

MACALISTER ELLIOTT AND PARTNERS LTD

SURVEILLANCE VISIT REPORT FOR THE GERMANY LOWER SAXONY MUSSEL DREDGE AND MUSSEL CULTURE FISHERY

**CERTIFICATE CODE: MEP-F-028
THIRD ANNUAL SURVEILLANCE**

Undertaken by:

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28 JANUARY 2015

MEP QA REF: 2783R02A



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1. GENERAL INFORMATION

Fishery Name	Netherlands blue shell mussel fishery, Bottom culture			
Units of Certification	<p>UoC 1. Collection of mussel seed by suspended ropes UoC 2. Collection of mussel seed by suspended nets UoC 3. Collection of mussel seed by mussel dredging UoC 4. Seeding mussel seed on culture plots, collection of harvest size mussels from culture plots by dredging</p> <p>Members of the Producentenorganisatie van de Nederlandse mosselcultuur (PO mussel culture) targeting blue shell mussel in the Waddenzee and Zeeuwse delta of the Dutch coastal region using dredge and bottom culture</p>			
Species	Blue mussel (<i>Mytilus edulis</i>)			
Area	The Waddenzee and Zeeuwse delta of the Dutch coastal region			
Method of capture	Dredging, spat collection on nets and ropes and bottom culture			
Client Address	Vereniging Producentenorganisatie van de Nederlandse mosselcultuur (Dutch PO mussel culture) Dregweg 2, 4401 LD, Yerseke, The Netherlands			
Client Contact Name	Mr. Addy Risseeuw			
Client Telephone No.:	+(31) 113 576 066			
Client Email	pomossel@xs4all.nl			
Certificate number	MEP-F-021			
Certificate Issue Date	20 December 2013 (original certificate # SGS-NL-MSF-F-0394 issued by SGS on 26 July 2011)			
Certificate Expiry Date	25 July 2016			
Audit stage	Year 1	Year 2	Year 3	Year 4
Audit experts	Expert 1 (Team Leader): Chrissie Sieben Expert 2: Bert Keus			
Surveillance Audit Date	27 November 2013			
Conclusion	All conditions were closed at this third surveillance audit. We therefore conclude that the Netherlands blue shell mussel fishery should retain its MSC certified status for another year for the Units of Certification specified above.			

2. INTRODUCTION

This report outlines the process and outcome of the Third Annual Surveillance audit for the MSC certified fishery “Dutch Blue Shell Mussel Fishery, Bottom Culture”.

The fishery is conducted by members of the Producentenorganisatie van de Nederlandse mosselcultuur (Dutch PO mussel culture). This PO is based in Yerseke, NL. It has around 87 members whose main activity is mussel culture on culture plots in the Waddenzee and the Oosterschelde.

This audit is the Third Annual Surveillance audit for this fishery since certification – which was finalised in July 2011. The audit was carried out in Yerseke, The Netherlands 11 December 2014 by the surveillance team consisting of Chrissie Sieben (Team Leader) and bert.keus@gmail.com. The audit participants are listed in Table 1.

Table 1. Audit participants

Name	Company
Jaap Holstein	H&S consultancy (client representative)
Cora Seip	H&S consultancy (client representative)
Hans van Geesbergen	PO Mosselcultuur
Jaap Geleijnse	Vereniging Zeeuwse Hangcultuurkwekers
Henk van den Ouden	Vereniging Zeeuwse Hangcultuurkwekers
Bert Keus	MEP
Chrissie Sieben	MEP

Stakeholders were informed of the scheduled site visit, its time and location and the proposed audit team on 11 November 2014. No comments or requests for interviews were received.

The fishery remains in conformance with the Scope Criteria relating to unilateral exemption and destructive fishing practices (MSC Certification Requirements, Section 27.4.4.).

3. BACKGROUND

A detailed summary of the fishery’s background was presented in the [Year 2 surveillance report](#) for this fishery and this is therefore not repeated here.

4. PRINCIPLE 1

The mussels stock of the Dutch coastal zone can be considered as one stock. The stock includes wild mussel beds (predominantly in the Wadden Sea), mussels on hard substrates like dykes and mussels on mussel culture plots, both in Wadden Sea and the Oosterschelde. A considerable part of the annual spatfall is harvested and transferred to the culture plots. Wild

stocks are surveyed on a scientific basis twice a year (in spring and autumn). The stock on bottom plots is known from a spring survey combined with seed quota, relaying and landing figures as collected by the Producer Organization (PO) and the Ministry of Economic Affairs (Van Stralen 2014b).

The wild stock of mussels in the Wadden Sea (excluding culture plots) was assessed in spring 2014 between 17 March and 10 April. The data from the spring assessment report (van Stralen, 2014a) show that the total wild stock in the Western Wadden Sea was estimated at that point at 36,500 tonnes live weight. Of this stock, 6,200 tonnes were seed mussels and 30,200 tonnes were half-grown or adult mussels. In order to estimate the quantity available to the fishery in May, these net estimates are increased by 20% for mussel growth between the survey date and the fishery, and also by a quantity for ‘tarra’. Tarra is the mix of empty shells and other rubble that comes up with the mussels, and which is counted in to the fished quantity because the amount fished is estimated according to the volume load of the vessel. The increase for tarra is 40% for seed mussels and 25% for other mussels. These give the total gross estimates. It was calculated on this basis that the gross wild stock in May was 52,800 tonnes including 12,500 tonnes of seed. Figure 1 shows the survey estimates of the spring wild stock biomass in the Western Wadden Sea from 1992 to 2014.

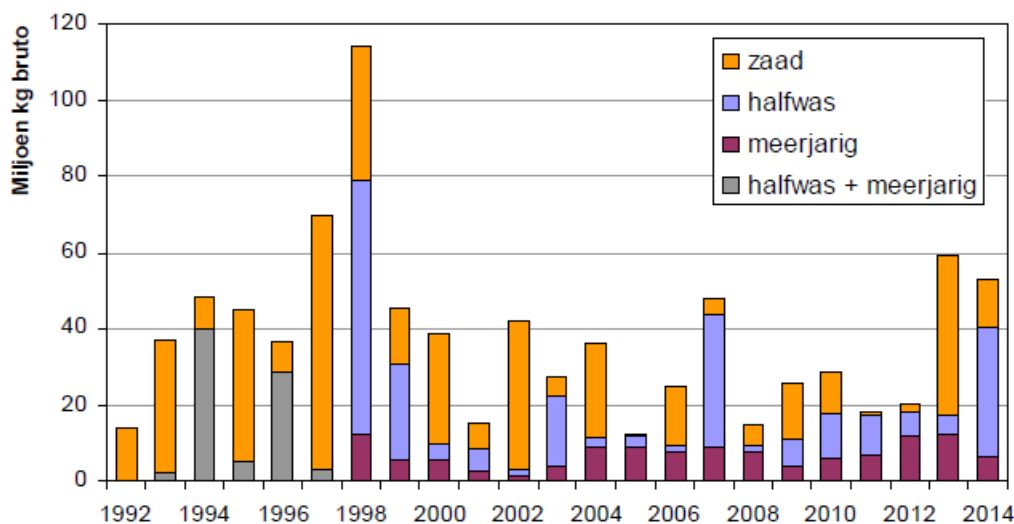


Figure 1. The spring survey estimates of wild mussel stock in the Western Wadden Sea, 1992-2014; zaad=seed, halfwas=half-grown, meerjarig=adult. (Source: van Stralen 2014a)

The stock on culture plots in the Western Wadden Sea was assessed in July 2014 (van Stralen 2014b). The results of these assessments are presented in Figure 2 alongside previous assessments. The stock on culture plots in July 2014 was 61,100 tons net fresh weight. Of this stock 7,500 were seed mussels, 33,300 tons half grown mussels and 20,300 tons adult mussels.

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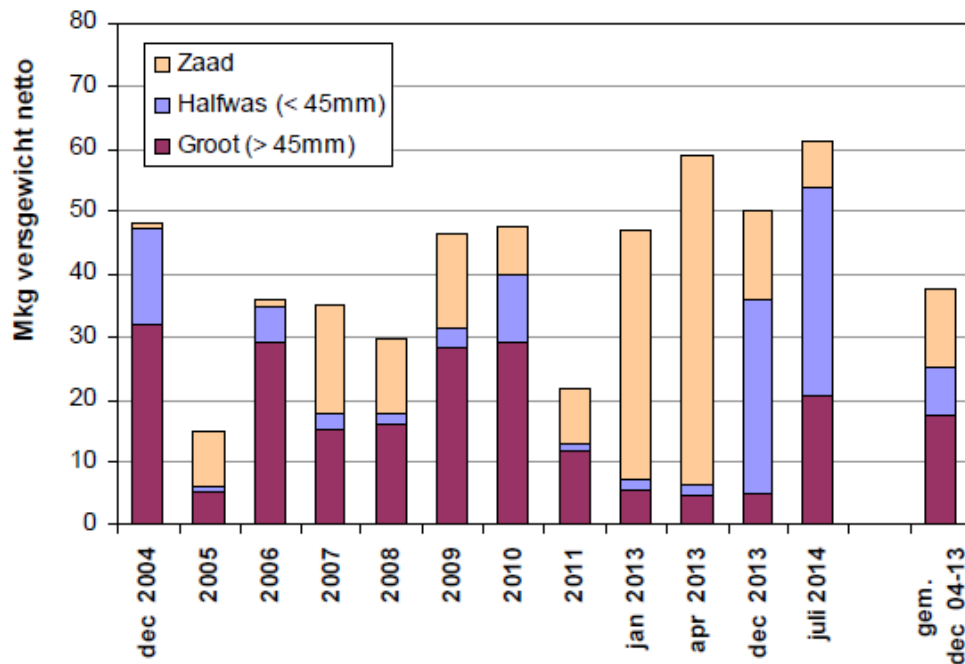


Figure 2. The mussel stock on culture plots in the Western Wadden Sea in net fresh weight at the start of the winter from 2004 to 2011, in the winter of 2012-2013 (January 2013), April 2013 and July 2014. (Source: van Stralen 2014b)

The quantity of mussel culture that is cultured on MZIs is annually estimated through a survey of production figures of companies that produce mussel spat through mussel seed collectors. Van Stralen (2014c) has estimated that in 2013, 14,170 tons of mussel seed was produced (Figure 3). This was 7 % less than the production in 2012.

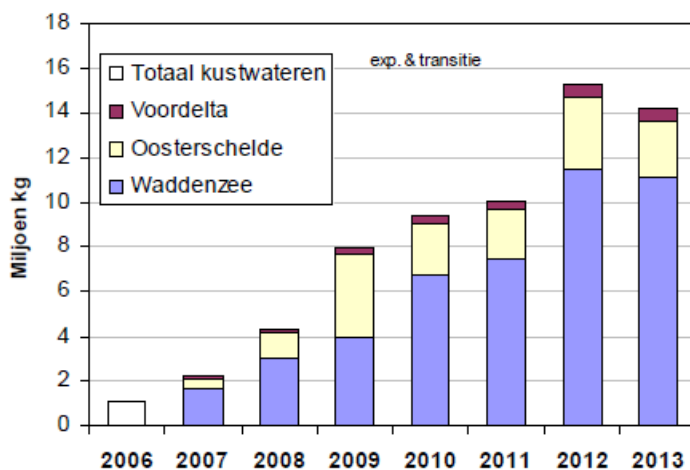


Figure 3. Annual harvest of seed mussels in mln kg wet weight from MZIs from Wadden Sea, Oosterschelde and Voordelta (Source: van Stralen 2014c).

Considering the data provided above it can be concluded that there are no signs that the stock status has changed significantly since the certification in 2011.

5. PRINCIPLE 2

The situation in relation to Principle 2 has not changed since assessment – the fishery is very clean, with no discernable impacts on non-target species, ETP species, habitats or the ecosystem. During the initial certification assessment, conditions were raised in relation to habitat and ecosystem impacts and these are further discussed in Section 7.

6. PRINCIPLE 3

6.1. CHANGES SINCE CERTIFICATION

Fisheries management in the Netherlands is the responsibility of the Ministry of Economic Affairs (Min EZ). It was already noted in the first and second surveillance reports that a central body in the Dutch fisheries sector, the Dutch Fisheries Product Board (Productschap Vis), would cease to exist. Some tasks that this organisation carried out will no longer be done and others have been taken over by the fisheries organisations like the Nederlandse Vissersbond, VisNed or the Mussel PO. The sanitary control and the designation of shellfish production waters (EU obligatory work) have been taken over by the Ministry of Health (NVWA) with effect of 1 May 2014. This change has not led to material changes of the management system.

The monitoring and inspection in the Wadden Sea is carried out by the Wadden Unit of the Ministerie of Economic Affairs (Min. EZ). In 2014 it was decided that the Wadden Unit would cooperate with Rijkswaterstaat of the Ministry of Infrastructure and Environment (Min. I & M) in a regional implementation unit (Regionale Uitvoeringsdienst RUD). This change includes that inspectors of the Wadden Unit and Rijkswaterstaat share the available inspection vessels that operate in the Wadden Sea Area. In the Oosterschelde the monitoring and inspection will continue to be performed by fishery officers (Visserijkundig Ambtenaren VKA) of the Ministry of Economic Affairs.

6.2. CONVENANT TRANSITIE MOSSELSECTOR EN NATUURHERSTEL WADDENZEE

On 21 October 2008 the mussel fishery sector, the Dutch government fishery authorities and stakeholder NGO's have signed an agreement (Convenant Transitie Mosselsector en Natuurherstel Waddenzee) by which the seed fishery would gradually be replaced by collection of mussel seed using MZIs. The purpose of the mussel covenant is to allow the development of undisturbed littoral and sublittoral mussel beds in the Wadden Sea, for conservation purposes. The mussel farmers have agreed to cooperate with the Ministry and NGOs to achieve this goal, on the condition that seed supply through other techniques would be maintained.

Under the first stage of this agreement, 20% of subtidal mussel beds are excluded from the fishery. In 2012 when the mussel sector was able to compensate for this reduction by the production of seed on MZIs exceeding the trigger level of 5,500 tonnes, it was agreed that a second step of 20% would take place in 2013, amounting to a total exclusion from the fishery of 40%. These closures were implemented as part of the fishing plans for the spring and autumn mussel seed fisheries.

In 2014 the action plan for the transition (“Plan van Uitvoering Transitie Mosselsector”) was evaluated. It was concluded that the strategy of closing areas with mussel beds was leading to the closure of rather small areas and also that mussel beds had frequently disappeared again from these closed areas. It was thus agreed between the Covenant partners that the strategy of closing mussel beds would be amended to a strategy of closing larger condensed areas and that a next step (of around 10 %) will be taken in 2018. The definitive decision on this matter will be taken in 2017.

Under the general shellfish policy framework (Beleidsbesluit Schelpdiervisserij), areas of 500, 200 and 30 hectares were initially planned for MZI development in the Waddenzee, Oosterschelde and Voordelta respectively. At the first step 120 hectares in the Wadden Sea and 85 hectares in the Oosterschelde were actually allocated. For the second transition step it was agreed to double these areas to 240 and 170 hectares respectively and thus to a total of 410 hectares. In 2014 it was agreed that 60 hectares would be allocated in the Wadden Sea in 2014 and a second 60 hectares in 2015. For the Oosterschelde it was agreed to postpone the second step.

The amended action plan for the transition of the Dutch mussel sector (Plan van Uitvoering Transitie Mosselsector 2014-2018) also includes the agreement that the available area of mussel culture area (plots) will be optimized. In this framework it is planned to allocate an additional area of 270 hectares of mussel plots on an experimental basis in 2015.

6.3. NATURA 2000

The management plan for the Natura 2000 site Oosterschelde is still being drawn up and not implemented yet. Measures included in the current draft of the plan do not affect the mussel culture since it is an existing activity which is not considered to affect the conservation goals of the area.

6.4. ENFORCEMENT AND COMPLIANCE

The mussel PO operates an internal control and enforcement system with monitoring of fishing operations through a black box system that records vessel movements. In case of infringements fishermen can be fined by an independent commission (COMBO). The audit team has received the annual report for the years 2012 and 2013 of the COMBO. It is reported that in 2012 one company had seeded mussels outside a mussel plot in the Waddenzee and the company was sentenced with a fine of 65.000 Euro of which 30.000 conditional. In 2013 another company was fined for seeding outside a mussel plot (into another mussel plot) and received a fine of 7.500 Euro. The assessment team concludes that the internal monitoring and enforcement system is working effectively and that the infringements did not significantly affect the ecological footprint of the fishery.

7. CONDITIONS

7.1. CONDITION 1: HARVEST STRATEGY – INFORMATION AND MONITORING

Applicable to UoC 1, UoC 2, UoC 3 and UoC 4

Harvest Strategy	1.2.3 Information and monitoring
Condition	<p>Information about suspended seed mussel collectors (standing stock, harvested amounts) is available at the farm level. Once a year harvest data is collected from the farmers that are organised within the Producers Organisation, based on the information from the farmers. Farm level book keeping includes the amount of seed harvested from seed collectors and used for grow out. There is sufficient relevant information available related to seed harvest to support the harvest strategy. However, there are no protocols for the procedure and validation of independent data collection. As the data are critical for both impact assessment and progress in the transition process, and farmers may have conflicting interests in estimating the amount of seed they have collected with the MZIs it is important to have a reliable and independent estimate of the harvested amounts.</p> <p>Protocols for the procedure and validation of independent data collection must be written and implemented.</p>
Milestones	Year 1: written evidence of the development towards an independent data collection system.
Client Action Plan	<p>The ministry (LNV) demands a report of the harvested quantity from each license holder. License holders are obliged to inform the ministry about the expected days of harvesting of the MZI's.</p> <p>The Ministry checks during the harvesting at random the individual catches. The PO collects for the ministry from the license holders the reports with the information about the MZI systems and the quantity of suspended seed mussels which is harvested. The PO yearly prepares a report of the total harvested quantity for the ministry. The PO will check the reliability of the individual data by comparing them.</p> <p>This report is available for the research institutes</p>
Progress on Condition (Year 1)	Stock and harvest size of the seed mussels from suspended collectors are now being collected according to a protocol and annual reports on the harvest per area are produced under contract of the PO Mosselcultuur and made public (van Stralen, 2012.)
Conclusion Year 1 audit	Closed
Conclusion Year 2 audit	Condition closed, no further action required
Conclusion Year 3 audit	Condition closed, no further action required

7.2. CONDITION 2: STOCK ASSESSMENT

Applicable to UoC 1, UoC 2 UoC 3 and UoC 4

Stock Status	1.2.4. Assessment of stock
Condition	<p>The stocks of seed mussels and the mussels on the culture plots is regularly assessed. This assessment is appropriate for the stock as a whole and for the harvest control rule, and is evaluating stock status relative to reference points.</p> <p>Concerning the size of the suspended mussel culture (stock) and the influence of this practice on the total mussel stock some uncertainties remain. The major sources of this uncertainty are identified (2-60). The stock of seed collectors is assessed at the moment of harvest by the farmers. Data is collected and reported annually for the total amount of seed and checked by fishery inspectors. However there are no protocols for the measurements and there is no independent (peer) review of these data.</p> <p>An independent and ongoing monitoring program should be in place to determine the size of stock and harvest of suspended mussel seed in order to estimate the effects of the harvesting strategy on the wild stocks.</p>
Milestones	By second surveillance audit: written evidence of the implementation of an ongoing monitoring program to determine the stock and harvest in this fishery.
Client Action Plan	<p>The ministry (LNV) demands a report of the harvested quantity from each license holder. License holders are obliged to inform the ministry about the expected days of harvesting of the MZI's.</p> <p>The Ministry checks during the harvesting at random the individual catches. The PO collects the reports for the ministry from the license holders with the information about the MZI systems and the quantity of suspended seed mussels that is harvested. The PO prepares an annual report of the total harvested quantity for the ministry. The PO will check the reliability of the individual data by comparing them.</p> <p>This report is available for the research institutes.</p>
Progress on Condition (Year 1)	<p>Stock size of the seed mussels from suspended collectors is derived from annual reports on the harvest per area (van Stralen, 2012).</p> <p>However, a validation of the development of the stock size over the season is not yet available, hence the use of harvest data for stock assessment needs to be substantiated by second surveillance.</p>
Conclusion Year 1 audit	Condition remains open and is on target
Progress on Condition (Year 2)	The report on the production of MZI seed was presented to the team (van Stralen 2013a). The report describes MZI production in 2013 in Waddenzee en Oosterschelde. The client has stated that a report of production with MZI's will be written every year. Hence it can be concluded that there is written evidence of the implementation of an ongoing monitoring program to determine the stock and harvest in this fishery and the condition can be closed.
Conclusion Year 2 audit	Condition closed
Conclusion Year 3 audit	Condition closed, no further action required

7.3. CONDITION 3: GENETIC INFORMATION

Applicable to UoC 1, UoC 2, UoC 3 and UoC 4

Harvest Strategy	1.2.6 Genetic Information
Condition	<p>Information on the genetic characteristics of the mussel population is available on the basis of a synoptic survey, but no monitoring is carried out on the development of the populations and their genetic characteristics, that may be affected by imported mussels.</p> <p>A survey program for genetic profiling of the mussel population should be in place that is able to detect possible changes over a period time with a 5 years interval.</p>
Milestones	<p>Year 1: Provision of data and information encouraging the development of a survey program for genetic profiling for this fishery.</p> <p>Year 3: written evidence of implementation of a genetic survey program.</p> <p>Note that the requirement for the fishery to provide ‘written evidence of implementation of a genetic survey program’ was extended from end Year 3 to end Year 4 at the year 2 surveillance audit.</p>
Client Action Plan	The PO will discuss with the Ministry the responsibility for the extra analysis of the mussels in the culture areas for their genetic profile. This analysis must give information about the consequences of the governmental policy concerning the replacement of bottom seed fishery by MZIs on the genetic profile of the mussel populations in Dutch Waters.
Progress on Condition (Year 1)	By first surveillance the client explained that the discussion with the Ministry has taken place about a survey program. The PO Mossels together with the Ministry are now developing an action plan on how to achieve data on genetic characteristics of the mussel populations. In principle the protocol of Kijewski et al 2009 will be used. By second surveillance this issue will be discussed further
Conclusion Year 1 audit	Condition remains open and is on target
Progress on Condition (Year 2)	<p>The implementation of a genetic survey was discussed with the client during the audit. The client has prepared for a survey to cover both the Dutch and the German Wadden Sea.</p> <p>Further to the discussion in Section 5 above, however, it is possible that expanded sampling and analysis may be required to cover other certified fisheries from which mussels are translocated into the Oosterschelde (from Denmark, the UK and Ireland). On this basis, it does not make sense for the client to agree the scope of a survey before the assessment of these translocations has been completed (estimated by the end of March 2014). This gives very little time available for the client to agree and implement the survey before the Year 3 deadline for the closure of this condition (July 2014). On this basis, the audit team agreed that it was appropriate to extend the deadline on this condition by one year.</p> <p>The requirement for the fishery to provide ‘written evidence of implementation of a genetic survey program’ is therefore extended from end Year 3 to end Year 4.</p>
Conclusion Year 2 audit	Condition remains open and is on target
Progress on Condition (Year 3)	The Association of shellfish importers (Vereniging van Schelpdier Importeurs) commissioned the scientific bureau GIMARIS on the 19 th January to conduct a genetic survey of the genetic profiling of the Dutch Delta area and the Wadden Sea. The details of the survey are as follows:

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	<p><i>A survey program will be designed and conducted focusing on the genetic profiling of the wild mussel populations in the Dutch Delta region and the Dutch/German Wadden Sea, to enable the detection of changes in the genetic composition within these populations over time.</i></p> <p><i>As was also done in recent population genetics studies of mussels in the region (Groenenberg et al., 2011; and Kijewski et al., 2009, 2011), we propose to assess the genetic composition of the wild mussel populations in the Dutch Delta region and the Dutch/German Wadden Sea, using a selection of (mitochondrial and nuclear) DNA markers.</i></p> <p><i>Sample locations will be selected spread equally throughout the research regions. Sample collection will focus on assessing the genetic profile of the wild mussel populations that are present in the Dutch Delta region and the Dutch/German Wadden Sea. To ensure that the wild population is sampled, mussel seed will be collected where it settles, i.e. on the bottom and/or on mussel seed collectors. In addition samples will be collected from floating docks in harbours as the mussels that grow there, have certainly settled there from the wild.</i></p> <p><i>After assessing the genetic profile of the mussel populations in 2015 the results will be compared with the results of similar population genetic studies of mussels in the region (Groenenberg et al., 2011; and Kijewski et al. 2009, 2011), scanning for any significant changes in the genetic profile of the mussel populations over time. Additionally the genetic profile assessed for the mussel populations in 2015 can be compared with the genetic profile of mussel populations in 2012-2013. Close to a thousand mussels were collected by GiMaRIS during various projects in 2012/2013 throughout the Wadden Sea, and spread throughout the Dutch Delta region. They were collected from buoys and floating docks, assuring that they concern representatives of the wild mussel population. Each of these mussels was dissected, after which the mussel flesh was preserved on ethanol 96% for future DNA-analyses. The shells were also stored, each separately coded to be able to match them to the DNA sample.</i></p> <p><i>Time schedule:</i></p> <p><i>* February-March 2015: Assessment / collection of genetic data of mussels in the research area that is already present in genbank (based on all previous molecular studies).</i></p> <p><i>* March-May 2015: DNA-analyses of a selection of mussels collected throughout the area in 2012/2013.</i></p> <p><i>* April-June 2015: Sampling seed mussels throughout the region.</i></p> <p><i>* June-August 2015: Molecular analyses.</i></p> <p><i>* September 2015: Final report</i></p> <p>The client informed the team that the collection of samples has already commenced. The above provides evidence that the genetic survey programme is now being implemented. As such the team considered that progress against this condition was ahead of target and that the SG80 is level is now met. This condition can therefore be closed.</p>
Conclusion Year 3 audit	Condition closed
Evidence provided	Proposal and acceptance of proposal for study “Population genetics of wild mussel populations in the Dutch delta region and the Wadden Sea” by

	GIMARES.
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7.4. CONDITION 4: HABITAT INFORMATION

Applicable to UoC 3

Harvest Strategy	1.2.6 Genetic Information
Condition	<p>The fishery is unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm. Results of the ongoing research are required for further consideration. There is a research project going on to detect possible damage to the habitat at various spatial scales.</p> <p>Results of impact studies need to be taken into account to evaluate the effects of the seed fishery on the habitat types.</p>
Milestones	Year 2: Results of impact studies need to be taken into account to evaluate the effects of the seed fishery on the habitat types.
Client Action Plan	The PO uses and will use the results of scientific studies and recommendations in the appropriate assessments for the application of a license based on the Nature Conservation Act. The possible effects of seed fishery on the habitat types is part of the actual Probus study of which the results are expected in 2012. Intermediate results will be taken into account.
Progress on Condition (Year 1)	The results of the PRODUS study on the impact of mussel seed fishery on sublittoral nature values and habitats will be issued in March 2013. By second surveillance data will be available and this will be used as a basis for addressing this condition.
Conclusion Year 1 audit	Condition remains open and is on target
Progress on Condition (Year 2)	<p>As announced at the first surveillance audit, the long expected final report of the multi-annual Probus research study was published in May 2013. The Probus report provides the results of research that was ongoing at the time of the main assessment, with no data then available to the assessment team.</p> <p>The Probus research showed that immediately after the spring fishery, fewer mussels remained in the areas open to fishing compared with the closed areas. The differences between open and closed areas reduced over time, but after several years differences were still detectable. After the autumn fishery, conversely, no significant differences were found between open and closed areas. The autumn fishery targets areas known to be unstable (from which the mussels will be lost before spring). In these unstable areas, mussel seed beds disappeared at the same rate from the open and closed areas, and after several years almost no adult mussels remained in these areas. Out of two large wild beds closed to fishing in 2009 and 2010, one survived to 2012 and one disappeared.</p> <p>The client noted that these results will be taken into account in the management of the mussel seed fishery. It is important to note that mussel beds in more stable areas have been gradually excluded from the fishery – as of 2013 this concerns 40 % of these beds. The impact of fishing on these beds is detectable but apparently reversible, while the impact of the fishery on the less stable areas is not detectable.</p> <p>On this basis, the team concludes that there is now sufficient information to conclude that is highly unlikely that the mussel seed fishery, as it is managed through the mussel agreement (Mossel Convenant), reduces habitat structure and function to a point where there would be serious or irreversible harm.</p>

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Conclusion Year 2 audit	Closed
Conclusion Year 3 audit	Condition closed, no further action required

7.5. CONDITION 5: ECOSYSTEM INFORMATION

Applicable to UoC 1, UoC 2 and UoC 4

Ecosystem	2.5.3 Information monitoring
Condition	<p>Sufficient data continue to be collected to detect any increase in risk level (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures). Carrying capacity studies and spat fall seed collection data are needed before up scaling of the seed net collectors will take place.</p> <p>Quantitative information on the effects of increase in the seed mussel collectors on the carrying capacity and effect on the ecosystem need to be available and applied. Independent data collection of stock and harvest size, need to be in place.</p>
Milestones	Year 2: Quantitative information on the effects of increase in the seed mussel collectors on the carrying capacity and effect on the ecosystem need to be available and applied. Independent data collection of stock and harvest size, need to be in place.
Client Action Plan	The agreement (Covenant) to change from dredging for seed to seed collecting (transition) will be executed. The data collection of seed from MZI's is available and research is done on the effects on the carrying capacity and ecosystem. These results will be taken in account in the decision about up scaling of MZI's.
Progress on Condition (Year 1)	A research project on the impact of SMC's on the carrying capacity will be finalized in 2013. By second surveillance data from the project will be available for the audit.
Conclusion Year 1 audit	Condition remains open and is on target
Progress on Condition (Year 2)	<p>As was announced at the first surveillance audit, a study on the impact of the increase of the seed mussel collectors (MZI's) should have been finalised in 2013. The audit team has received the unpublished draft report of the monitoring plan for this impact assessment of MZI's for the period 2010-2013 (Kamermans et al., 2013). In the plan the approach to the research is laid out. One important aspect of the project is the estimation of the effect of the agreed transition from seed dredging to production of mussel seed on MZI's on the carrying capacity of the Wadden Sea and Oosterschelde.</p> <p>The monitoring plan is being implemented under the Natura 2000 framework, to ensure that the fishery is not having significant impacts on the conservation goals of the areas' Natura 2000 designations. During the audit the team also received the 2013 report on the production of seed mussels on MZI's in 2012 (van Stralen, 2013a).</p> <p>The team concluded on this basis that sufficient data are continuously being collected to estimate the impacts of the mussel transition on the carrying capacity of Waddenzee en Oosterschelde and therefore the condition can be closed.</p>
Conclusion Year 2 audit	Closed
Conclusion Year 3 audit	Condition closed, no further action required

7.6. CONDITION 6: COMPLIANCE AND ENFORCEMENT

Applicable to UoC 4

Fishery specific management system	3.2.3 Compliance and enforcement
Condition	<p>Currently there are no clear monitoring, control and surveillance measures in place that convincingly guarantee that Fishermen comply with all measures in the management system.</p> <p>Therefore at present the requirements for a monitoring, control and surveillance system that has demonstrated an ability to enforce relevant management measures, strategies and/or rules are not met.</p> <p>To improve the control, monitoring and enforcement system in such a way that the compliance with all measures in the management system is demonstrated.</p>
Milestones	Year 1: demonstrate compliance with all measures in the management system.
Client Action Plan	<p>Each processing and packing company has to give sufficient information about their livestock administration system in the Chain of Custody Certification. This system makes it possible to track each load. Not msc mussels have to be stored on marked (parts of the) rewatering plots.</p> <p>Each farmer has to inform the ministry, based on the license, about the culture plot(s) where imported mussels are relayed. A copy is send to the PO. The lot can be followed with the weekly check of the black box. From this plot no msc mussels can be fished during the period that the mussels are on this plot. The auction master is informed by the PO about the plots where imported mussel are farmed and will inform the buyers when the mussels are sold.</p>
Progress on Condition (Year 1)	<p>The system as described in the client action plan has been implemented. The regulations (reglementen) of the PO have been adapted and a “Regulation for the relaying of mussels origination from non-MSD production areas” has been imposed. This new regulation lays down that in the case that a processing company intends to import non-MSD mussels a notification has to be given to the PO. The culture plot where the mussels will be relayed will be marked as a non-MSD plot in the PO’s and the mussel auctions registration systems. The quantity of mussels relayed on the plot will also be registered. For every occasion that mussels are fished from the culture plots a registration document has to be filled. A copy will be send to the PO. Therefore all quantities harvested from all plots are registered. When the mussels are brought to the auction it is also registered on the purchasing document issued by the auction whether mussels are MSD or non-MSD. All mussel vessel movements are registered by the black box system. It can therefore be traced when fishing takes place on a non-MSD plot. The plot will remain a non-MSD plot until the whole quantity is harvested again. The PO conducts regular cross checks with the auction regarding the quantities harvested from the non-MSD plots. When all mussels are removed from a non-MSD plot a fishery inspector of the Ministry of EZ will conduct a check whether the plot is empty. Only after that check the plot can be remarked as a MSD plot.</p> <p>In the previous year only in two occasions non-MSD mussels were relayed in the Oosterschelde. One load from the German Wadden Sea and one from Menai Strait in the UK. The loads have been followed closely by the PO and the mussels have been landed to the auction as non-MSD mussels.</p>
Conclusion Year 1 audit	Closed

Conclusion Year 2 audit	Condition closed, no further action required
Conclusion Year 3 audit	Condition closed, no further action required

8. TRACKING AND TRACING OF FISH PRODUCTS

It was brought to the attention of the team that one company had seeded mussel from Lower Saxony to a plot in the Oosterschelde. Although these mussels were MSC certified in Germany, they lost this qualification when seeded in Dutch waters and therefore the PO has declassified the concerning mussel plot to a non-MSC status. After removal of the mussels the plot will have to be fished completely empty before this plot can regain its status as a MSC mussel plot again.

Note that separate arrangements have been made with the client on the issue of translocation from other MSC certified fisheries into the Oosterschelde. There will be a full assessment of the possible impact of translocations of MSC certified mussels to the Oosterschelde in 2015. Stakeholders will be kept informed of the proposed actions and their implementation, and will be invited to provide input, separate from this audit process. On this basis, this surveillance audit is not affected, and considers only the conditions placed on the fishery at the time of certification.

9. CONCLUSION AND CERTIFICATION RECOMMENDATION

Re-scoring of performance indicators at the third surveillance is summarized in the table below:

Condition	Principle	PI No.	Performance Indicator (PI)	UoC	Score Main Assessment	Score First Surveillance	Score Second Surveillance	Score Third Surveillance	Status open/closed
1	P1	1.2.3	Information & monitoring	all	75	80	80	80	closed
2	P1	1.2.4	Assessment of stock status	all	75	75	80	80	Closed
3	P1	1.2.6	Genetic information	all	75	75	75	80	Closed
4	P2	2.4.1	Habitat status	UoC3	60	60	80	80	Closed
5	P2	2.5.3	Ecosystem information	UoC 1~2~4	75	75	80	80	Closed
6	P3	3.2.3	Compliance & enforcement	UoC4	70	80	80	80	Closed

On the basis of the third surveillance audit it is concluded that the fishery's progress is considered to be **on target**. On the basis of the above, the Netherlands blue shell mussel fishery **should** retain its MSC certification for another year.

10. SURVEILLANCE SCORE

In accordance with the MSC Certification Requirements, the frequency of future surveillance visits was calculated for this fishery. The overall surveillance score is calculated by adding the scores from **Error! Reference source not found.** and matching those with the Surveillance Level in **Error! Reference source not found.**.

This fishery's score was calculated at 4, which implies a normal surveillance level with annual on-site surveillance audits.

Table 2. Criteria to determine Surveillance Score

Criteria	Surveillance Score	This Fishery
1. Default Assessment Tree used?		
Yes	0	2
No	2	
2. Number of conditions		
Zero conditions	0	0
Between 1 – 5 conditions	1	
More than 5	2	
3. Principle level Scores		
≥85	0	2
≤85	2	
4. Conditions on outcome PIs?		
Yes	2	0
No	0	
Total Score		4

Table 3. Surveillance level

Surveillance score (from Table C3)	Surveillance level		Years after certification or recertification			
			Year 1	Year 2	Year 3	Year 4
2 or more	Normal Surveillance		On-site surveillance audit	On-site surveillance audit	On-site surveillance audit	On-site surveillance audit & recertification site visit
1	Remote Surveillance	Option 1	Off-site surveillance audit	On-site surveillance audit	Off-site surveillance audit	On-site surveillance audit & recertification site visit
		Option 2	On-site surveillance audit	Off-site surveillance audit	On-site surveillance audit	
0	Reduced Surveillance		Review of new information	On-site surveillance audit	Review of new information	On-site surveillance audit & recertification site visit

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