ÝSA – HADDOCK
Melanogrammus aeglefinus
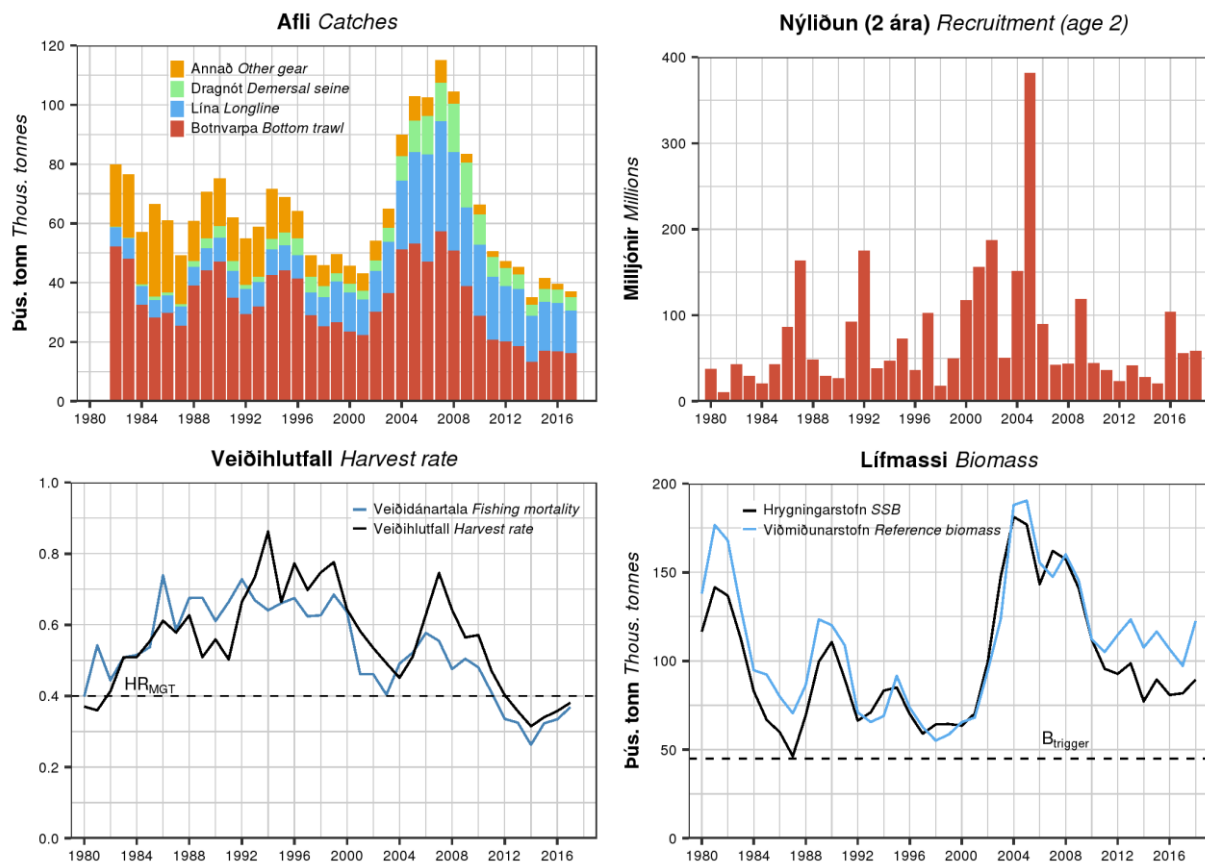
RÁÐGJÖF – ADVICE

Hafrannsóknastofnun og Alþjóðahafrannsóknaráðið leggja til, í samræmi við aflareglu íslenskra stjórnvalda, að afli fiskveiðiárið 2018/2019 verði ekki meiri en 57 982 tonn.

MFRI and ICES advise that when the Icelandic management plan is applied, catches in the fishing year 2018/2019 should be no more than 57 982 tonnes.

STOFNÞRÓUN – STOCK DEVELOPMENT

Hrygningarstofn stækkaði á árunum 2001–2004 vegna nokkurra sterkra árganga og var stór fram til ársins 2008. Eftir 2008 fór hrygningarstofninn minnkandi, en hefur á síðustu fimm árum verið stöðugur og yfir aðgerðar-mörkum aflareglu (MGT $B_{trigger}$). Veiðihlutfall árin 2015–2017 er metið með því lægsta á stofnmatstímabilinu og nálægt því sem stefnt er að með aflareglu (HR_{MGT}). Nýliðun 2 ára ýsu árin 2010–2015 var mjög léleg, en nýliðun 2016 er góð og nýliðun áranna 2017 og 2018 nálægt meðaltali.

SSB increased from 2001–2004, after several strong year classes, and was large until 2008. Since 2008, the SSB has decreased but in recent years has stabilised above MGT $B_{trigger}$. Harvest rate in 2015–2017 is estimated close to its lowest level in the assessment period and is currently close to HR_{MGT}. Recruitment of 2 year old haddock in 2010–2015 was low, but is estimated high for 2016 and close to average for the last two years.

Ýsa. Afli eftir veiðarfærum, nýliðun 2 ára, veiðihlutfall og veiðidánartala, stærð viðmiðunarstofns (45 cm og stærri) og hrygningarstofns.

Haddock. Catch by gear type, recruitment at age 2, fishing mortality and harvest rate, reference stock biomass (45 cm and larger) and spawning stock biomass (SSB).

STOFNMAT OG GÁTMÖRK – *BASIS OF THE ASSESSMENT AND REFERENCE POINTS*

Forsendur ráðgjafar *Basis of the advice*	Aflaregla *Management plan*
Aflaregla *Management plan*	Aflamark sett sem 40% af viðmiðunarstofni (lífmassi 45 cm og stærri ýsu) *TAC set as 40% of reference biomass (biomass of 45 cm and larger)*
Stofnmat *Assessment type*	Aldurs-aflalíkan (ADAPT) *Age-based model (ADAPT)*
Inntaksgögn *Input data*	Aldursgreindur afli og aldursgreindar fjöldavísitölur úr stofnmælingum (SMB, SMH) *Catch in numbers and age disaggregated indices (IS-SMB, IS-SMH)*

Nálgun *Framework*	Gátmörk *Reference point*	Gildi *Value*	Grundvöllur *Basis*
Aflaregla *Management plan*	MGT $B_{trigger}$	45 000 t	Slembireikningar *Stochastic simulations* (ICES 2013)
	HR_{MGT}	0.40	Aflaregla *Management plan*
Hámarksafrakstur *MSY approach*	HR_{MSY}	0.52	Slembireikningar *Stochastic simulations* (ICES 2013)
	MSY $B_{trigger}$	Ekki skilgreint *Not defined*	
Varúðarnálgun *Precautionary approach*	B_{lim}	45 000 t	Varúðarmörk (ICES 2012)
	B_{pa}	59 000 t	Gátmörk (ICES 2016)
	F_{lim}	Ekki skilgreint *Not defined*	
	F_{pa}	Ekki skilgreint *Not defined*	
	HR_{pa}	0.46	Slembireikningar *Stochastic simulations* (ICES 2013)

HORFUR - *PROSPECTS*

Áætlað er að viðmiðunarstofninn fari vaxandi eftir að 2014 árgangurinn bætist við hann. Árgangar frá 2015–2017 eru metnir nálægt meðaltali. Meðalþyngd árganga frá 2014–2017 er spáð yfir meðallagi árið 2019.

Reference biomass will increase in 2017, as the 2014 cohort enters the reference stock. The 2015–2017 cohorts are estimated close to the long-term mean recruitment. Average weight of the 2014–2017 year classes is predicted to be above average in 2019.

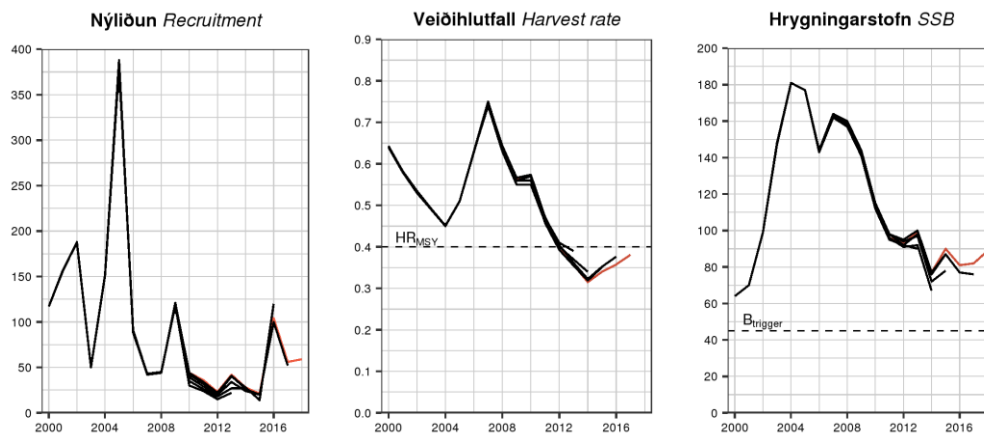**Ýsa.** Áætluð þróun stofnstærðar (tonn) miðað við veiðar samkvæmt aflareglu.
Haddock. *Projection of reference biomass and SSB (tonnes) based on adopted harvest control rule.*

2018				2019			
Áætlaður afli *Estimated catches*	Viðmiðunarstofn *Reference biomass*	Hrygningarstofn *SSB*	Veiðihlutfall *HR*	Aflamark *TAC*	Veiðihlutfall *HR*	Viðmiðunarstofn *Reference biomass*	Hrygningarstofn *SSB*
47 331	122 611	89 479	0.38	57 982	0.40	144 955	128 766

GÆÐI STOFNMATS – *QUALITY OF THE ASSESSMENT*

Gott samræmi er í stofnmati undanfarinna ára.

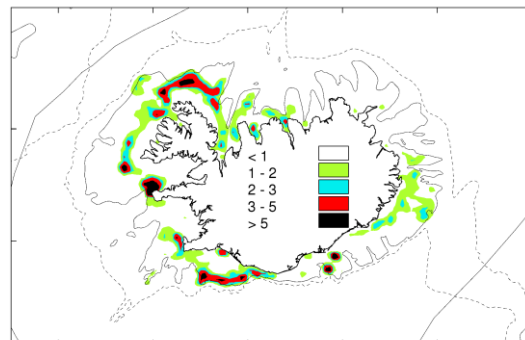*This assessment this year is consistent with previous assessments.*

Ýsa. Samanburður á stofnmati áranna 2013–2018 (rauð lína: 2018)**.**

Haddock. *Current assessment (red line) compared with previous estimates (2013–2017).*

VEIÐAR – *THE FISHERY*

Fram til 1996 voru 65–70% ýsuafla tekin í botnvörpu en hlutdeild línu jókst jafnt og þétt árin 1996–2011. Frá 2011 hafa tæplega 90% ýsuaflans fengist á línu og í botnvörpu.

Before 1996, about 65–70% of haddock catches were caught by trawl, but the proportion caught by longline increased steadily from 1996–2011. From 2011, almost 90% of catches have been taken by longlines and bottom trawls.

Ýsa. Veiðisvæði árið 2017 (t/sjm²)

Haddock. *Fishing grounds in 2017 (t/nmi²)*

Afli 2017 (tonn) *Catches 2017 (tonnes)*	Botnvarpa *Bottom trawl*	Lína *Longline*	Dragnót *Demersal seine*	Annað *Other*
37 062	44%	43%	12%	1%

AÐRAR UPPLÝSINGAR – *OTHER INFORMATION*

Stofnmælingar benda til að hlutfall veiðistofns ýsu á norður og austur miðum hafi aukist úr 10–15% í tæp 50% frá 2000–2008. Á sama tíma hefur einungis fimmtungur aflans verið veiddur þar. Veiðiálag á ýsu á norðurmiðum er þar af leiðandi töluvert lægra en utan þeirra. Norðurmið hafa hins vegar lengi verið mikilvæg uppeldissvæði ýsu, en fyrir 2000 gekk hún þaðan við kynþroska.

Information from surveys indicate that the proportion of the fishable part of the stock on the northern and eastern part of the shelf has increased from 10–15% to 50% in the period 2000–2008, but only 20% of catches are taken there. Therefore, fishing pressure is much lower in the north and the east compared to other areas. The northern part of the shelf has always been an important nursery ground for haddock, but before 2000 it migrated out of the area once mature.

RÁÐGJÖF, AFLAMARK OG AFLI – *ADVICE, TAC AND CATCH*

Ýsa. Tillögur um hámarksafla, ákvörðun stjórnvalda um aflamark og afli (tonn).
Haddock. *Recommended TAC, national TAC and catches (tonnes).*

Fiskveiðiár *Fishing year*	Tillaga *Rec. TAC*	Aflamark *National TAC*	Afli Íslendinga *Catches Iceland*	Afli annarra þjóða *Catches others*	Afli alls *Total catch*
2010/11	45 000	50 000	50 042	243	50 285
2011/12	37 000	45 000	49 179	227	49 179
2012/13	32 000	36 000	40 481	781	40 512
2013/14	38 000	38 000	38 948	681	39 628
2014/15	30 400[1]	30 400	35 403	1167	36 656
2015/16	36 400[1]	36 400	38 646	1471	40 117
2016/17	34 600[1]	34 600	34 754	1586	36 340
2017/18	41 390[1]	39 890			
2018/19	57 982[1]				

[1] 40% aflaregla. *40% harvest control rule.*

HEIMILDIR OG ÍTAREFNI – *REFERENCES AND FURTHER READING*

ICES. 2012. Report of the North-Western Working Group (NWWG), 26 April–3 May 2012, ICES Headquarters, Copenhagen. ICES CM 2012/ACOM:07. 1425 pp.

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