
FISHERY BY-PRODUCT REPORT

IFFO GLOBAL STANDARD FOR RESPONSIBLE SUPPLY OF FISHMEAL AND FISH OIL



FISHERY By-Product:	Goldenredfish (<i>Sebastes norvegicus</i>)
LOCATION:	EU waters FAO 27
DATE OF REPORT:	December 2015
ASSESSOR:	Sam Dignan

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1. APPLICATION DETAILS AND SUMMARY OF THE ASSESSMENT OUTCOME		
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Name of Certification Body:	SAI Global (Ireland)	
Assessor Name	Peer Reviewer	Initial/Surveillance/ Re-certification
Sam Dignan	Deirdre Hoare	Surveillance
1. Scope of Assessment		
		By-Product surveillance
2. Fishery By-Product		
		Golden redfish (<i>Sebastes norvegicus</i> , previously <i>Sebastes marinus</i>)
3. Fishery By-Product Location		
		EU waters/FAO 27
4. Fishery Method		
		Bottom trawl
5. Outcome of Assessment		
		Maintain approval

2. GUIDANCE FOR ONSITE ASSESSMENT

3. ASSESSMENT DETERMINATION

There is a robust fishery management framework in place in Iceland and Denmark which is applied specifically to the golden redfish stock in the assessment area, albeit with somewhat limited international cooperation on quota setting. Management is supported by species-specific data collection and stock assessment. The assessment team recommends approving this byproduct material against the IFFO RS standard. Icelandic Golden Redfish is MSC certified since 2014.

This species has up to now been named *Sebastes marinus*. It was decided to adopt the species list by WoRMS (<http://www.marinespecies.org/>). The name used for this species will hence hereafter be *Sebastes norvegicus*.
ICES 2014 R1

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4. RATIONALE OF THE ASSESSMENT OUTCOME

A. THE MANAGEMENT FRAMEWORK AND PROCEDURE

LEVEL OF COMPLIANCE

The management of the fishery used to produce the By- Product must include a legal and administrative basis for the implementation of measures and controls to support the management of the fishery.

LOW	An administrative framework that ensures an efficient management of the fishery is not established.
MEDIUM	An administrative framework that ensures an efficient management of the fishery is somehow established, but there is evidence of not being efficient to ensure the management of the stock.
HIGH	A legal and administrative framework that ensures an efficient management of the fishery is established and works efficiently.

Determination: There is an effective fishery management framework in place in Iceland and Denmark, which is applied specifically to the byproduct species under assessment. The reinstatement of the formal agreement and management plan mean that a high compliance rating is now appropriate.

Fishery management framework:

Iceland:

Modern Icelandic fisheries management is based on the Fisheries Management Act of 1990, and is the responsibility of the Ministry of Fisheries and Agriculture. The objectives of the Fisheries Management Act are to promote the conservation and efficient utilisation of the marine resources and thus to ensure stable employment and economic viability of fishing communities. In other words, the aim is to ensure the sustainability of the fisheries while emphasizing the economic benefits of the fisheries sector. The fisheries management system in Iceland is primarily based on extensive research on the fish stocks and the marine ecosystem, decisions made on the conduct of fisheries and allowable catches on the basis of scientific advice, and effective monitoring and enforcement of the fisheries and the total catch. Research is carried out within Iceland by the Marine Research Institute and internationally by ICES. These are the main pillars of the Icelandic fisheries management intended to ensure responsible fisheries and the sustainability of the ocean’s natural resources. Management of those stocks subject to international prosecution is facilitated by Iceland’s membership of the North-East Atlantic Fisheries Commission (NEAFC).

Denmark:

The responsible authority for monitoring and enforcing EU and national conservation policies is the Danish Agrifish Agency, which is a part of the Ministry of Food, Agriculture and Fisheries, under the 1999 Fisheries Act. The Agency carries out inspection at sea and landings, as well as verification of EU marketing standards. The Ministry also works for Danish fisheries and aquaculture through

- Regulation and inspections of the fishing industry
- Support for research in fisheries and aquaculture production
- Support for the development of fisheries, the fish industry, fishery harbours and aquaculture
- Fish management and fishing license arrangements for recreational fisheries

The primary provider of scientific information and advice at the national level within Denmark is the National Institute of Aquatic Resources at the Technical University of Denmark (DTU Aqua). DTU Aqua’s stated mission is to conduct research, provide advice, educate at university level and contribute to innovation in sustainable exploitation and management of aquatic resources. DTU Aqua directly advises the Danish Ministry of Food,

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Agriculture and Fisheries and other public authorities.

Species-specific management: Golden redfish is considered to be a single stock in Icelandic, Faroese and Greenland waters, although the large majority of landings are from Icelandic waters. There is now a formal agreement between the government of Iceland and government in Greenland on the sharing of the TACs for redfish in their waters. The Faroese government has chosen not to be included in the agreement. Faroese catches are a negligible part of the total. In recent years the Icelandic TAC has been set in line with advice, and the small quantities of landings elsewhere has meant that total removals have been much closer to the advice. There is a proposed species-specific management plan which has been evaluated by ICES (see section B). The Fisheries Directorate record all non-compliance, including minor infringements and sanctions. They report no systematic non-compliance issues.

Table 2.3.10.7 Golden redfish in Subareas V, VI, XII, and XIV. History of ICES advice, the agreed TAC, and ICES estimates of landings.

Year	ICES advice	Predicted catch corresp. to advice	Iceland TAC* ^{##}	Greenland TAC [~]	<i>S. norvegicus</i> ICES landings
1987	No increase in F	83	95		77
1988	No increase in F	84	85		90
1989	TAC*	117*	77		57
1990	TAC*	116*	80		67
1991	Precautionary TAC	77 (117*)	55*		56
1992	Precautionary TAC	76 (116*)	90		56
1993	Precautionary TAC*	120*	104		50
1994	Precautionary TAC, if required	100*	90		43
1995	TAC	90*	77		45
1996	TAC for Division Va (28); precautionary TAC for Division Vb and Subarea XIV (4)	32**	65		37
1997	Effort 75% of 1995 value	32**	65		40
1998	Effort reduced in steps of 25% from the 1995 level	37.2**	65		39
1999	Effort not increased compared to 1997	35**	65		42
2000	Catch not increased compared to 1998	35**	60		44
2001	Effort not increased compared to 1999	33** [^]	57		37
2002	25% reduction in effort	29 ^{^^}	65		51
2003	25% reduction in effort(2001)	31 ^{^^}	60		39
2004	25% reduction in effort(2002)	37.4 ^{^^}	57		33.4
2005	Maintain fishable biomass above U _{pa}	37 ^{^^}	57		45.4
2006	Maintain fishable biomass above U _{pa}	37 ^{^^}	57		42.2
2007	Maintain fishable biomass above U _{pa}	37 ^{^^}	57	5 [~]	39.1
2008	Maintain fishable biomass above U _{pa}	37 ^{^^}	57	1 [~]	46.3
2009	Maintain fishable biomass above U _{pa}	< 30	50		39.2
2010	Maintain fishable biomass above U _{pa}	< 30	50	6 [~]	38.7
2011	Same advice as last year	< 30	37.5	8.5 [~]	45.3
2012	Maintain catches	< 40	40	8.5 [~]	45.6
2013	Maintain catches	< 40	45	8.5 [~]	53.3
2014	20% increase in catches (rel. 2010–2012)	< 52	52	8.5 [~]	50.7
2015	Management plan	< 47.3	45.6	8.5 [~]	
2016	Management plan	< 51			

Weights in thousand tonnes.

* Deep-sea *S. mentella* and *S. norvegicus* combined.

** *S. norvegicus* only.

[^] In Division Va only.

^{^^} Both Divisions Va and Vb and Subarea XIV.

* Year ending 31 August.

^{##} From 1992 onwards: Quota year September–August.

[~] Demersal redfish (*Sebastes norvegicus* and *S. mentella*).

Figure 1. Golden redfish in Subareas V, VI, XII, and XIV. History of ICES advice, the agreed TAC, and ICES estimates of landings. R2

B. STOCK ASSESSMENT PROCEDURES AND MANAGEMENT ADVICE

LEVEL OF COMPLIANCE

B. Research in support of fisheries management should exist.

LOW	Research to support the management of the stock does not exist
MEDIUM	Research to support the management of the stock exists, however research programmes could be significantly improved to decrease scientific advice uncertainty.
HIGH	Research to support the management of the stock exists, and research programmes for provision of scientific advice are considered adequate.

Determination: Research and stock assessment activities are carried out, and are considered by ICES to be appropriate for the stock.

Iceland:

Fisheries management in Icelandic waters is supported nationally by the Marine Research Institute (MRI). The MRI carries out ongoing research on the status and productivity of commercial stocks, and long-term research on the marine environment and the ecosystem around Iceland. The results of this research are the foundations on which the majority of Icelandic fishery management decisions are made.

Denmark:

Scientific research on the stock in Denmark is carried out by the Technical University of Denmark National Institute of Aquatic Resources (DTU-Aqua).

International:

Additional and international scientific advice is provided by the International Council for the Exploration of the Sea (ICES). ICES utilises the best available scientific information collected by 20 member countries and others, and develops advice for the majority of commercially fished stocks in European waters. MRI conducts an annual Gadget catch-at-age model stock assessment using age and length data from landings and survey data from Greenland and Iceland. ICES is also engaged in the assessment of the stock, and in February 2014 responded to a request by Iceland, the Faroe Islands and Greenland to evaluate a proposed long-term management plan and harvest control rule. ICES found the most recent assessment model and available data to allow a full analytical assessment and MSY-based reference points to be derived, and also consider the proposed harvest control rules to be consistent with the MSY and precautionary approaches.

Framework	Reference point	Value	Technical basis	Source
MSY approach	MSY $B_{trigger}$	220 kt	$B_{lim} \times \exp(0.2 \times 1.645)$	ICES (2014a)
	F_{MSY}	0.097	Average of ages 9–19. F_{max} in the 2012 Gadget run, leading to < 1% probability of going below B_{lim} , based on recruitment patterns since 1975 and with large assessment uncertainty.	ICES (2014a)
Precautionary approach	B_{lim}	160 kt	Lowest SSB in the 2012 Gadget run.	ICES (2014a)
	B_{pa}	Not defined		
	F_{lim}	Not defined		
	F_{pa}	Not defined		
Management plan	SSB_{MGT}	220 kt		
	F_{MGT}	0.097		

Figure 2. Golden redfish in Subareas V, VI, XII, and XIV. Reference points, values and their technical basis

R3 – R5

C. STOCK STATUS

LEVEL OF COMPLIANCE

C. The fish used to produce the fish By- Product is not considered to be critically at risk of over exploitation in accordance with the IUCN guidance.

LOW	The fish By-Product must not come from a species that is listed as extinct, or critically endangered.
MEDIUM	The fish By- Product is from a species that is classified as vulnerable, but has a management regime in place that will control the level of fishing permitted. Or if a species is deemed to be endangered but the sub-group from where the fish By- Product is harvested is deemed scientifically to be at no risk of over exploitation.
HIGH	The fish By- Product comes from a fishery that is not deemed to be at risk of over exploitation from fishing activities.

Determination: Golden redfish has not been categorised by the IUCN; however Icelandic Golden Redfish has

been certified as sustainable by the MSC therefore a high compliance rating is appropriate.

The IUCN has not categorised *Sebastes norvegicus*, and it is not listed in the CITES appendices. The Icelandic golden redfish fishery has been certified against both MSC and FAO-based Iceland Responsible Fisheries Management Specifications.

R6- R9

5. REFERENCES

R1 -Iceland and East Greenland Golden redfish (*Sebastes norvegicus*) in Subareas V, VI, XII, and XIV- <http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2014/2014/smr-5614.pdf>

R2- ICES Advice June 2015 Golden redfish (*Sebastes norvegicus*) in Subareas V, VI, XII, and XIV (Iceland and Faroes grounds, West of Scotland, North of Azores, East of Greenland): <http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2015/2015/smr-5614.pdf>

R3 – Icelandic Fisheries, Golden redfish: <http://www.fisheries.is/main-species/redfishes/golden-redfish/>

R4 – MRI stock assessment and advice, golden redfish, 2014: <http://www.hafro.is/Astand/2014/english/04-goldenredfish-14.pdf>

R5 – ICES special request, February 2014, Iceland, Faroe Islands, and Greenland request to ICES on evaluation of a proposed long-term management plan and harvest control rule for golden redfish (*Sebastes marinus*): http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2014/Special%20Requests/Iceland_Faroe_Islands_Greenland_Evaluation_of_ltmp_for_golden_redfish.pdf

R6 – IUCN redlist: <http://www.iucnredlist.org/>

R7 – CITES appendices: <http://www.cites.org/eng/app/appendices.php>

R8 – MSC Icelandic Golden Redfish assessment downloads: <http://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/north-east-atlantic/isf-iceland-golden-redfish>

R9 - Iceland Responsible Fisheries (Golden redfish Fisheries) <http://www.responsiblefisheries.is/certification/certified-fisheries/golden-redfish-fisheries/>