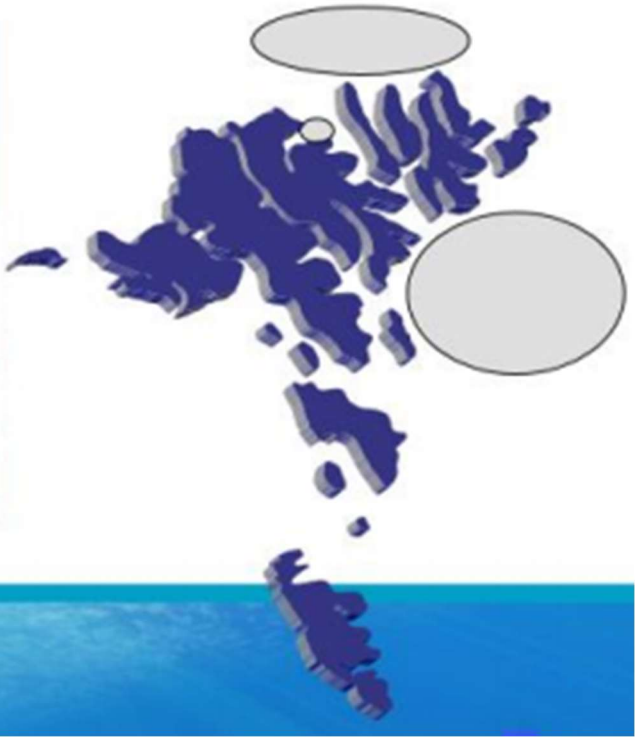
Fishery Manual

for

the Faroese Scallop Fishery



P/F O.C.Joensen

November 2021

Introduction

The company O. C. Joensen has been in the scallop's fishery since early 1970's and has been the only operator the last 30 years. This has given the company a good opportunity to manage the fishery to a relative stable, knowledge-based fishery. In 2008 the company started a process of MSC certification to state the sustainability of the Faroe Islands scallop fishery.

This document is made by O.C. Joensen to give a manual for the company's scallop fishery. The manual is written as a presentation of the fishery, of implemented fishery registrations and outline practises related to the fishery licence, health certificate and MSC certification.

The manual will be a handbook for the operating vessel on fishery procedures and registrations. It lay the procedures for the regular updates of knowledge, improvements and yearly evaluations of the Faroese scallop fishery and it has been presented to the fishery authorities and the Faroese Marine Research Institute (FAMRI) for their input and acceptance. The manual will be evaluated and updated after each fishing season and prior to every surveillance of the MSC certification. This Fishery Manual will be kept with identical copies, one at the O. C. Joensen office and one onboard the operating vessel for scallop fishery f/v Nordheim. The Fishery Manual is in a similar Faroese version.

The objective of the Fishery Manual

The objective of this Fishery Manual is to ensure that the scallop fishery is

- managed systematically, consistent with best available science
- working closely with the Government
- working closely with relevant science institutes like FAMRI
- enabling the fishery to pass international fishery standards like Marine Stewardship Council (MSC) and other standards recognized by Global Sustainable Seafood Initiative (GSSI)
- sustainable and its products are high quality products from a sustainable source.

The scallop licence issued by the Faroese Fishery Ministry

The Faroese queen scallop fishery is managed by Parliamentary Act No. 152 from 23 December 2019 on fishery resources. One Faroese fishing vessel is licensed to fish for queen scallop in Faroese waters and the Ministry of Fishery has stated that "there will not be issued new licences and no additional vessels will be permitted to fish for queen scallop".

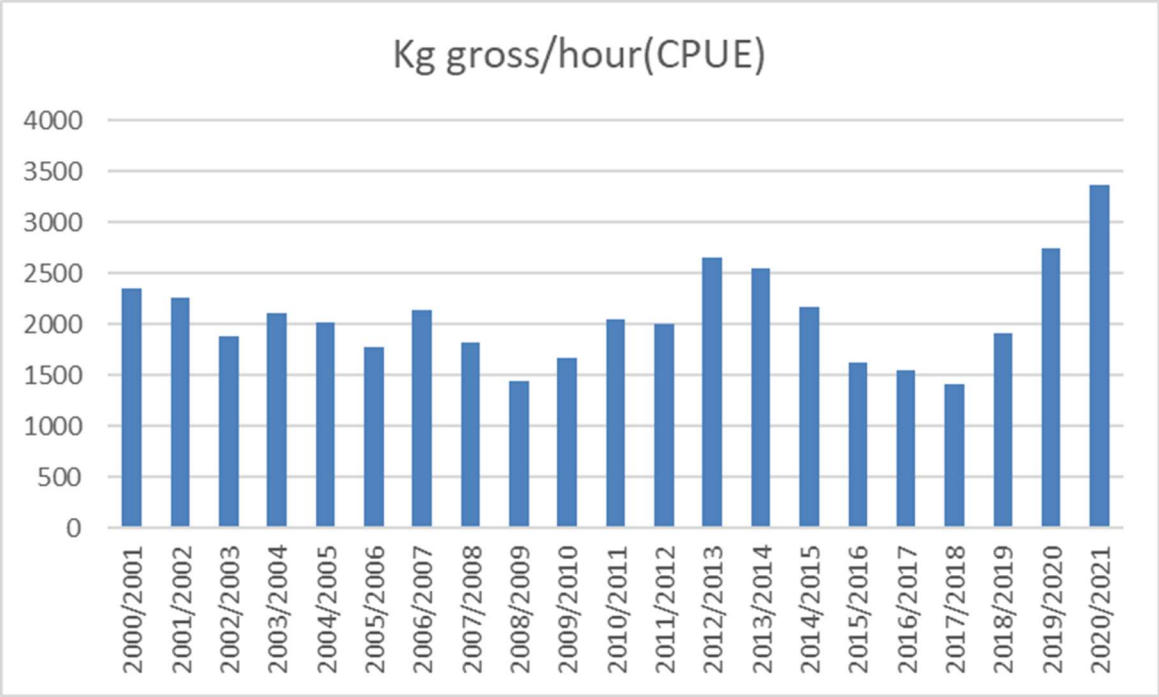
The queen scallop fishery is regulated by fishing licence and upon request the fishing authorities issue 3 licences for one year at a time. The licences are allocated based on historical rights. They are all to the same fishing vessel and fishery is only permitted in specific queen scallop fishing areas within a limited fishing season – from August to the end of March. General restrictions are on the vessel, the size of fishing gear (two 12 ft wide dredges) and amount of bycatch (1 %).

The licences to the fishery in the two northern fishing areas are quota regulated experimental licences. The fishery is based on the CPUE as the key indicator, and the annual TAC is based on the CPUE within precautionary limits. O.C. Joensen expect there will be a review to determine whether the exploratory fishery should become a permanent fishery. As the CPUE is similar to other areas, and no new bycatch issues, the O.C. Joensen has brought that rational forward and asked the government to change the exploratory license to permanent license. If on the other hand the CPUE is below certain numbers then O.C. Joensen will suggest to the government to close for the area and not open until test fishery enable new exploratory license.

If some unwanted bycatch as ETP is observed then we will discuss with FAMRI about how to mitigate or avoid. Precautionary conservation measures will be adopted and eventually this may lead to area closure.

The Catch per unit of effort (CPUE) has been the foundation of the management and this knowledge has been built up during many years of scallops' fishery on the scallop fishing grounds around Faroes as seen in the table. Stock size of scallops in the Faroese area is not exactly known but

analysis indicates that levels of both catches and effort are consistent and have fluctuated in a narrow range in the last many years, which suggests a stock not being subject to fisheries depletion. Se enclosed statement from FAMRI.



Harvest Control Rules for the scallop fishery around Faroe Islands

The fishing grounds for queen scallop (Chlamys opercularis) are east and north of the islands. The main fishing area is located east of the island of Nólsoy as the catch has been most stable in this area. Exploratory fishery is at an area north of the islands and at a small area in Djúpini outside Funningsfjord. These exploratory areas have been regularly and carefully fished during around 40 years.

At times the company can receive exploratory licenses to carry out test-dredging outside the normally license areas for one day or so. This is to regularly review other areas where it may be possible to harvest for scallop. As the only license holder to utilize the scallop resources around Faroe Island, the O.C. Joensen and the FAMRI have a mutual interest in the knowledge about the scallop resources around Faroe Islands.

The fishing licenses, divided on 3 licenses, are issued for one year at

a time and can be found at https://teyggjan.fo/, look up Nordheim. The basic governmental restriction to keep a sustainable scallop fishery is to limit the effort to one fishing vessel and to limit the regular fishing period from August to the end of March. Also, the fishing equipment is limited to two dredges, each 12-foot wide.

The vessel is equipped with a VMS (Vessel Monitoring System) transponder and are under surveillance of the Fishery inspection. Navigation tools onboard are used to map the tow-lines and the distribution (scope) of the fishery activity.

The vessel is from 1966, but elements of the vessel and the fishing equipment have been improved in years. Some improvements have been made to ensure that the dredge can turn without disruption of the bottom and having a failed tow and to get a better sea flow through the dredge. We regularly improve both the fishing vessel, the equipment and the monitoring system. Any improvements in the fishery efficiency have to be approved by the fishery authorities.

The company O.C. Joensen is committed to harvest the scallop beds in a sustainable way. We see it important to dredge in a way which keeps the fishing grounds ecologically healthy so they are always able to regain and keep their value as scallop fishing beds.

A main company Harvest Control Rule (HCR) is to ensure an effective exclusion of small scallops in the catch. Scallops below 55 mm in size are not taken which means that all scallops shall have a chance to spawn at least once (first spawning is at 40 mm when the scallop is around 2 years). A 60 mm scallop is around 4 years and we don't expect the scallop to become larger than 70 mm or older than 8-10 years.

There will be several tows in the same area as each tow should be less than 30 minutes on the bottom. The towing cycles are around 40 minutes. A fishing voyage takes normally around 20 – 40 hours. The scallop can be in a different state and number and the weather condition can influence on the fishery.

Another important Harvest Control Rule (HCR) is to move away from areas with small catch. The amount of catch and the time used for

this has been registered for many years. The fishery starts when the tow is launched in a specific area and ends when the last tow is hailed.

The tows during a voyage will be evaluated towards the standard CPUE, which is a historically fixed sustainability value. Should the CPUE be lower than expected it will be evaluated towards the CPUE trigger for moving to another area. The trigger CPUE is the level where the amount of catch is regarded as too low for a sustainable fishery. If the catch is lower than the trigger CPUE it will be evaluated towards the CPUE limit, which is the lowest point of fishery in an area, set as a fishery security limit. Areas where the fishery comes down to the limit CPUE are closed for fishery next 2 years by the company.

- Tow should give above 1.5 ton/hour of scallops. The CPUE (target) is to keep all tow above this
- Tow lower than 1,5 ton indicate awareness and should be avoided. The CPUE (trigger) is between 1.0 -1,5 ton/hour
- Tow lower than 1 ton/hour means that the area shall be abandoned for at least 2 years. The CPUE (Limit) is 1,0 ton/hour

When making these evaluations the master should bear in mind that the fishery is very much affected by weather conditions and current. It is not possible to fish in wind above 15 m/s, especially from the east. Also, strong current gives problems especially in the north and the coast near part of the eastern area.

All three Referent Points are set by O.C. Joensen as a Fishery Management Tool to ensure sustainable harvest of the scallop areas. As the fishery has been relative stable for 4-5 decades, we are sure that these reference points are valid. Both FAMRI and the Fishery Ministry have close knowledge of the use of these fishery limits as Harvest Control Rules (HCR) to ensure sustainability.

Vulnerable habitats are not expected in the fishing area, but should a

tow include corals, sponges or other elements from special bottom habitats (Vulnerable Marine Ecosystem (VME)), these areas shall be avoided and registered as closed areas due to special ecosystem. Also, areas with horse mussels' habitats should be avoided.

On-board the vessel after a tow the content of the dredge is emptied into the fishing reception tank. From the tank, the catch will be transported through a sorting system ensuring that undersized scallops and other smaller bottom elements are transported to the sea again. The right size scallop together with other bottom species at the same size and larger is moved into boxes and landed.

Fish normally swim away from the gab, but should any fish be in the dredge they are handled separately. It is not allowed to throw fish out again and it is the responsibility of the Captain to ensure the registration of which species fish is taken on-board with the dredge.

Should any garbage be part of the catch it is important to handle it separate and take it to the garbage treatment ashore. It is not allowed to throw garbage out again and it is the responsibility of the Captain to ensure the registration of any garbage.

Registrations

The company has been very careful to closely monitor the fishery through many years. The Captain ensure all the necessary registrations onboard. It will be stated in the digital fishery record book and other schemes when the vessel leaves the harbour, when the vessel reaches the fishing grounds and start the fishery, at which position the fishery start and end, when the vessel leaves the fishing ground and when the catch is landed. Each voyage to a specific area is regarded as one registration in fishery records and landing schemes. The amount of catch is noted onboard, but on the landing site the content of catch (scallops and trash) is separated and the different content of trash is registered. The amount of bycatch is noted in different species onboard.

The method for trash registration is that a part from the landed catch (a 20-litre basket) is taken to a table where the healthy scallops are separated from empty shells, starfishes, mussels, stones etc. All the elements, which not are scallops (Chlamys opercularis), are regarded as trash. The content of the trash elements is separated and the amount registered into different species, empty shells, stones and other waste. The amount of trach is noted and withdrawn from the total catch and gives the real amount of the scallop catch (netto-skel) from each fishing voyage.

With the registration of bycatches and trash we are able to detect any risk to Endangered, Threatened and Protected (ETP) species, any threat on their population as well as any change in interactions with these species. In the event of any ETP species will start to be detected in the catches or any new unprecedented circumstance occurs in the fishery, this will trigger consultation with the Fishery Ministry as well as Faroese Marine Research Institute (FAMRI) to address these new circumstances

The two schemes from the captain to the landing site include the same information as in the digital fishery record book, stated above. The difference between the schemes is that one scheme includes the crewmembers, notes on effective fishing period, notes on bycatch species and note on use of dredge. This scheme is used for

registration purposes at the landing site and for crew administration. The other scheme includes a map where the fishing area is specified. This map is sent Food and Veterinary Authority in relation to export information on Health Certificate.

All the information from the vessel together with the results from the sorting of the trash are registered at the landing site and are sent to either Fishery Inspection (Vørn), Food and Veterinary Authority or Faroese Marine Research Institute (FAMRI) according to the different requirements.

The CPUE is calculated based on each fishing voyage. It is calculated as the catch amount from the time the fishery starts in a specific area to the time the fishery ends in the same specific area. Fishing areas are registered in grid outlined in a map. Good area, Awareness areas and Closed areas are separated visually each year.

Registration forms are:

- <u>For captains to fill out</u>:
    - Digital fishery Record book,
    - Landing registration I and II.
- <u>For landing site to fill out</u>:
    - Scallops, excluding trash, is noted as netto-skel,
    - Trash content is noted,
    - Catch, bycatch and other information from the vessel's Landing registration schemes I and II are registered digital together with CPUE on specified fishing areas.
    - Landing site also fulfil the Fishery Inspection schemes: "Vektarseðlar" and "Avreiðingarseðlar" and regularly sends this information to Food and Veterinary Authority and Faroese Marine Research Institute (FAMRI).

Examples of the registration forms and some examples of data utilisation can be seen on the last pages:

Reviews

To ensure a sustainable fishery both the Harvest Control Rules (HCR), the registrations and the presentations are summarized and evaluated yearly at the end of each fishing season. The Faroese Marine Research Institute (FAMRI) is invited to participate in the evaluation meeting.

Registration of catch, area and time will be evaluated together with CPUE target, CPUE trigger and CPUE limit. Also, registration of bycatch, bottom habitats and equipment status will be evaluated.

The abilities to improve equipment and make a better value out of the product without in any way harming the future of the stable fishery on the used fishing grounds has great importance for the company.

The protocol from the evaluation meeting will include:

a. Place, time and attends
b. Last fishery season
    i. Fishing tours and catch this season
    ii. CPUE and scallop meat evaluation
    iii. Good areas, Awareness areas and Closed areas evaluation
    iv. Bycatch and trash evaluation
    v. Dredge efficiency evaluation
c. Outstanding issues/conditions/recommendation
d. Other items needed to discuss

The registrations of fishery data and the outline from the evaluation will be presented for the Fishery Ministry and the Faroese Marine Research Institute (FAMRI) at a yearly meeting. This meeting will take place after each fishery season and in advance to the annual certification surveillance.

Research on Faroes Queen Scallop fishery

As the only company licensed to this fishery, we cooperate closely with FAMRI and we have stated our interest in supporting scientific research on the Faroese Queen Scallop. The company is able to ensure the need of vessel, good field registration and we are steadily improving the documentation of catch, bycatch and trash according the different use.

O.C. Joensen intends to be active seeking fund and engage science with the fishery to develop this further. On this attempt O.C. Joensen intend to seek fund from Ocean Stewardship Fund (OSF), and engage students and FAMRI in this process.

Poster onboard the vessel:

Fiskiveiðureglur galdandi á øllum økjum **Harvest Control Rules for Scallops fishery in all areas**	**Gross ton pr hour**	**Action**
Target reference point	➢ **1,5 ton/hour**	**Keep on the good fishery**
Trigger reference point	**< 1,5 ton/hour**	**Move to a better area**
Target reference point	**< 1,0 ton/hour**	**Closed area for 2 years**

Statements from FAMRI

HAVSTOVAN
FAROE MARINE RESEARCH INSTITUTE

Tórshavn, 13 November 2019

Regarding Faroese fishery of queen scallop

Queen scallops in the Faroese EEZ are a unique and separate stock in the North Atlantic.

Faroe Marine Research Institute (FAMRI) is part of the ICES (International Council for the Exploration of the Sea) working group assessing scallops stocks in the North-East Atlantic. The fishery for queen scallops in the Faroes has been conducted for the past 40-50 years in the east coast and although the stock size in absolute levels is unknown, analysis carried out by the scallop ICES working group suggests that catch rates (measured in catch-per-unit-effort) are stable and have fluctuated in a narrow range in the last 15 years. Thus, the stock is not subject to long-term declines or fisheries depletion (ICES 2016, ICES 2017, ICES 2018). In addition to the traditional fishing grounds in the east a relatively small area in the north was opened to experimental fisheries in the 1990s.

The fishery is managed and monitored by authorities under the Ministry of Fisheries by Parliamentary Act No. 28 from 10 March 1994 on Commercial Fisheries. The queen scallop fishery is regulated by fishing licenses granted to a single vessel which is only permitted to operate in specific fishing areas and under seasonal restrictions. The fishery in the Northern fishing area is regulated by an experimental fishing license and is regulated by quotas.

Sources:

ICES, 2016. Report of the ICES Scallop Assessment Working Group (WGScallop), 3–7 October 2016 Aberdeen, UK. ICES CM 2016/ ACOM:24

ICES, 2017. Interim Report of the Scallop Assessment Working Group (WGSCALLOP), 10-12 October 2017,Belfast, Northern Ireland, UK. ICES CM 2017/SSGEPD:25

ICES, 2018. Report of the Scallop Assessment Working Group (WGScallop), 10-12 October 2018 York, UK. ICES CM 2018/EPDSG:13

Sincerely

Eilif Gaard

Eilif Gaard, Director
Faroe Marine Research Institute
Nóatún, FO-110 Tórshavn, Faroe Islands

FAROE ISLANDS
SUSTAINABLE
FISHERIES

Havstovan – Faroe Marine Research Institute
Nóatún
100 Tórshavn

22.11.2021

Agreement on issues to be resolved

FISF, on behalf of OC Joensen, hereby proposes the following plan for cooperation with FAMRI on resolving some issues regarding the fishery for queen scallop in Faroese waters. These issues have been raised in connection with the MSC certification process of the fishery.

1. CPUE project documenting a more precise CPUE for the rectangles appointed by FAMRI in the fishing areas.
2. Updating habitat mapping information
3. Annual Internal Review of the Management Plan
4. External Review of the Management Plan

Referenced is made to the client action plan outlining the timeline and the roles for these issues to be resolved in cooperation between FAMRI and OC Joensen.

OC Joensen commits to fund the new activities of FAMRI for the duration of the action plan, i.e. the next four years.

Durita í Grótinum	Hans Andrias Kelduberg	Eilif Gaard
FISF	OC Joensen	Havstovan

Registration schemes

Information to be sent FAMRI each year

- **Information on voyages and fishery**

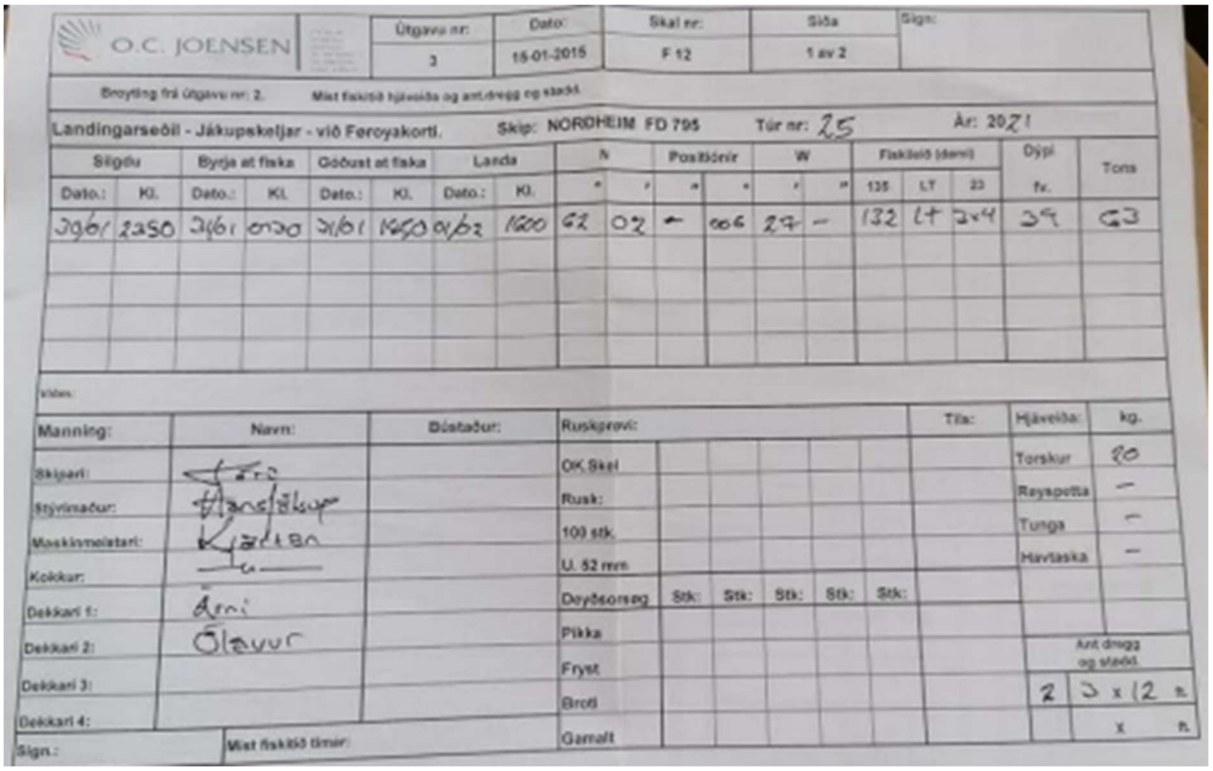
Vertíð 52 Dato.	Túr nr	Byrja at fiska dato/kl.	Góðust at fiska dato/kl.	Pos N	Pos. W	Fiski leið	Øki (Fiski loyvi nr.)	Dýpi	Kg. RV.Tils.	Kg netto skel	Rein leika %	Fiska tímar	Hjáveiða Toskur	Hjáveiða Reyðsprøka	Hjáveiða Tunga	Hjáveiða Havtaska	Jákups-skeljaknús	Øða, livandi	Øðuskelja knús	Kúvingur, livandi	Kúvingaskeljaknús	Gágga, Livandi	Gágga tóm	Gággu krabbar	Krabbar	Krossfiskur	Igulker og Trælsrass	Mosi	Annað knús
##########	52	#########	#########	62,02,00	06,40,00	133lk	60568	32	7371	4333	58,8	6,2	0,0	0,0	0,0	0,0	######	#####	######	######	######	######	######	######	######	######	######	######	######
##########	52	#########	#########	62,02,00	06,19,00	133ly	60568	45	38961	31720	81,4	12,5	0,0	0,0	0,0	0,0	######	#####	######	######	######	######	######	######	######	######	######	######	######
##########	52	#########	#########	62,00,00	06,28,00	131lr	60568	40	49491	42900	86,7	16,2	15,0	15,0	0,0	0,0	######	#####	######	######	######	######	######	######	######	######	######	######	######
##########	52	#########	#########	62,05,00	06,23,00	136lw	60568	36	66339	50050	75,4	25,0	10,0	15,0	0,0	0,0	######	0,0	0,0	0,0	8696,5	729,0	427,0	0,0	0,0	937,3	0,0	0,0	######
##########	52	#########	#########	62,06,00	06,23,00	133lw	60568	43	66591	52563	78,9	17,2	20,0	10,0	0,0	0,0	######	0,0	0,0	0,0	#######	330,3	80,7	0,0	0,0	315,6	0,0	7,3	741,4
##########	52	#########	#########	62,04,00	06,23,00	135lw	60568	45	67284	55163	82,0	19,5	10,0	5,0	0,0	10,0	######	0,0	0,0	0,0	7559,3	416,9	705,0	0,0	0,0	######	0,0	0,0	459,8
##########	52	#########	#########	62,02,00	06,27,00	133lu	60568	41	66213	52780	79,7	19,3	0,0	0,0	0,0	0,0	######	#####	225,0	0,0	6922,1	0,0	519,9	310,4	0,0	######	0,0	0,0	######
##########	52	#########	#########	62,02,00	06,26,00	133lt	60568	42	63882	53083	83,1	18,6	0,0	0,0	0,0	0,0	######	#####	81,5	370,3	2436,7	281,4	740,6	0,0	0,0	######	0,0	0,0	503,6
##########	52	#########	#########	62,05,00	06,22,00	136lx	60568	45	61929	53213	85,9	20,0	20,0	30,0	10,0	20,0	######	883,8	0,0	0,0	5364,4	0,0	147,3	0,0	0,0	0,0	0,0	0,0	######

- **CPUE information for areas**

Kg. brutto fiska/tíma	Vertíð				
Fiskileið.	**2015/2016**	**2016/2017**	**2017/2018**	**2018/2019**	**2019/2020**
114lu			897		
115lw		1,583			
124ma		1477			
125lu	1770				
125lw		1,627			3,071
125lx			1285	1610	
125ly	1798	1593	1235		
126lu	1524	1,455			
126lw			1223		
126lx	2000			1628.5	1,981
126ly	1233				2,229
127ly				1586	1,582
127lu	1,873				
127lt	2,246				
127lv	1910				
127lw	1940				

Registration onboard

- **Landing document, I**



O.C. JOENSEN

Útgávu nr:	Dato:	Skal nr:	Síða	Sign:
3	15-01-2015	F 12	1 av 2	

Broyting frá útgávu nr: 2. Mist fiskidø hjáveiða og ant.dreggj og stødd

Landingarseðil - Jákupskeljar - við Føroyakorti. Skip: NORÐHEIM FD 795 Túr nr: 25 Ár: 2021

Sigdu Dato:	Sigdu Kl.	Byrja at fiska Dato:	Byrja at fiska Kl.	Gáðust at fiska Dato:	Gáðust at fiska Kl.	Landa Dato:	Landa Kl.	N °	N '	N "	Positiónir W °	W '	W "	Fiskidø (dømi) 135	LT	23	Djúpi fv.	Tons
31/01	2250	31/01	0030	31/01	1450	01/02	1600	62	07	←	006	27	–	132	LT	2x4	39	63

Viðm.:

Manning:	Navn:	Bústaður:
Skipari:	[illegible]	
Stýrimaður:	[illegible]	
Maskinmeistari:	[illegible]	
Kokkur:	[illegible]	
Dekkari 1:	Árni	
Dekkari 2:	Óli Gavur	
Dekkari 3:		
Dekkari 4:		

Sign.: Mist fiskidø tímar:

Ruskprøvi:						Tíð:
OK Skel						
Rusk:						
100 stk.						
U. 52 mm						
Deyðsorsog	Stk:	Stk:	Stk:	Stk:	Stk:	
Pikka						
Fryst						
Brotl						
Gamalt						

Hjáveiða:	kg.
Torskur	80
Reyspotta	–
Tunga	–
Havtaska	–
Ant.dreggj og stødd	
2	3 x 12 ft.
	x ft.

- **Landing document, II**

O.C. JOENSEN

O.C.JOENSEN SKELJAVIRKIÐ OYRI AUT. FO:131

Broytingar:Skipanavn og havnamerki er komi aturat,og arki er gjørt tíðiligari

Veiða eftir Jákupskel undir Føroyum FAO: 27								Skip: NORÐHEIM FD 795						Túr nr.	Ár	
Sigldu		Byrja at fiska		Liðugt at fiska		Landa		Positiónir						Fiskiøki	Dýpi fv.	Tons brutto
								N			V					
Dato	KL.	Dato.	KL.	Dato.	KL.	Dato.	KL.	°	'	"	°	'	"			

Sign:

Útgávu nr	Dato:	Skjal nr.	Síða	Sign:
2	01-02-2012	F 52	1 av 1	[signature]

10

- **Information sent to Fishery Inspection**