

Intertek Fisheries Certification (IFC)

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## Surveillance Report Limfjord Oyster Dredge Fishery

Certificate No.: MML-F-123

**Intertek Moody Marine** 

January 2014

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## **1 GENERAL INFORMATION**

**Scope against which the surveillance is undertaken:** MSC Principles and Criteria for Sustainable Fishing as applied to the Limfjord Oyster Dredge Fishery.

Species: European Oysters (Ostrea edulis)

Area: Limfjord, Denmark.

Method of capture: Oyster dredge.

Date of Surveillance Visit:	7 <sup>th</sup> -9 <sup>th</sup> January 2014				
Initial Certification	Date: 3 <sup>rd</sup> May 2	Date: 3 <sup>rd</sup> May 2012		Certificate Ref: MML-F-123	
Surveillance stage	1 <sup>st</sup>	2 <sup>nd</sup>	3rd	4th	
Surveillance team:	Lead Assessor: Assessor(s):	J. Andrey A.R. Bra	ws nd, M. Maar		
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## 2 THE CERTIFICATION / ASSESSMENT PROCESS

This report contains the findings of the second annual surveillance audit in relation to this fishery.

The client's response to the Conditions of Certification was set out in an Action Plan, which was appended to the final certification report. Action on this was examined as a part of the first surveillance in 2013 and again in this second surveillance audit report. For each condition, the report sets out progress to date. This progress has now been evaluated by the Intertek Fisheries Certification audit team ('Observations' and 'Conclusion') against the commitments made in the Action Plan. This assessment includes a re-evaluation of the scoring allocated to the relevant Performance Indicators in the original MSC assessment. Where the requirements of a condition are met, the Performance Indicators are rescored and if the score is 80 or more, then the condition is closed.

Information regarding this year's audit has been collected from interviews held with the client, stakeholders and information in published reports and in records inspected during the audit. All are listed at the end of this report.

#### 2.1 Assessment process

The assessment process for this audit followed that set out in the MSC Fisheries Certification Requirements.

Notice of this surveillance audit was announced on the MSC website on 17<sup>th</sup> December 2013 with a supporting notice to stakeholders issued by the MSC on that date. Direct e-mail notification was also sent by Intertek Fisheries Certification to the stakeholders that had previously been identified for this fishery inviting interested parties to contact the audit team.

The audit team visited the fishery between  $7^{th}$  and  $9^{th}$  January 2014. Meetings were held with the client and key stakeholders. A full list of all meetings attended is presented at the end of this report.

#### 2.2 Assessment team composition

The MSC require that surveillance audits shall be carried out by a team of two or more individuals with expertise comparable to the members of the original team (that conducted the assessment of the fishery). If different from the original assessment team, the MSC also require that the selection of individuals to conduct audits shall be justified in writing and their relevant skills and/or expertise documented.

This surveillance audit was carried out by Jim Andrews, Marie Maar, and Andy Brand. These auditors were the members of the original assessment team for this fishery.

### 2.3 Audit frequency

The MSC Certification Requirements specify that after each certification, surveillance and re-certification the Conformity Assessment Body (CAB) shall determine the level at which subsequent surveillance of the fishery shall be undertaken.

The surveillance level required for this fishery has been calculated using the methodology set out in the MSC Certification Requirements. The fishery has a "surveillance score" of 3 (see Table 1).

Criteria	Surveillance Score	Score awarded		
1. Default Assessment tree	used			
Yes	0	0		
No	2			
2. Number of conditions				
Zero conditions	0			
Between 1-5 conditions	1	1		
More than 5 conditions	2			
3. Principle level scores	3. Principle level scores			
<u>≥</u> 85	0			
<u>&lt;</u> 85	2	2		
4. Conditions on outcome	4. Conditions on outcome PIs?			
Yes	2			
No	0	0		
	TOTAL	3		

**Table 1**:Calculation of surveillance score for this fishery.

The response to this score is set out in Table C4 of the Certification Requirements. Fisheries that score 2 or more have a "Normal" surveillance level, requiring annual assessments throughout the period of certification. Fisheries that score 1 or 0 have the option of "remote" or "reduced" surveillance.

A Normal surveillance schedule is therefore appropriate for this fishery, with annual surveillance audits.

## **3** RESULTS, CONCLUSIONS AND RECOMMENDATIONS

#### 3.1 Results

During this second surveillance audit, the audit team assessed the status of the target stock and compliance with the management regime, as well as progress with the recommendations of certification. The results of the team's findings are set out in the tables below.

The assessment team also checked the current composition and performance of the fleet in the unit of certification. The vessels in the Unit of Certification are listed in Table 2 overleaf.

#### Vessel Number Vessel Name Licensed Species Licence Holder Ø Olav Gorm Petersen A36 A60 MØ Partrederiet Frida A88 MØ Svend Åge Poulsen A122 Benny Nielsen Ø A956 MØ Carsten Nørremark Jensen AS56 Ø Rene Michael Kloosterman Martin Hansen E18 E62 Ø Kaj Iversen E63 Ø Kaj Iversen HM88 Ø Ole Vangsgaard HM198 Birgitte Aps HM324 Ernst Egon Christensen Ø HM404 Ø Morten Konge HM430 Ø Brian Didriksen L10 Ø Reinhardt Schmidt L11 Poul Støvlbæk L28 Ø Jes Andersen L82 Allan Leisle Bach L115 Ø Benno Smith Kjærgaard L154 MØ Tommy Bach L158 MØ Jørgen Bach L206 Ø Niels Ole Hansen L253 Benny Rimmer Andersen L346 Sofus Iversen L472 Bruno Eriksen L491 Partsredriet Berit L500 Jens Sund Kynde Laursen L555 Ib Trier Jeppesen L560 Kaj Møller Jensen L820 Jens Peter Lange L900 Jan Torp Nielsen L904 Hans Jørgen Jensen L908 Herluf Bonde Broberg L929 Herluf Bonde Broberg L933 Keld Strøm Kristensen L935 Kjeld Møller Pedersen SK20 Leo Kjærgaard Andersen SK49 Johannes Christensen Jan Møller SK100 SK489 Jens Olaf Mamp SK919 Mona Pedersen SK920 Anders Dalsgaard Pedersen

MØ

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#### **Table 2:**List of vessels within the Unit of Certification.

SK924

SK925

T35

Poul Erik Norup Haubo

Partsrederiet Joan Kiss

Henning Jensen

Vessel Number	Vessel Name	Licensed Species	Licence Holder
T36		Ø	Frederik Thorsen
T58		Ø	Bent Normann Gade
T60		Ø	Tommy Hasager
T72		Ø	Lars Kyndi Toft
T112		Ø	Peter Bredahl Pedersen
T121		MØ	Henrik Støvlbæk Krog
T122		Ø	Poul Kjeldgaard Støvlbæk
T132		MØ	Svend Bonde
T192		MØ	Orla Mygdam
T194		MØ	Tommy Gertsen
T229		MØ	Liden Kirsten I/S
T257		MØ	Søren Peter Jespersen
T299		MØ	Tommy Drejer
T300		MØ	Poul Kærgaard
T301		MØ	Poul Kærgaard
T329		Ø	Freddy Kristian Sandbæk

### 3.2 Audit findings

The outcome of this surveillance audit  $(SA^1)$  is set out below.

	ITEM	COMMENTS
1.	Stock status update	The Limfjord oyster stock remains limited to the production areas in the western Limfjord. The main concentration of oysters is still within production areas 1-4, with
		some oysters in production areas to the east and north. Oysters have been found in production areas 11 and 12, but the commercially viable stocks generally extend no further ports over them area 0 (see Figure 1)
		further north-east than area 9 (see Figure 1).
		Transfer 22 27 28 28 20 26 30 26 30 25 11 12 25 11 12 26 13 13 13 13 13 13 13 13 13 13 13 13 13
		<b>Figure 1:</b> Map of the unit of certification. Oyster dredging is limited to shellfish production areas 1-4, 6, 7 and 9-13. Inset map shows the location of the Limfjord.
		The most recent stock survey was completed in June 2013, and indicated that there had been a decline in the oyster stock in the Limfjord (Fomsgaard et al, 2013. The stock in the main production area (1-4, known as Nissum Bredning) was estimated to be 679t. The stock outside this area was estimated to be 398t, making a total stock of 1,077t These stock estimates are limited to the oyster stock in waters deeper than 3m; there is thought to be a considerable stock in shallower waters that does not form part of the assessment, but may form an important part of the spawning stock biomass.
		This stock assessment shows that there has been a considerable decline in the oyster stock in the Limfjord since 2009, when it was estimated to be around 6-7000t. Prior to 2009 the stock had grown rapidly, following good recruitment of oysters over several years in the early part of the decade. There has been no sign of recruitment to the stock since 2006. The increase in the oyster stock resulted from the growth of these strong year classes, and the subsequent decline of the stock is an inevitable consequence of several years of poor recruitment. The inter-annual decline in the stock is much greater than annual fishery removals, indicating that natural mortality of oysters is the main cause of the fall in the population (see Figures 2 & 3).

 $<sup>^{\</sup>rm 1}$  The abbreviation SA1 is used to identify Surveillance Audit 1, SA2 for Surveillance Audit 2, and so on.



	ITEM	COMMENTS	
		has occurr 1933. Limf and good s	ed for periods of up to 20 years, as happened between 1914 and jord is near to the temperature limit for spawning of Ostrea edulis patfalls are confined to warm summers (Yonge 1960).
		Fishery scientists an oyster stock is a rep The recent fishery h decline appears to b conditions.	d fishermen in the Limfjord consider that the current fall in the eat of the historical pattern of irregular recruitment to the fishery. as been carefully managed, and catch rates have been kept low; the e a result of poor recruitment, itself a result of environmental
		It was noted in the a in the Limfjord coul hatchery is being co are due to start in th long-standing proble	ssessment report that a solution to the problem of poor recruitment d lie in the restocking of the oyster beds with spat. An oyster mmissioned at the Danish Shellfish Centre, and restocking trials e near future. This approach could represent a solution to this em in the Limfjord oyster fishery.
		Management Resp The response of the reduce the TAC for	onse to stock status management system to the decline in the oyster stock has been to oysters over recent years.
		The Nissum Brednin in that area is govern features of that area 1,481t. The manage the Nissum Brednin 2012-13 fishery.	ng area is a Natura 2000 site, and management of the oyster fishery ned by the requirement to protect the marine environmental . There is a limit reference point ( $B_{lim}$ , derived from $B_{loss}$ ) of ement advice in June 2012 was that there should be no fishing in g area. This advice was transposed into fishery regulations for the
		The same advice con oyster fishery in the was transposed into	nsidered that it would be appropriate to set a TAC of 200t for the area outside the Nissum Bredning Natura 2000 site. This TAC fishery regulations for the 2012-13 fishery.
2	Condition 1	Information / Man	itoring
3.	Performance Indicator	1.2.3	normg
4			
4.	Scoring Guideposts	SG60 Standard	<u>Some</u> relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy.
4.	Scoring Guideposts	SG60 Standard	<ul> <li><u>Some</u> relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy.</li> <li>Stock abundance and fishery removals are monitored and at least one indicator is available and monitored with sufficient frequency to support the harvest control rule.</li> </ul>
4.	Scoring Guideposts	SG60 Standard SG 80 Standard	<ul> <li><u>Some</u> relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy.</li> <li>Stock abundance and fishery removals are monitored and at least one indicator is available and monitored with sufficient frequency to support the harvest control rule.</li> <li><u>Sufficient</u> relevant information related to stock structure, stock productivity, fleet composition and other data is available to support the harvest strategy.</li> </ul>
4.	Scoring Guideposts	SG60 Standard SG 80 Standard	<ul> <li><u>Some</u> relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy.</li> <li>Stock abundance and fishery removals are monitored and at least one indicator is available and monitored with sufficient frequency to support the harvest control rule.</li> <li><u>Sufficient</u> relevant information related to stock structure, stock productivity, fleet composition and other data is available to support the harvest strategy.</li> <li>Stock abundance and fishery removals are regularly monitored at a level of accuracy and coverage consistent with the harvest control rule, and one or more indicators are available and monitored with sufficient frequency to support the harvest control rule.</li> </ul>
4.	Scoring Guideposts	SG60 Standard SG 80 Standard	<ul> <li><u>Some</u> relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy.</li> <li>Stock abundance and fishery removals are monitored and at least one indicator is available and monitored with sufficient frequency to support the harvest control rule.</li> <li><u>Sufficient</u> relevant information related to stock structure, stock productivity, fleet composition and other data is available to support the harvest strategy.</li> <li>Stock abundance and fishery removals are regularly monitored at a level of accuracy and coverage consistent with the harvest control rule.</li> <li>Stock abundance and fishery removals are available and monitored with sufficient frequency to support the harvest strategy.</li> </ul>

	ITEM	COMMENTS
		productivity, fleet composition, stock abundance, fishery removals and other information such as environmental information), including some that may not be directly relevant to the current harvest strategy, is available.
		<u>All information</u> required by the harvest control rule is monitored with high frequency and a high degree of certainty, and there is a good understanding of the inherent uncertainties in the information [data] and the robustness of assessment and management to this uncertainty.
5.	Score Awarded	70
6.	Rationale	In scoring this Performance Indicator, the team have taken regard of the fact that the RBF has been used to score PI1.1.1 because there is limited information about the state of the stock relative to unfished. The fishery has been awarded a 'pass' score for PI 1.1.1, and a default pass score of PI 1.2.4 (assessment of stock status). A consequence of the limited information about the stock, which triggered the use of the RBF, is that there is limited information available about stock structure and productivity. There is a good understanding of oyster stock status within the Nissum Bredning Natura 2000 site, and the location of sensitive habitats and species in this area (such as eelgrass beds, and reefs) that might be adversely affected by the fishery. However, outside this site the information about oyster stocks is less detailed. Very good information is available about the composition of the fleet prosecuting the oyster stock. All fishing activity is recorded and monitored, and all fishery removals from the oyster stock are recorded in official landings data. This information is sufficient to support the harvest strategy for the fishery.
7.	Action required	The status of the oyster stocks outside Natura 2000 sites should be monitored at a frequency and accuracy that is adequate to support the harvest control rules in place for the oyster fishery.
8.	Timescale	An appropriate monitoring programme should be agreed with relevant agencies within 12 months of certification. Evidence of implementation should be provided within 2 years of certification. Reports of monitoring should be provided within 4 years of certification. The results of on-going monitoring will be reviewed in all subsequent surveillance audits.
9.	Client action plan	We will work with DTU-Aqua to develop a monitoring programme for the unit of certification area that will enable the abundance of the oyster stock to be estimated at a level of accuracy and coverage that is sufficient to verify that the harvest controls in place are effective. This monitoring programme will seek to utilise both fishery dependent data (such as CPUE) and fishery-independent data as well as the results of industry test dredging and formal survey data to provide optimum and efficient coverage of the unit of certification area. Within 12 months of certification we will have agreed a monitoring programme with DTU-Aqua and other relevant organisations. This programme will be available for scrutiny at the first surveillance audit.

	ITEM	COMMENTS		
		By the time of the second surveillance audit we will have implemented the new monitoring programme, and will provide evidence of this.		
		Within 4 years of certification we will provide reports of the outcome of monitoring of the fishery, and this will be available for scrutiny at the fourth annual surveillance audit.		
		DTU-Aqua have been consulted about this action plan to develop a monitoring programme, and have agreed to work in partnership with us to support its implementation.		
10.	Observations at	The findings from the first surveillance audit are reproduced below:-		
	SAI	The most recent stock survey, which was completed in June 2012, provides evidence that the oyster stock is being monitored throughout the unit of certification and not just within the Nissum Bredning Natura 2000 site.		
		In the 2012 survey, a total of 180 stations were sampled in 12 production areas. 4 of the production areas (1-4) are within the Nissum Bredning Natura 2000 site, where 83 samples were taken. The remaining 97 samples were taken outside the Natura 2000 area.		
		The 2012 survey showed a stock of just over 1,500t in the Nissum Bredning Natura 2000 site, and just over 600t in the other production areas.		
		In response to the survey results, the TAC for 2012-13 was reduced to 200t.		
		<b>Conclusion</b> There is evidence that the monitoring programme for this stock has been extended, as required by this condition in year 1; and also that this new monitoring programme was implemented in 2012, which was ahead of schedule for the condition. Furthermore, there is evidence that the results of monitoring have already been reported and that the management system has responded to these results with an adjustment of the TAC.		
		It is therefore concluded that progress with this condition is <b>ahead of target</b> . The timescale for this condition extends for a further 3 years, so it is appropriate for it to remain open.		
11.	Observations at SA2	The most recent stock survey, which was completed in June 2013, provides further evidence that the oyster stock is being monitored throughout the unit of certification and not just within the Nissum Bredning Natura 2000 site.		
		In the 2013 survey, a total of 202 stations were sampled in 12 production areas in waters deeper than 3m. 4 of the production areas (1-4) are within the Nissum Bredning Natura 2000 site, where 88 samples were taken. The remaining samples were taken outside the Natura 2000 area.		
		The 2013 survey showed a stock of 679t in the Nissum Bredning Natura 2000 site, and 398t in the other production areas (all in areas deeper than 3m; it should be noted that there is a considerable, but unquantified, stock in the shallower waters).		
		In response to the survey results, the TAC for $2012, 14$ was reduced to $120t$ all of		
		which is to be taken outside the Nissum Bredning Natura 2000 site.		
		There were anecdotal reports of very good spat settlement in 2013, as may have been expected because of the warm summer conditions. While this is a good sign for the future, it remains to be seen whether this year-class will lead to strong recruitment of harvestable oysters in 3-4 years time.		

	ITEM	COMMENTS	
12.	Conclusion from SA2	The observations at this audit provide further evidence of implementation of the extended stock monitoring programme as well as evidence that the results of monitoring have already been reported and that the management system has responded to these results with an adjustment of the TAC. It is therefore concluded that progress with this condition remains <b>ahead of target</b> .	
		to remain open.	
13.	Condition 2	Discarded non-targ	get species – information & monitoring
14.	Performance Indicator	2.2.3	
15.	Scoring Guideposts	SG60 Standard	Qualitative information is available on the amount of main bycatch species affected by the fishery.
			Information is adequate to broadly understand outcome status with respect to biologically based limits.
			Information is adequate to support measures to manage bycatch.
		SG 80 Standard	Qualitative information and some quantitative information are available on the amount of main bycatch species affected by the fishery.
			Information is sufficient to estimate outcome status with respect to biologically based limits.
			Information is adequate to support a partial strategy to manage main bycatch species.
			Sufficient data continue to be collected to detect any increase in risk to main bycatch species (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the strategy).
		SG100 Standard	Accurate and verifiable information is available on the amount of all bycatch and the consequences for the status of affected populations.
			Information is sufficient to quantitatively estimate outcome status with respect to biologically based limits with a high degree of certainty.
			Information is adequate to support a comprehensive strategy to manage bycatch, and evaluate with a high degree of certainty whether a strategy is achieving its objective.
			Monitoring of bycatch data is conducted in sufficient detail to assess ongoing mortalities to all bycatch species.
16.	Score Awarded	70	
17.	Rationale	Qualitative informat fishery, but no quan information is suffic adversely affect the	tion is available on discarding of non-target species from the titative information has been presented. Nevertheless, this cient to determine that discarding from the fishery is unlikely to status of the discarded species in the area.
		There is no program from the fishery.	me in place to continue to collect data about the level of discarding

	ITEM	COMMENTS
		All of SG60 requirements met; the second and 3 <sup>rd</sup> SG80 requirements met.
18.	Action required	A monitoring programme should be established to provide better information about the species discarded from the oyster fishery. This programme should be designed to provide quantitative information that enables the outcome status for these species with respect to biologically based limits.
19.	Timescale	An appropriate monitoring programme should be agreed with relevant agencies within 12 months of certification. Evidence of implementation should be provided within 2 years of certification. Reports of monitoring should be provided within 4 years of certification.
		The results of ongoing monitoring will be reviewed in all subsequent surveillance audits.
20.	Client action plan	We will work with DTU-Aqua and other interested parties to develop a monitoring programme for discards from the oyster fishery. This programme will provide information about the nature and quantity of species that are discarded from oyster dredging vessels.
		Within 12 months of certification we will have agreed a discard monitoring programme with DTU-Aqua and other relevant organisations. This programme will be available for scrutiny at the first surveillance audit.
		By the time of the second surveillance audit we will have implemented the new monitoring programme, and will provide evidence of this.
		Within 4 years of certification we will provide reports of the outcome of monitoring of the fishery, and this will be available for scrutiny at the fourth annual surveillance audit.
		DTU-Aqua and Fiskeridirektoratet have been consulted about this proposal to produce a discard monitoring plan, and have agreed to co-operate with its implementation.
21.	Observations at SA1	The findings from the first surveillance audit are reproduced below:- During the site visit the Assessment Team observed video of oyster fishing vessels in
		operation, which confirmed the view that the fishery is very clean, and that discards are limited to starfish and other marine invertebrates that are returned to the sea whilst the catch is sorted on board the fishing vessel.
		Interviews with the client and DSC confirmed that a formal discard monitoring programme has not yet been agreed or implemented.
		The client reiterated their commitment to work with DTU Aqua to prepare and implement an appropriate discard monitoring programme for this fishery.
		<b>Conclusion</b> Progress with this condition is presently <b>behind target</b> .
		In order to put progress back on schedule, the AT has asked the client to work with DTU-Aqua to prepare a discard monitoring programme that meets the SG80 requirements for this PI within 3 months of this surveillance audit.
22.	Observations at SA2	The client provided an appropriate research plan which included actions to address this issue within 3 months of the 2013 surveillance audit, which put progress back on schedule.
		Evidence of implementation of the monitoring programme for non-target species was

	ITEM	COMMENTS	
		provided at this surveillance audit. Scientists from DTU-Aqua and the oyster fishing industry have agreed a monitoring programme which will examine the discarded species at random from 5 oyster fishing vessels.	
		Field work is due to start in March 2014, and the result of this research are due to be reported later in the year. The start of the field work is ahead of the second anniversary of certification, which is the deadline for the condition.	
23.	Conclusion from SA2	Evidence of progress on target and it app second anniversary	is with this condition was provided at the site visit. Progress is now bears likely that progress will be ahead of target by the time of the of certification in May 2014.
24	Condition 3	Deceenab Dien	
24.	Performance Indicator	3.2.4	
26.	Scoring Guideposts	SG60 Standard	Research is undertaken, as required, to achieve the objectives consistent with MSC's Principles 1 and 2.
			Research results are available to interested parties
		SG 80 Standard	A research plan provides the management system with a strategic approach to research and reliable and timely information sufficient to achieve the objectives consistent with MSC's Principles 1 and 2.
			Research results are disseminated to all interested parties in a timely fashion.
		SG100 Standard	A comprehensive research plan provides the management system with a coherent and strategic approach to research across P1, P2 and P3, and reliable and timely information sufficient to achieve the objectives consistent with MSC's Principles 1 and 2.
			Research plan and results are disseminated to all interested parties in a timely fashion and are widely and publicly available.
27.	Score Awarded	70	
28.	Rationale	In scoring this Perford deficiencies associa 1. This resulted in a (under PI 1.2.3) it w improved by improved Research into key as has provided inform and development of results of this resear through publication The SG60 requirem There is not, howev condition has been g	ormance Indicator, the assessment team notes that the information ted with this fishery have triggered the use of the RBF for Principle a satisfactory outcome; however in the assessment of Principle 1 vas noted that the quality of information about the fishery could be ving monitoring arrangements for areas outside Natura 2000 sites. spects of the fishery is carried out by DTU-Aqua. Recent research nation on the potential effects of the fishery on Natura 2000 sites, a lighter oyster dredge that causes less damage to the seabed. The ch are disseminated to all interested parties in a timely fashion on the DTU-Aqua website. ents are met; and the second of the SG80 requirements are met. er, a research plan in place for the unit of certification area. A generated in response to this.
20	Action required	A research plan abo	uld be produced for the fichery setting out a strategic framework
29.	Action required	for research that will state of the stock, ar	l provide reliable and timely information describing the fishery, the ad effects of the fishery on the environment.
30.	Timescale	A draft research pla interested parties wi	n should be produced within 12 months and agreed with all thin 2 years.

	ITEM	COMMENTS
31.	Client action plan	We will work with DTU-Aqua and other interested parties to develop a research plan for the oyster fishery that sets out a strategic approach to research. This research plan will provide reliable and timely information that will inform the management of the fishery.
		We will develop a draft plan within 12 months of certification of the fishery, which will be available for inspection at the first annual surveillance audit.
		We will seek agreement to the research plan within 2 years of certification and present evidence of this for scrutiny at the second surveillance audit.
		DTU-Aqua and Fiskeridirektoratet have been consulted about this proposal to produce a research plan, and have agreed to co-operate with its implementation.
32.	Observations at SA1	The findings of the first surveillance audit are reproduced below:-
		Research has been carried out by DTU-Aqua and the Dansk Skaldyrcenter (Danish Shellfish Centre, DSC) into a number of aspects of the shellfish fisheries in the Limfjord, including research into the oyster fishery.
		Recent research projects include stock assessments carried out by DTU-Aqua (Dolmer et al, 2011; Dolmer, 2012). DSC have also established a native oyster hatchery at Nykøbing Mors and are planning to rear seed oysters as part of trial restocking of the Nissum Bredning area.
		While it is clear that much relevant research continues to be carried out, there is no evidence of progress with the production of a research plan that would set a strategic context for ongoing investigation of the oyster fishery.
		<b>Update – June 2013</b> Whilst this report was in preparation, a draft research plan was submitted to the assessment team by the client fishery. This plan identified the key priorities for research as:-
		<ol> <li>Restocking of the oyster beds using hatchery-reared oysters.</li> <li>Investigating the effect of predators on the oyster stock.</li> <li>Researching the environmental impacts of fishing.</li> </ol>
		Conclusion
		At the site visit, progress with this condition was behind target.
		In order to put progress back on schedule, the AT asked the client to work with DSC / DTU-Aqua to prepare a draft research plan that meets the SG80 requirements for this PI within 3 months of this surveillance audit.
		The submission of this draft research plan in June 2013 has put progress with this condition back <b>on target</b> .
33.	Observations at SA2	The client provided an appropriate research plan which included actions to address this issue within 3 months of the 2013 surveillance audit, which put progress back on schedule.
		Evidence was presented at the site visit to demonstrate that all relevant parties had committed to the research plan and are taking action to implement it. Specifically:-
		• <b>Restocking</b> – trial restocking of a small experimental area in the Nissum Bredning oyster bed is being undertaken. Small oysters are being produced both in a hatchery (at the DTU-Aqua facilities in Nykøbing Mors) and also collected using spat collectors (empty mussel shells in mesh bags).

	ITEM	COMMENTS
		<ul> <li>Starfish predation – DTU-Aqua are investigating the role of starfish as predators on oysters, and the potential for managing the starfish population in order to sustain the oyster stock.</li> <li>Discards – DTU-Aqua are working with the fishermen to implement a discard monitoring programme, due to start in March 2014.</li> <li>Environmental effects – DTU Aqua are monitoring the extent of eelgrass and macroalgae in the western Limfjord as part of the monitoring of habitats in the Nissum Bredning Natura 2000 site, which has historically been the most important oyster fishing ground.</li> </ul>
34.	Conclusion from SA2	There is evidence that the interested parties have agreed to a research plan for this fishery, and that action is being taken to implement the proposals set out in the research plan. Progress with this condition is therefore considered to be <b>ahead of target</b> . It will be appropriate to review evidence of implementation at the third surveillance audit in 2015 before determining this condition.
35.	Recommendations	<ul> <li>The assessment team made one recommendation that would improve the performance of the fishery against the MSC Principles and Criteria.</li> <li>Recommendations do not have to be implemented to maintain certification, and accordingly the action taken and timescales are at the discretion of the client. The certification team's recommendations are that:</li> <li>1. The score awarded for PI 2.4.3 could be improved if experimental work was carried out to quantify the effects of the fishery on marine habitats (such as the creation of experimental dredging exclusion zones).</li> </ul>
36.	Observations at SA1	The findings of the first surveillance audit are reproduced below:- It was reported that the approach to protecting eelgrass beds from the effects of dredging is under review in other parts of the Limfjord. If new management measures prove successful in other areas, it is thought likely that they would be implemented for eelgrass and other vulnerable marine habitats in the vicinity of the oyster dredge fishery. <b>Conclusion</b> Although there has been no direct progress with this issue, it is clear that the interaction between dredge fisheries and marine habitats in the Limfjord is under scrutiny, and that progress might be made with this recommendation over the period of certification.
37.	Observations at SA2	It was reported that work is being carried out to monitor the extent of sensitive marine habitats in the Nissum Bredning. Continuing this work while the area is closed to fishing (due to poor recruitment & low oyster stock) will provide a better understanding of the potential direct and indirect impacts of dredging on these habitats.
38.	Conclusion from SA2	With the closure of the Nissum Bredning area and ongoing monitoring of habitats in this area, it may be possible over time to make progress with this recommendation.
39.	Any complaints against the certified operation; recorded reviewed and actioned	No complaints about the fishery that are relevant to MSC Principles have been made to IFC or to NaturErhvervstyrelsen over the past 12 months.
40.	Any relevant	There have been no changes to legislation or regulation over the past 12 months.
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ITEM		COMMENTS
	changes to legislation or regulation	
41.	Any relevant changes to management regime	There have been some changes to the management regime. <b>Scientific Institutions</b> The merger between the Danish Shellfish Centre (Dansk Skaldyrcenter, DSC) and the Danish Technical University Aquatic Sciences department (Danmarks Tekniske Universitet – Aqua, abbreviated to DTU-Aqua) was underway at the last site visit. This merger was completed on 1 <sup>st</sup> January 2014. The merging of these two institutions has resulted in some personnel changes, and the addition of the personnel and facilities of the DSC in Nykøbing Mors to the existing DTU-Aqua facilities at Charlottenlund.
42.	Any relevant changes to fishing activity.	There have been no changes to fishing practices or activity since the fishery was certified.
43.	Compliance with regulations & legislation	No non-compliance issues are reported for the vessels included in this unit of certification.
44.	Destructive fishing practices	The AT confirmed that destructive fishing practices (poisons or explosives) are not being used in this fishery.
45.	Controversial unilateral exemptions	The AT confirmed that the fishery is not subject to any controversial unilateral exemptions.
46.	Annual Catch Data Reporting	The oyster fishery TAC year runs from 1 <sup>st</sup> September to 31 <sup>st</sup> August of the following year. TAC and catch data for the last complete year (2012-13) are summarised below.
47.	Total TAC in most recent fishing year	2011-12: 450t 2012-13: 200t 2013-14: 130t
48. 49.	UoC share of TAC Client share of	The Unit of Certification has 100% of the TAC. The client has 100% of the TAC.
50.	"Green weight" of catch taken by client group	2011-12: 433t 2012-13: 180t 2013-14: 75t (to date)
51.	Overall Conclusion	The main observation from this audit is that the oyster stock in the Limfjord is following the historical pattern. Recruitment to the stock is usually poor, and the fishery only flourishes for a period of years after environmental conditions favour several successive years of good recruitment. After a period of growth, the stock, and thus the fishery, is now in decline, but providing an adequate spawning stock of this long-lived, high fecundity, species is maintained then the fishery will be able to recover when favourable environmental conditions return. The audit team have found that the monitoring and management system has responded appropriately to the change in stock status, with a reduction in TAC commensurate with the change in the stock. There is also evidence of a proactive approach being

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	developed, with plans to restock the fishery with spat grown in a hatchery.
	After a slow start, there has subsequently been good progress with all of the three conditions, two of which (conditions 1 & 3) are now considered to be ahead of target. The other condition (monitoring of discarded species) is now <u>on target</u> and it appears likely that progress will be ahead of target by the time of the second anniversary of certification in May 2014.
	We conclude that the fishery currently meets the requirements of the MSC Standard, and that MSC Certification should continue with annual audits.

#### **Information Sources:**

#### Meetings

- 1. Søren Mattesen, Vilsund Blue A/S, Nykøbing Mors, 7<sup>th</sup> January 2014.
- 2. Viggo Kjølhede, Foreningen Muslingeerhvervet, Nykøbing Mors, 9<sup>th</sup> January 2014.
- 3. Jens Kjerulf Petersen, Dansk Skaldyrcenter, 8<sup>th</sup> January 2014.
- 4. Henrik Nielsen, NaturErhvervstyrelsen, Nykøbing Mors, 9<sup>th</sup> January 2014.

(NB all stakeholder from the full assessment were contacted prior to the surveillance audit taking place)

#### Reports

Dolmer P., Poulsen L.K, Christoffersen M., Geitner K., & Larsen F. (2011) Konsekvensvurdering af fiskeri af østers i Nissum Bredning 2011/2012. DTU Aqua-rapport nr. 245-2011. Institut for Akvatiske Ressourcer, Danmarks Tekniske Universitet, 57 s. + bilag Available from: <u>http://www.aqua.dtu.dk/upload/aqua/publikationer/forskningsrapporter/245-2011</u> konsekvensvurdering-af-fiskeri-af-oesters-i-nissum-bredning-2011-12.pdf

Dolmer, P. (2012). Østersfiskeri i Nissum Bredning 2012/2013. DTU-Aqua Notat, 15 Juni 2012, 11/01618. 6pp. Unpublished Report.

Fomsgaard, C., Geitner, K. & Petersen, J.K. (2013). Notat om fagligt grundlag for tilladelse til østersfiskeri i Limjorden 2013/14. 7pp. Unpublished DTU-Aqua report.

#### Standards and Guidelines used:

- 1. MSC Principles and Criteria
- 2. MSC Certification Requirements v1.3, 14<sup>th</sup> January 2013.

# Annex 1: Written Stakeholder submissions to the surveillance audit and IMM responses to points raised.

No written submissions were received.

#### Annex 2: Notification of surveillance audit

