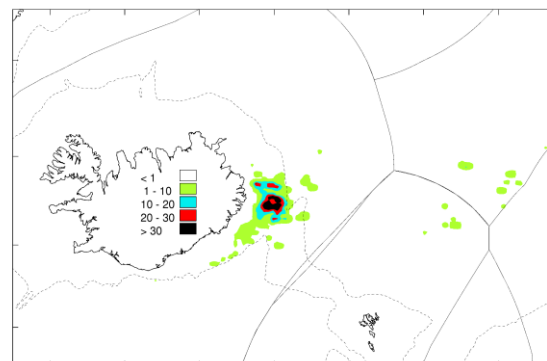
Norsk-íslensk vorgotssíld. Samanburður á stofnmati árinna 2013–2017 (rauð lína: 2017). Fram til 2015 miðaðist nýliðun frá stofnmati við fjölda 0 ára í stað 2 ára og þeim árum er því sleppt hér.

Norwegian spring-spawning herring. Current assessment (red line) compared with previous estimates (2013–2016). Recruitment estimates from assessments conducted before 2016 are not shown as they refer to age 0 instead of age 2.

VEIÐAR ÍSLENDINGA – THE ICELANDIC FISHERY

Afli íslenskra skipa úr norsk-íslenska síldarstofninum árið 2016 var 50 186 tonn og var allur veiddur í flotvörpu. Tæp 99% aflans fékkst innan íslenskrar lögsögu, um 1% í færeyskri lögsögu og minna en 0.5% á alþjóðahafsvæði. Beinar veiðar á síldinni hófust í ágúst og stóðu yfir fram í desember. Mest veiddist í september (35%) og í október (40%). Heildarafli allra þjóða úr stofninum árið 2016 var 383 174 tonn.

Icelandic landings of Norwegian spring-spawning herring in 2016 were 50 186 tonnes, all caught with pelagic trawl. About 99% of the catches were taken within the Icelandic EEZ, around 1% within the Faroese EEZ, and below 0.5% in international waters. The direct fishery started in August and lasted until December. Majority of the catches were taken in September (35%) and October (40%). The total catch of all nations in 2016 was 383 174 tonnes.



Norsk-íslensk síld. Veiðisvæði íslenskra skipa árið 2016 (t/nmi²)
NSS herring. Fishing grounds of the Icelandic fleet in 2016 (t/nmi²)

AÐRAR UPPLÝSINGAR – OTHER INFORMATION

Ekki er í gildi samkomulag milli þeirra þjóða sem stunda veiðar úr norsk-íslenska síldarstofninum um skiptingu aflahlutdeildar og hver þjóð hefur því sett sér aflamark. Afleiðingarnar eru að frá árinu 2013 hafa veiðar umfram ráðgjöf ICES numið 10–21% á ári. Samhliða hefur stofninn farið minnkandi vegna lélegrar nýliðunar allt frá árinu 2005.

Since 2013, a lack of agreement by the coastal states on their share in the TAC has led to unilaterally set quotas, which together are 10–21% higher than the TAC indicated by the management plan. Simultaneously, the stock size has declined because of relatively poor recruitment since 2005.

RÁÐGJÖF, AFLAMARK OG AFLI – ADVICE, TAC AND CATCH

Norsk-íslensk síld. Tillögur um hámarksafla, aflamark samkvæmt ákvörðun stjórnvalda og afli (tonn).

Norwegian spring-spawning herring. Recommended TAC, national TAC and catches (tonnes).

Ár Year	Tillaga ICES Rec. TAC ICES	Aflamark Ísland Iceland national TAC	Afli Íslendinga Catches Iceland	Aflamark allra þjóða Total national TAC	Afli alls Total catch
2011	988 000–1 170 000	145 000	151 074	988 000	992 997
2012	833 000	121 000	120 956	833 000	826 000
2013	619 000	90 000	90 729	692 000*	684 743
2014	418 487	61 000	58 828	436 893*	461 306
2015	283 013	41 000	42 626	328 206*	328 740
2016	≤ 316 876	46 000	50 186	376 612*	383 174
2017	≤ 646 075	103 000		805 142*	
2018	≤ 546 472				

* Ekkert samkomulag um heildaraflamark; því er sýnd summan af aflamarki allra þjóða - *There was no agreement on the TAC; the number is the sum of autonomous quotas from the individual states.*

HEIMILDIR OG ÍTAREFNI – REFERENCES AND FURTHER READING

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