

Marine Stewardship Council (MSC) 2nd Surveillance Audit Report

Basse Normandie Granville Bay whelk fishery

On behalf of

**The Comité Régional des Pêches Maritimes et des Elevages
Marins de Normandie**

Prepared by

Control Union Pesca Ltd

May 2020

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QA

Role	Signature and date
Originator:	HE 23/04/2020
Reviewer:	HJ 28/04/2020
Approver:	TT 04/05/2020

Glossary

Acronym	Definition
BESTCLIM	Buccin, Espece SenTinelle pour le CLIMat
CDPMEM	Comité Départemental des peches Maritimes et des Elevages Marins
COGECO	COopération dans la GEstion des COquillages
CPUE	Catch Per Unit Effort
CRPM-N	Comité Régional Pêches Maritimes et des Elevages Marins de Normandie
CUP	Control Union Pesca
DDTM	Direction Départementale des Territoires et de la Mer
ETP	Endangered, Threatened, and Protected (species)
GLM	Generalized Linear Model
ICES	International Council for the Exploration of the Seas
LPUE	Landings Per Unit Effort (DPUE – Débarquements Par Unité d’Effort in french)
MEC	ME Certifications Ltd
MECANOR	Amélioration de la gestion des Métiers du CASier en NORmandie et au NORd de la France
MLS	Minimum Landing Size
NFM	Normandie Fraicheur Mer
PI	Performance Indicator
SMEL	Synergie Mer et Littoral
TAC	Total Allowable Catch
UoA	Unit of Assessment
UoC	Unit of Certification

1 Executive Summary

This is the report of the year 2 annual MSC surveillance audit for the Basse Normandie Granville Bay whelk fishery.

The audit was undertaken by a team made up of Henry Ernst and Chrissie Sieben. The site visit was held in Granville on the 10th of March, where Henry met with the clients, the Comité Régional des Pêches Maritimes et des Elevages Marins (CRPM) Normandie, and Normandie Fraicheur Mer, as well as stakeholders including a representative from Synergie Met et Littoral, and the co-presidents of the whelk commission.

An update on the performance of the fishery was provided by the client, who noted that the warmer waters may be affecting whelk distribution and abundance in Granville Bay. Progress against condition raised at the initial certification audit were checked. One was deemed to be behind target, while all others were on target. One condition had been fully addressed at the year 2 milestone (at which point a score of 80 would be achieved if progress were to be on target), and the PI was rescored to reflect the changes made in the fishery, which resulted in the condition being lifted.

Overall, fishing effort has remained largely stable since last year. The effort reduction scheme is ongoing, and there is one fewer licence made available by the CRPM Normandie for whelk fishing. The annual LPUE has fallen below the trigger level, and as a result, management action was triggered. A whelk commission meeting was called soon after the LPUE results were published, and the unanimous decision to reduce daily quotas by 10% was taken.

Bycatch remains unchanged, as has the bait used in the whelk pots. Several new MPAs have been designated, and new regulations are set regarding trawl fisheries. These do not affect the client fishery, other than perhaps mitigating gear loss from overlapping fishing activities.

The wider management framework of this fishery has not changed. Despite Brexit having potentially important ramifications in the region, there had been no official change to the management framework in the region (the Granville Bay Treaty is still in place) at the time of writing.

Following consideration of all stakeholder inputs and new information provided to the team, the assessment team concludes that the fishery should remain certified against the MSC Standard.

2 Report Details

2.1 Surveillance information

1	Fishery name	
	Basse Normandie Granville Bay whelk fishery	
2	Surveillance level and type	
	Surveillance level 6	
3	Surveillance number	
	1st Surveillance	
	2nd Surveillance	x
	3rd Surveillance	
	4th Surveillance	
	Other (expedited etc)	
4	Proposed team leader	
	Name	Henry Ernst
	Areas of responsibility	Team Leader and Principle expert
	Competency criteria (Annex PC)	Henry obtained a MSci in marine biology from the University of Southampton. He has a broad background in marine research including inshore fisheries, functional marine ecology and aquaculture research. Prior to joining CU Pesca he was engaged in benthic invertebrate identification and biomass work with the National Oceanographic Centre, Southampton, United Kingdom. Henry has passed his team leader training course, undertaken three MSC surveillance audits as a team member and is a qualified ISO lead auditor. He has participated in the reassessment of the SARPC toothfish fishery, surveillance audits of the Compagnie des Pêches Saint Malo and Euronor cod and haddock and Scapeche, Euronor and Compagnie des Pêches de St Malo saithe. Henry has also undertaken several pre-assessments for CU Pesca in French-speaking countries. He has passed the traceability module of the online training as well as the MSC Team Leader online training, allowing him to meet competency criterion 6. in Table PC3. He therefore meets the team leader qualifications. Henry is also fluent in French, the language spoken by the fishery and stakeholders. This, combined with the aforementioned assignments with French fisheries meet criterion 5. of Table PC3. 3 Henry has completed the required Fishery Team Leader MSC training modules for the new V2.01 Fisheries Certification Requirements and obtained certification for the ISO 9001 Quality Management Systems

	<table border="1"> <tr> <td>Conflict of interest in relation to this fishery</td> <td>No conflict of interest has been identified for this fishery</td> </tr> <tr> <td>On-site or off-site</td> <td>On-site visit</td> </tr> <tr> <td>CV</td> <td>Available upon request</td> </tr> </table>	Conflict of interest in relation to this fishery	No conflict of interest has been identified for this fishery	On-site or off-site	On-site visit	CV	Available upon request						
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CV	Available upon request												
5	Proposed team members												
	<table border="1"> <tr> <td>Name</td> <td>Chrissie Sieben</td> </tr> <tr> <td>Areas of responsibility</td> <td>Principle expert</td> </tr> <tr> <td>Competency criteria (Annex PC)</td> <td> <p>Chrissie has a Master’s Degree in Marine Environmental Protection which she obtained at the University of Wales, Bangor, and specialises in marine and fisheries ecology, marine environmental impact assessments and sustainable fisheries. She was the MSC Fisheries Scheme Manager at ME Certification Ltd (which later became CU Pesca) up until December 2018. Previous to joining MEC, she worked as a fisheries consultant and marine ecologist on UK-based and international projects. Chrissie is now an independent assessor with over eight years’ experience with the MSC certification requirements and has acted as team leader and P2 assessor on a range of preassessments, surveillance audits and full assessments of demersal and pelagic fisheries in the, the Mediterranean, as well as the Atlantic, Indian, Southern, and Pacific Oceans. She also regularly participates in MSC training sessions and workshops. Chrissie speaks fluent French and Dutch in addition to English. She will act as the Team Leader for this assessment and will be responsible for Principle 2. Chrissie has successfully completed the MSC online training on the application of the Risk-Based Framework (RBF), FCRv2.0 and FCPv2.1. With over 10 years’ experience in marine fisheries ecology, she meets the following criterion in Table PC3: Fishing impacts on aquatic ecosystems. Chrissie has completed the MSC online Traceability training and previously worked as a Chain of Custody auditor for MEP. She therefore meets the Table PC3 criterion: Understanding the CoC Standard and CoC Certification Requirements. There are no conflicts of interest in relation to the fishery under assessment. Chrissie has completed the required Fishery Team Leader MSC training modules for the new V2.01 Fisheries Certification Requirements and obtained her ISO 19011 qualification.</p> </td> </tr> <tr> <td>Conflict of interest in relation to this fishery</td> <td>No conflict of interest has been identified for this fishery</td> </tr> <tr> <td>On-site or off-site</td> <td>Off-site</td> </tr> <tr> <td>CV</td> <td>CV available upon request</td> </tr> </table>	Name	Chrissie Sieben	Areas of responsibility	Principle expert	Competency criteria (Annex PC)	<p>Chrissie has a Master’s Degree in Marine Environmental Protection which she obtained at the University of Wales, Bangor, and specialises in marine and fisheries ecology, marine environmental impact assessments and sustainable fisheries. She was the MSC Fisheries Scheme Manager at ME Certification Ltd (which later became CU Pesca) up until December 2018. Previous to joining MEC, she worked as a fisheries consultant and marine ecologist on UK-based and international projects. Chrissie is now an independent assessor with over eight years’ experience with the MSC certification requirements and has acted as team leader and P2 assessor on a range of preassessments, surveillance audits and full assessments of demersal and pelagic fisheries in the, the Mediterranean, as well as the Atlantic, Indian, Southern, and Pacific Oceans. She also regularly participates in MSC training sessions and workshops. Chrissie speaks fluent French and Dutch in addition to English. She will act as the Team Leader for this assessment and will be responsible for Principle 2. Chrissie has successfully completed the MSC online training on the application of the Risk-Based Framework (RBF), FCRv2.0 and FCPv2.1. With over 10 years’ experience in marine fisheries ecology, she meets the following criterion in Table PC3: Fishing impacts on aquatic ecosystems. Chrissie has completed the MSC online Traceability training and previously worked as a Chain of Custody auditor for MEP. She therefore meets the Table PC3 criterion: Understanding the CoC Standard and CoC Certification Requirements. There are no conflicts of interest in relation to the fishery under assessment. Chrissie has completed the required Fishery Team Leader MSC training modules for the new V2.01 Fisheries Certification Requirements and obtained her ISO 19011 qualification.</p>	Conflict of interest in relation to this fishery	No conflict of interest has been identified for this fishery	On-site or off-site	Off-site	CV	CV available upon request
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Conflict of interest in relation to this fishery	No conflict of interest has been identified for this fishery												
On-site or off-site	Off-site												
CV	CV available upon request												
6	Audit/review time and location												
	10 th March 2020 at the Halle à marée de Granville												
7	Assessment and review activities												

	<p>During the audit, CU Pesca communicated with the client and any relevant stakeholders and used any available up to date information to assess and review;</p> <ul style="list-style-type: none"> • Any changes to the fishery and its management including those to management systems, regulation and relevant personnel assessments; • Any changes to the scientific base of information such as stock; • Reviewed progress against the five conditions associated with this fishery (PI 1.1.2, PI 1.2.3, PI 1.2.4, PI 3.2.1 and PI 3.2.4); • Any developments or changes within the fishery impact may impact on traceability and the ability to segregate MSC from non-MSC products; • Any other significant changes in the fishery.
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3 Background

3.1 Version details

Table 1. Fisheries programme documents versions

Document	Version number
MSC Fisheries Certification Process	Version 2.1
MSC Fisheries Standard	Version 2.01
MSC General Certification Requirements	Version 2.4.1
MSC Reporting Template	Version 2.01

3.2 Unit(s) of Assessment (UoA)

CU Pesca confirms that the fishery under audit remains within in the scope of the MSC Fisheries Standard (7.4 of the MSC Fisheries Certification Process v2.1):

- The target species is not an amphibian, reptile, bird or mammal;
- The fishery does not use poisons or explosives;
- The fishery is not conducted under a controversial unilateral exemption to an international agreement;
- The client or client group does not include an entity that has been successfully prosecuted for a forced or child labour violation in the last 2 years;
- The fishery has in place a mechanism for resolving disputes, and disputes do not overwhelm the fishery;
- The fishery is not an enhanced fishery as per the MSC FCP 7.4.6; and
- The fishery is not an introduced species-based fishery as per the MSC FCP 7.4.7.

CU Pesca confirms that the client group has submitted the completed ‘Certificate Holder Forced and Child Labour Policies, Practices and Measures Template’ prior to the start of this assessment.

The current Unit of Assessment (UoA) is given in Table 2.

Table 2. Unit(s) of Assessment (UoA)

Species	Whelk (<i>Buccinum undatum</i>)
Stock	Granville Bay
Geographical range of fishery	Granville Bay (Normandie exclusive zone in West Cotentin, plus shared Normandy/Brittany/Jersey zone as defined under the Granville Bay Treaty, plus zones A, B and C as defined under the Granville Bay Treaty for those Normandy vessels with the rights to fish in those areas).
Harvest method / gear	Whelk pot
Client group	Whelk fishermen from West Cotentin, Basse-Normandie, i.e. those with a current whelk permit issued by the CRPM-Normandie.
Other eligible fishers	None

This report outlines the process and outcome of the second annual surveillance audit for the Normandie Granville Bay whelk fishery.

The client for this assessment is the Comité Régional Pêches Maritimes et des Elevages Marins de Normandie (CRPM-N), and the certification process managed by Normandie Fraicheur Mer (NFM). The Unit of Certification (UoC) for this fishery is defined as whelk fishermen from West Cotentin, in what was formerly known as Basse-Normandie (this regional division no longer exists, as Basse Normandie and Haute Normandie have been merged to form the Normandie region), i.e. those with a current whelk permit issued by the CRPM, targeting whelks with whelk pots ('casiers bulot') in Granville Bay. The Granville Bay area is shared between Normandy, Brittany and Jersey, with a system of co-management in place for shared areas based on the Granville Bay Treaty. No other eligible fishers have been identified.

The fishery is only open to vessels <12m length and is based around day trips which all take place inside 12 nautical miles. In Granville bay, whelks are caught in coastal waters at depths shallower than 30-40m between Diélette and Granville as far as around Jersey.

The fishery was certified by ME Certifications Ltd (MEC), now Control Union Pesca (CUP), on the 13th September 2017 with five conditions and one recommendation, as indicated in Table 3 and

Table 4. Progress against conditions and recommendations is further discussed in Section 4.

Table 3. Summary of Assessment Condition prior to the year 2 surveillance audit

Condition number	Performance Indicator (PI)	Status	PI original score	PI revised score
1	1.1.2 - By the end of Year 3, the limit reference point should be set above the level at which the reproductive capacity of the stock is impaired.	Open	75	75
2	1.2.3 - By the end of Year 4, there should be a review of the data being used to monitor the fishery and stock status, with an appropriate statistical analysis carried out	Open	75	75

	to try as far as possible to reduce uncertainties associated with external variability or spatial variability in stock structure and dynamics and fishing pressure. The analysis may be used to inform future data gathering, such that data is gathered following a suitable statistical methodology where possible.			
3	1.2.4 - By the end of Year 3, the stock assessment approach should be peer-reviewed.	Open	75	75
4	3.2.1 - By the end of Year 3, there need to be explicit management objectives for both Principle 1 (stock) and Principle 2 (ecosystem). They do not have to be expressed in terms of stock biomass, but should be consistent with keeping the stock at a level of high productivity. The objectives could be at the level of the Basse-Normandie fishery or at the Granville Bay level.	Open	60	60
5	3.2.4 - By the end of Year 2, a formal research plan as a framework for guiding research should be prepared and adopted.	Open	70	70

Table 4. Summary of recommendations prior to the Year 1 Surveillance Audit

Nb	Recommendation	Status
1	The team recommends that any lost whelk pots be reported on so that this can be monitored by the CRPM-N/SMEL and any increase in risk to habitat structure and function can be determined	Open

3.3 Principle 1

The Normandie Granville Bay whelk (*Buccinum undatum*) fishery is a coastal fishery targeting whelks with pots (known as casiers) at a depth of less than 40 metres. This fishery operates at the southern boundary of the whelks' geographical range. Catches are generally lower in late summer and early autumn as whelks burrow to avoid the stress caused by higher water temperatures. The area in which the UoA fleet operates has not changed during certification (West Cotentin and Granville Bay waters) (Figure 1) (Sieben & Addison, 2019).

The harvest strategy described in the Year 1 surveillance report is still in place, and the reduction of fishing effort has continued since the last surveillance audit. The specific elements of the strategy are described in detail in (Sieben & Addison, 2019). The aim is to reduce the number of licences by 1 to 3 per year. In 2020, whelk quotas were reduced as a result of LPUE falling below the trigger level (see Section 3.3.3).

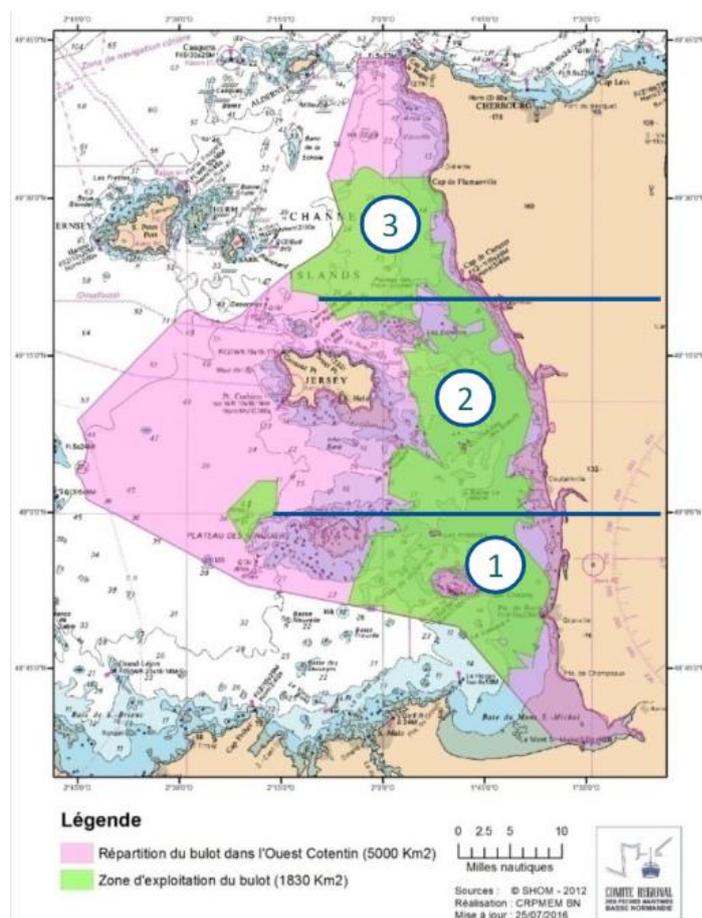


Figure 1. Distribution of whelk in West Cotentin waters (pink), and whelk fishing areas (green) which are divided into fishing zones. (Source: CRPM)

3.3.1 Vessel numbers

The strategy of gradual reduction has continued, with 66 licences in 2020 (one less than the year before). Since 2008, the licence reduction scheme has resulted in 14 fewer licences available to this fishery. The active fleet was reduced by 14 vessels over this period (Figure 2).

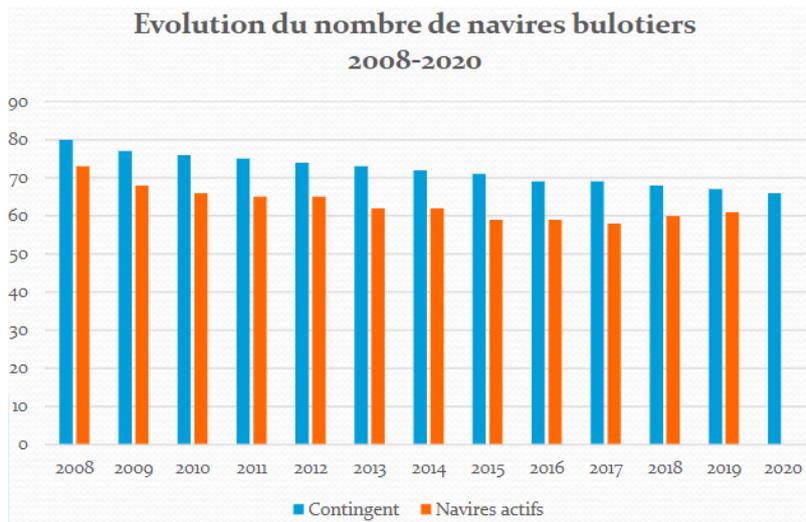


Figure 2. Number of licences and active vessels in the Normandie-Manche Ouest whelk fishery from 2008 to 2018 (Source: CRPM Normandie).

3.3.2 Landings

Two sources of landings data have been presented to the team: logbook records from CRPM (Figure 3) and from IFREMER (Figure 4). Both analyses show that the trend of stable landings around 6000 tonnes continued through 2018 (which is the last year of available data). The CRPM data are generally considered to be more reliable than the IFREMER dataset, as IFREMER compiles landings data from a select group of reference vessels that may not be representative of the entire fleet. The data for 2018 are likely more representative than usual since 59 vessels out of the ~60 active vessels were sampled. However, as in previous years, the CRPM data will be used as official landings data for the UoC, the latest figures are provided in Table 5. The main fishing areas of the Normandie fleet are in ICES rectangles 27E8 around Carteret, 27E7, and 26E8 around Granville. Fishing effort has remained fairly stable in areas 27E8 and 26E8, while effort has increased in 27E7, and decreased in 26E7.

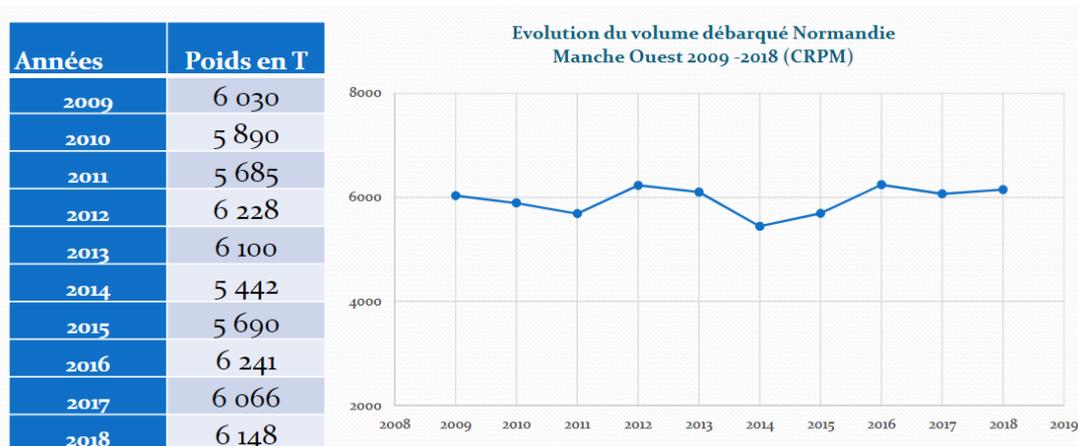


Figure 3. Landing of whelks in Normandie – Manche Ouest between 2009 and 2018. (Source: CRPM Normandie)

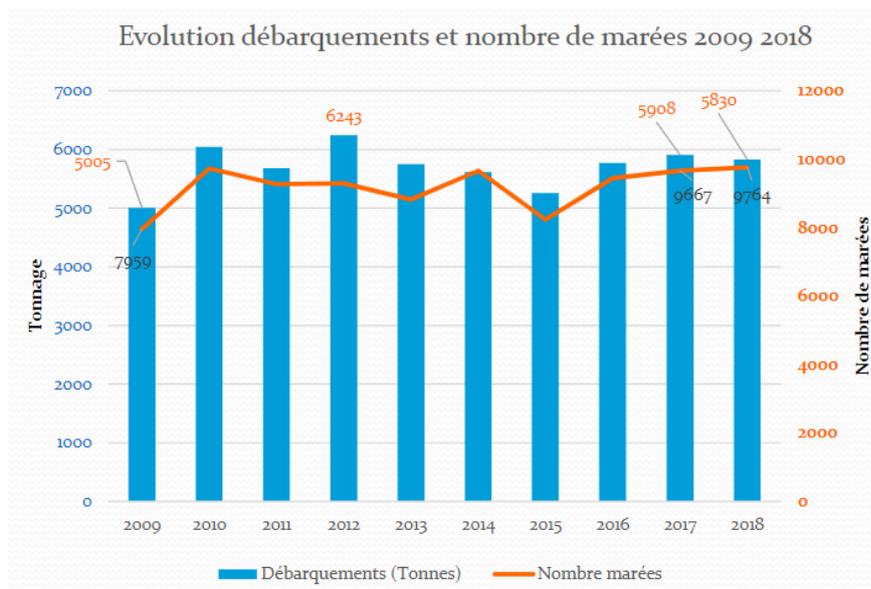


Figure 4. Landings of whelks in Normandie – Manche Ouest between 2009 and 2018, and number of trips sampled. (Source: IFREMER)

There is a daily quota (for three-man vessels and above it is 810 kg/vessel/day, and for two-man vessels it is 540kg/vessel/day) but this does not translate into a TAC.

Table 5. TAC and Catch data (Source: CRPM Normandie)

Total green weight catch by UoC	Year (most recent)	2018	Amount	6,148 tonnes
	Year (second most recent)	2017	Amount	6,066 tonnes

3.3.3 Landings per unit effort (LPUE)

The stock indicator for the whelk stock in Granville Bay is landings per unit effort (LPUE – DPUE in French), which can be used as a proxy for stock abundance. There are currently two data sources: a self-sampling scheme in a reference fleet of vessels which are considered representative of the whole fleet targeting this stock, and an observer programme headed by SMEL (Synergie Mer et Littoral).

LPUE has continued to decline since 2016 and is now below the trigger reference point (Figure 5). This is a reversal of the stock trend between 2009 and 2015. At the last surveillance audit, the LPUE was 109 kg / 100 pots, which is just on the trigger reference point adopted by the fishery. Management action has been taken in response to this (see Section 3.3.5). Work is currently being undertaken by SMEL to analyse the LPUE data and filter out the temporal “intra-annual” effects, as well as geographical variability (it is important to note that Sieben & Addison (2019) highlighted the importance of geographical variability in LPUE trends). The objective is to standardise the LPUE data in order to quantify annual variability and represent relative abundances (through a GLM model).

Catch per unit effort (CPUE) is a fraction lower than the previous year (Figure 6) (details on the collection of observer data can be found in Sieben & Addison (2019)). The proportion of whelks above the minimum landing size has risen slightly compared to last year and has reached the highest level across the time series. However the juvenile/undersized component of the catch has decreased significantly. The CPUE values for whelks above the minimum size are significantly higher than the LPUE (DPUE) data from the self-sampling programme. It should be noted that the sorting grids used

by fishermen sort for whelks of at least 48mm, which is above the MLS (45mm). The client has confirmed that the sorting grids used by the fishermen remain unchanged. While the overall CPUE for 2019 has decreased slightly since 2018, it remains relatively high when compared against the rest of the time series (Figure 6).

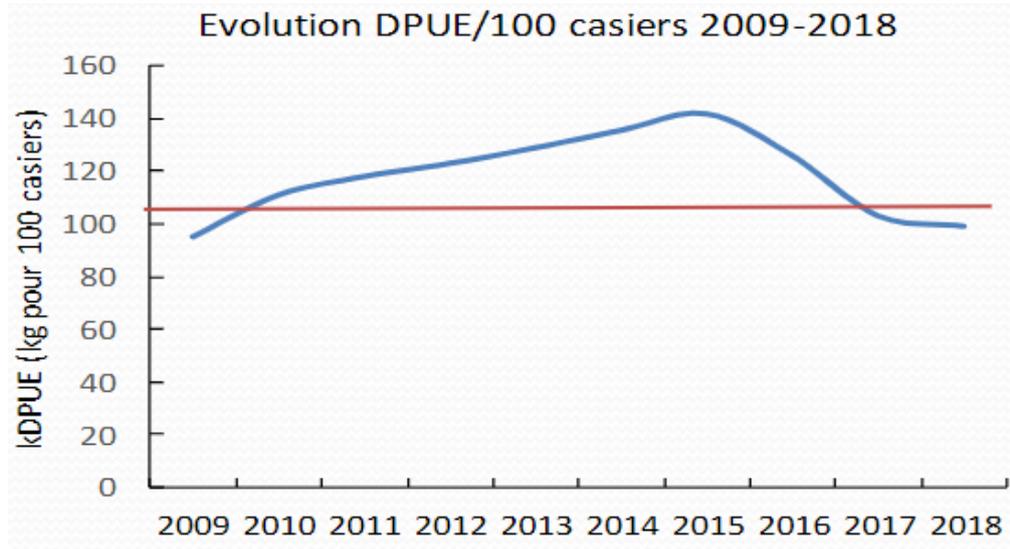


Figure 5. Trends in Landings per unit effort (LPUE) since from 2009-2018 (units are kg/ 100 pots). (Source: SMEL)

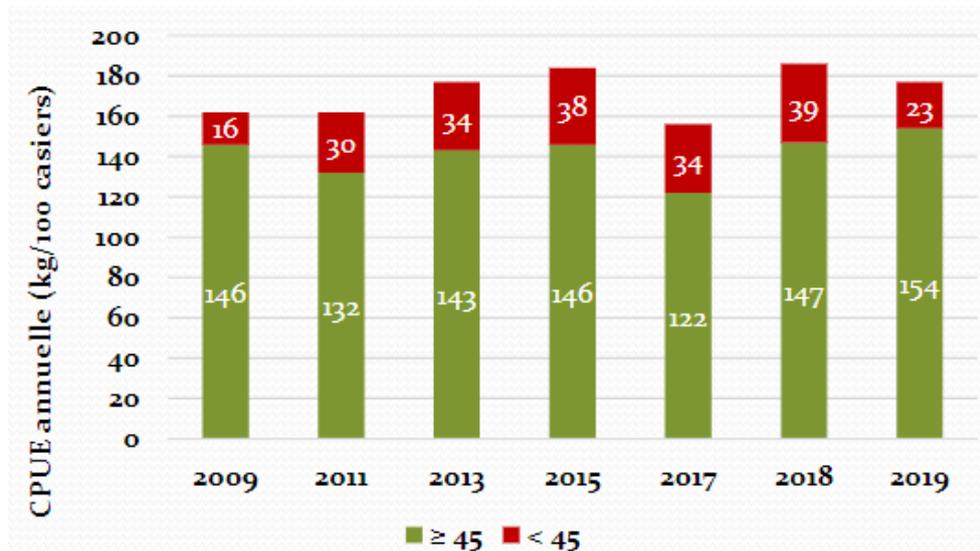


Figure 6. Catch per unit effort (CPUE) in kg / 100 pots for whelks above the minimum landing size (green) and for undersized whelks (red) based on sampling from five observer programmes carried out between 2009 and 2019. (Source: SMEL/CRPM Normandie)

3.3.4 Size composition of catch

Data on size structure of the catch are available from the observer programme, which only took place between March and May 2019. A wide size distribution was observed over the course of these three months (Figure 7). Juveniles were more commonly caught in March, while mature individuals made up most of the catch in April and May. Over the three-month period however, there was an even representation of juveniles and mature whelks.

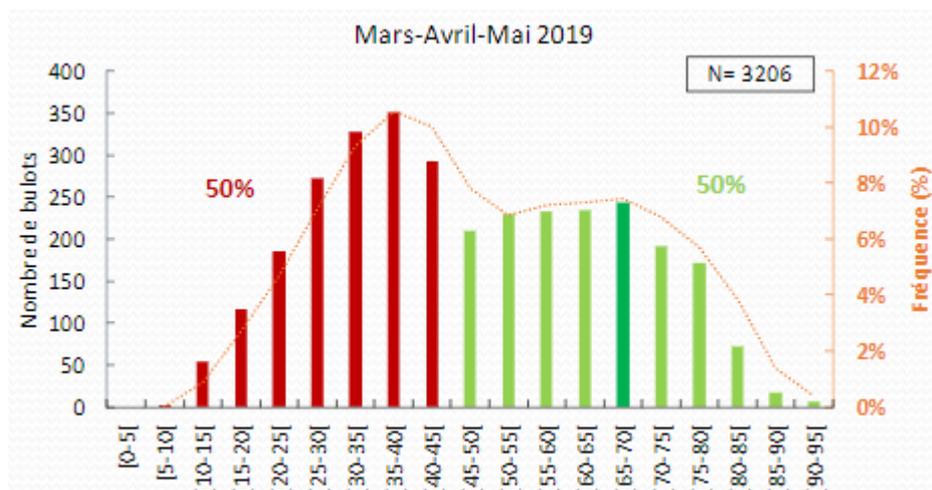


Figure 7. Size composition of the catch in 2019 (Zone 1) between March and May 2019. Green bars represent whelk over the minimum landing size, while red bars represent whelk under the 45mm limit. (Source: SMEL)

3.3.5 Stock assessment

Taken from Sieben and Addison (2019):

“Reference points are defined as a ‘seuil d’alerte’ (trigger reference point) and a ‘seuil d’alarme’ (limit reference point). The reference point levels are calculated using the self-sampling data because they have good spatial and temporal coverage and are therefore considered to be the most reliable stock indicators. The reference points are defined in terms of landings per unit effort (kg / 100 pots):

- *Seuil d’alerte – 109kg / 100 pots (the lowest mean annual LPUE in the time series from 2009-2015)*
- *Seuil d’alarme – 70kgs / 100 pots (the lowest mean monthly LPUE in the time series)*

If the LPUE drops below these reference points, there is an agreed list of measures which will be triggered which includes reduction in daily quotas, increase in minimum size, increase in spacing in the sorting grill, introduction of a maximum size, introduction of escape gaps in pots and a closed season. The chosen measure(s) will depend on the likely causes of the decline.”

As a result of the LPUE falling below the “Seuil d’alerte”, management action was taken to address the apparent decline of the whelk stock. The daily quota was decreased by 10%. This means that for three-man vessels, the daily quota has dropped from 900kg/vessel/day to 810kg/vessel/day, and for two-man vessels this has decreased from 600kg/vessel/day to 540kg/vessel/day. The three-man quota also applies to vessels carrying more than three crew. A potential difficulty was raised by a stakeholder during the site visit regarding the change in quota and LPUE data. There may be an issue in the future with regard to the declarations: a reduced quota will inevitably result in fewer pots being used by the fishermen, however according to the stakeholder, it is quite likely that the fishermen will fill in the declarations form using the old number of pots out of habit, severely impacting the LPUE data. The client has informed the team that thoroughly educating captains on these changes has been a major point for the CRPM since the change in quota came into effect (March 1st, 2020 – shortly after the LPUE results were shared with the managers).

In terms of research conducted on this stock, the BESTCLIM project (described in Sieben and Addison, 2019) started in 2016 is still running. Two new projects have been launched in 2020, one of which is

MECANOR (“Amélioration de la gestion des Metiers du CASier en NORmandie et au NORd de la France” – improving the management of pot fisheries in Normandy and the north of France) began on the 1st of January 2020. This project was borne out of a recent increase in fishing pressure on “grand crustacés” (large crustaceans) and whelks as a result of the conversion of a large number of netters to the pot fishery due to a decline in sole stock in the Eastern English Channel. Managers recognised that Normandie and Hauts de France were managing these species independently, and desired to harmonise management efforts across the entire French Channel seaboard. Managers also recognised that stock assessments at this scale would be key to underpin harmonised management. For this reason, the MECANOR project was launched, and the CRPMEM Normandie, as well as the SMEL (both represented at the site visit) are heavily involved in this project. The MECANOR project consists of three research objectives:

- compile all known information on the fisheries and target species (life cycle, habitats, growth rates, maturity, ageing studies, etc...) in order to identify information gaps, and highlight the differences in management strategies that are currently in place;
- develop assessment methodologies based on the available data, while testing several different stock assessment approaches, propose a stock assessment model that can be used to ascertain stock status reference points for the stocks concerned;
- share any and all information gathered on the two previous points, in order to identify, as a group, the most appropriate management action in order to achieve a sustainable exploitation of these stocks across the regions involved in the project. This includes sharing outcomes with fishermen.

The other project launched in 2020 is COGECO (“COopération dans la GEstion des COquillages” = cooperation in the management of shellfish). This project involves the Comité Départemental des Pêches Maritimes et des Elevages Marins d’Ille et Vilaine (CDPMEM 35– similar management structure to the CRPM(EM), but on the departmental rather than regional scale – there are several CDPMEM per region, as well as on CRPMEM), the CRPMEM Normandie, the CDPMEM 22, and the States of Jersey. The scope of this project is scallops and whelks in the Gulf shared by Normandie and Brittany. The aim of this project is to exchange knowledge and information on the whelk and scallop stocks in the region in order to harmonise data collection protocols and stock status reference points. This will allow managers to make informed decisions on managing fishing effort based on the status of the resource.

3.3.6 Principle 1 overall conclusion

Progress against conditions raised on Principle 1 Performance Indicators is described in Section 4. Following this surveillance audit, all three Principle 1 conditions remain open, and revising Principle 1 scores was not required.

3.4 Principle 2

For Principle 2, the situation remains as described during the initial assessment. Other than whelks, no other species are retained. The main discarded species is the netted dogwhelk ('nasse', *Nassarius reticulatus*) which was initially assessed with the Risk-Based Framework. No information was put forward during the surveillance which indicates either a change in discarded species or a change in the fishery's impact on the netted dogwhelk.

There has been no change in overall bait composition which continues to be made up of a mixture of crabs, dogfish and low-grade fish. The lesser-spotted dogfish ('roussette', *Scyliorhinus canicula*) is still the likely 'main' bait species (see Gascoigne et al., 2017 for discussion). The team reviewed the latest advice for this species which is a category 3 stock according to the ICES framework. The advice is based on biomass indices derived from four surveys used to provide an overall stock size indicator; the two latest index values (2017/18) are then compared with the five preceding values (2012/16). This comparison has indicated a reduction in the recent index value (1.74 from 1.97), leading to the more precautionary advice that landings should be no more than 2380 tonnes in each of the years 2020 and 2021 (compared to 3380 tonnes for 2018 and 2019). Despite this lower recent index value, stock size indicator overall is still on an upward trajectory and well above the lower levels reported prior to 2011 (see Figure 1 in ICES, 2019). On that basis, the team concludes there has been no material change requiring rescoring of this scoring element. In terms of the other bait species, site visit interviews have indicated an increased reliance on spider crab as demand for edible crab appears to exceed supply at times. This trend will be followed up on at the next surveillance, when a more detailed analysis of bait composition will be carried out.

Key ETP species and habitats of concern to the assessment are those designated under the EC Habitats Directive. Impacts on those species were not determined to be significant during the initial assessment and this situation has not changed. No interactions with ETP species were recorded in the SMEL observer reports. Although there are a few new Natura 2000 areas in the north and one new one planned in the south of Granville Bay, the management measures affect mobile gears only, which therefore do not restrict the whelk fishery. It may, however, help reduce pot losses due to gear conflicts which are a relatively regular occurrence in this fishery. According to stakeholders on site, 1.8% of deployed gear in 2019 was lost. To help with monitoring of gear loss, IFREMER Lorient are developing an App so that lost pots can be recorded. The project INDIGO, a collaboration between the Universities Bretagne Sud, Plymouth and Portsmouth, and research institutes IFREMER, CEFAS and SMEL, is also carrying out research into biodegradable materials in fishing gears. The project was launched in February 2020 and will run until 2023. The team will continue to monitor trends in pot losses and associated mitigation efforts at each surveillance; however, at this stage, the information provided was not considered to lead to a material change in outcome. No rescoring was therefore carried out.

There have been no other changes in gear use or fishing areas.

3.4.1 Principle 2 overall conclusion

Based on the information presented above, none of the changes in the fishery constitute a material change requiring rescoring of any of the Principle 2 performance indicators.

3.5 Principle 3

There have been no changes to the overarching framework. Véronique Legrand, the key CRPMEM staff member involved in the management and monitoring of this fishery, and of its progress through the MSC scheme has retired and has been replaced by Lucile Aumont.

There has been no change to the licensing system for the fishery which continues to aim for a gradual reduction of effort in the fishery. Generally, the main tool for this has been a reduction in the number of whelk permits; however, this year, a quota reduction was introduced to further reduce fishing effort.

The projects described in Section 3.3.5 are an indication of a growing trend of inter-regional cooperation for the French façade of the English Channel. At the time of writing, these projects are still in the data collection and compilation phase, but it has been made clear that the end goal of these projects is harmonised management across the entire seaboard (if this approach is found to be sensible with regard to stock structure). A more uniform management regime for this species would likely allow for changes to MLS to be considered, if needed. Today, the size of the whelk landed is a large part of quality perception for the consumer, if one region were to independently change their MLS the consumer perception would likely change for that region, potentially unfavourably. For this reason, MLS-based management measures have been met with resistance. A geographically wider approach to management could allow for such measures to be implemented if necessary.

The decision-making processes of the CRPMEM Normandie were evidenced in February and March 2020 when the latest LPUE data was analysed to show a stock under the trigger reference point. A meeting was called by the CRPMEM Normandie calling upon the members of the “commission bulot” which is a commission specifically dedicated to the management of the whelk fishery that includes fishermen, members of the CRPM, industry group representatives, and scientists. The commission took place on the 15th of February 2020, and the discussions were centred around the proposition of new management measures for the whelk fishery (L. Aumont, pers. Comm.)

Measures discussed include:

- Closed areas that are rotated annually
- The closure of the fishery every other Friday
- Quota reduction
- Lengthening the closed season in the winter
- Marking strings of pots
- Increasing the selectivity of the gear
- Increasing the MLS

Meeting notes from the commission meeting were provided to the team. The notes outline the members in attendance, the discussions surrounding each measure, as well as the conclusion of this meeting. It was the whelk commission proposed to reduce the quota by 10%. This proposal was then taken to the Council of the CRPMEM Normandie, where the proposed measure was set in a “délibération” (resolution). It is important to note that the decision to reduce the quota by 10% was unanimous.

Regarding compliance, the DDTM was able to share inspection figures with the team. In 2018, 49 controls were undertaken, three infractions were noted, all related to the retention of whelks below the minimum size. The team was unable to determine if the infractions were all tied to the same vessel or captain. In 2019, 32 inspections were carried out, with only one infraction noted, relating to fishing without authorisation. No further details were provided on the infractions. The team considers that four infractions over the course of two calendar years is not an indication of systematic non-compliance. The fact that management measures and restrictions are being proposed by the fishermen provides a degree of confidence that they will be respected.

3.5.1 Principle 3 overall conclusion

Progress against conditions raised against Principle 3 Performance Indicators is described in Section 4. Following this surveillance audit, one Principle 3 condition was closed at this surveillance audit, the revised scoring table can be found in Section 4.5.

3.6 Traceability

There have been no changes to the traceability in this fishery which remains as described in Gascoigne et al. (2017).

3.7 Harmonisation

The only MSC fishery that partially overlaps with the fishery under assessment is the Normandy and Jersey lobster fishery. As in the previous surveillance audit, no matters requiring harmonisation have been identified during this surveillance.

4 Results

4.1 Surveillance results overview

4.1.1 Summary of conditions

Table 6. Summary of conditions

Condition number	Performance Indicator (PI)	Status	PI original score	PI revised score
1	1.1.2 - By the end of Year 3, the limit reference point should be set above the level at which the reproductive capacity of the stock is impaired.	Open	75	75
2	1.2.3 - By the end of Year 4, there should be a review of the data being used to monitor the fishery and stock status, with an appropriate statistical analysis carried out to try as far as possible to reduce uncertainties associated with external variability or spatial variability in stock structure and dynamics and fishing pressure. The analysis may be used to inform future data gathering, such that data is gathered following a suitable statistical methodology where possible.	Open	75	75
3	1.2.4 - By the end of Year 3, the stock assessment approach should be peer-reviewed.	Open	75	75
4	3.2.1 - By the end of Year 3, there need to be explicit management objectives for both Principle 1 (stock) and Principle 2 (ecosystem). They do not have to be expressed in terms of stock biomass, but should be consistent with keeping the stock at a level of high productivity. The objectives could be at the level of the Manche Department level fishery or at the Granville Bay level.	Open	60	60
5	3.2.4 - By the end of Year 2, a formal research plan as a framework for guiding research should be prepared and adopted	Closed	70	80

4.1.2 Recommendations

Nb	Recommendation	Status
1	The team recommends that any lost whelk pots be reported on so that this can be monitored by the CRPM-BN/SMEL and any increase in risk to habitat structure and function can be determined	Open

4.2 Conditions

Table 7. Condition 1

Performance Indicator	1.1.2																								
Score	75																								
Condition	By the end of Year 3 the limit reference point should be set above the level at which the reproductive capacity of the stock is impaired.																								
Milestones	Year 1: Review of options; discussion with stakeholders. Score: 75 Year 2: Proposal put forward for a suitable limit reference point level. Score: 75 Year 3: Limit reference point agreed and implemented. Score: 80																								
Client action plan	See Table 9 for Client Action Plan for Conditions 1 and 2.																								
Progress on Condition (Year 1)	<p>The Client has had discussions with IFREMER and other stakeholders reviewing the options for revision of the reference points including the limit reference point (LRP). Stakeholders agreed that the current LRP as expressed in terms of monthly LPUE (kgs/100 pots) from the self-sampling scheme is inappropriate as the trigger reference point is expressed in terms of annual LPUE. Initially two approaches to setting reference points have been proposed. Firstly, analysis of LPUE data by IFREMER suggested that 110 kg /100 pots would be a suitable trigger point below which additional management measures would be triggered to ensure that the LRP is not approached. A standard approach is to set a trigger level at 1.4 x the LRP, and the level corresponding to Maximum Sustainable Yield (MSY) as 2 x the LRP. Assuming a trigger point of an annual LPUE of 110 kg /pots as an appropriate trigger level, this would provide values of reference points as follows:</p> <table border="1"> <thead> <tr> <th>Reference point</th> <th>Kg / 100 pots</th> <th>Definition</th> </tr> </thead> <tbody> <tr> <td>Target (MSY)</td> <td>160</td> <td>2.0 x LRP</td> </tr> <tr> <td>Trigger</td> <td>110</td> <td>1.4 x LRP</td> </tr> <tr> <td>Limit</td> <td>80</td> <td>LRP</td> </tr> </tbody> </table> <p>An alternative approach is to use the method used in invertebrate fisheries in Canada where the time series of the stock indicator is used to set target (MSY), trigger and limit reference points. The LRP is set at the lowest observed point in the time series, i.e. a point from which the stock has demonstrably recovered and can therefore be considered to be above the point at which recruitment would be impaired, and the trigger and target reference points are then set based on the range of values observed over a specific time period. For the whelk fishery preliminary values for the reference points were set as follows:</p> <table border="1"> <thead> <tr> <th>Reference point</th> <th>Kg / 100 pots</th> <th>Definition</th> </tr> </thead> <tbody> <tr> <td>Target (MSY)</td> <td>136</td> <td>80th percentile of observed values</td> </tr> <tr> <td>Trigger</td> <td>114</td> <td>40th percentile of observed values</td> </tr> <tr> <td>Limit</td> <td>95</td> <td>Lowest observed point</td> </tr> </tbody> </table> <p>It should be stressed that the values suggested in both approaches are purely to demonstrate possible approaches and options and are not formal proposals for the whelk fishery. The audit team considered that the 1st year milestone had been met.</p>	Reference point	Kg / 100 pots	Definition	Target (MSY)	160	2.0 x LRP	Trigger	110	1.4 x LRP	Limit	80	LRP	Reference point	Kg / 100 pots	Definition	Target (MSY)	136	80 th percentile of observed values	Trigger	114	40 th percentile of observed values	Limit	95	Lowest observed point
Reference point	Kg / 100 pots	Definition																							
Target (MSY)	160	2.0 x LRP																							
Trigger	110	1.4 x LRP																							
Limit	80	LRP																							
Reference point	Kg / 100 pots	Definition																							
Target (MSY)	136	80 th percentile of observed values																							
Trigger	114	40 th percentile of observed values																							
Limit	95	Lowest observed point																							
Progress on Condition (Year 2)	The Year 2 semester 1 milestones have been addressed by the client through the Bestclim project. Indeed, data from 2009-2014 were analysed in several ways. A preliminary comparison of the landings																								

data with sea surface temperature (SST) was undertaken, there appears to be a link between SST and catch rates, with catches being significantly higher at low temperatures (Figure 8)

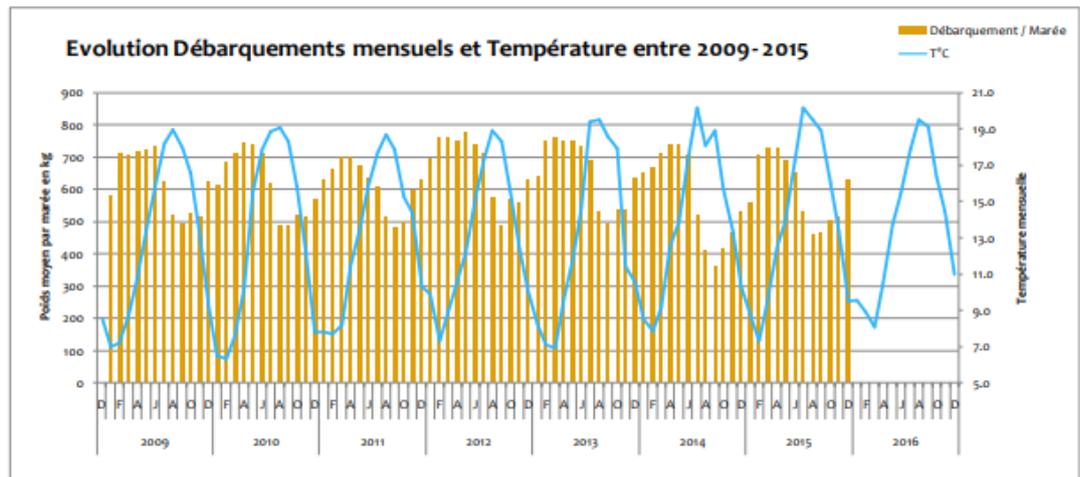


Figure 8. Relation between landings (kg/trip) and temperature from 2009-2015. (Source: SMEL, CRPM Normandie, Université Caen - BOREA, IFREMER – Bestclim project).

The relation between monthly average CPUE and temperature were further investigated in the Bestclim project (Figure 9).

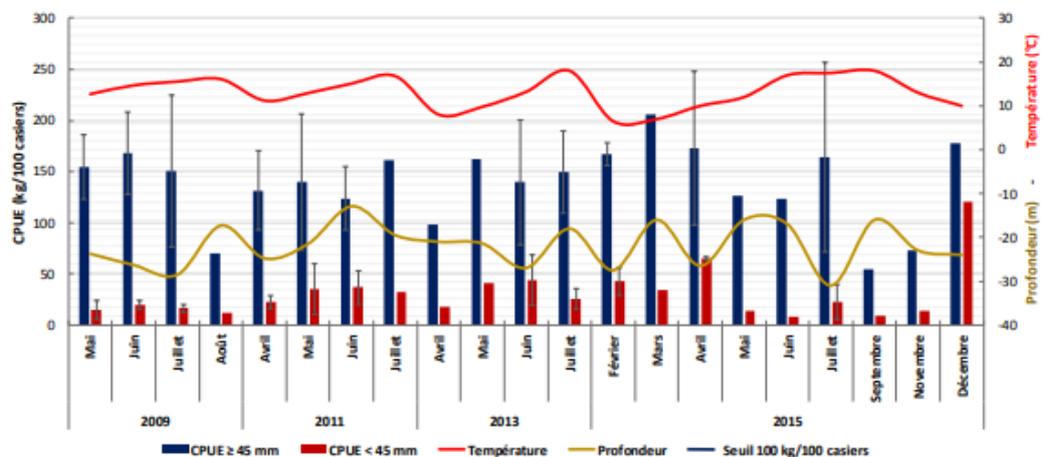


Figure 9. Monthly trends in CPUE for selected months between 2009-2015, also plotted are average temperature and depth fished. (Source: SMEL, CRPM Normandie, Université Caen - BOREA, IFREMER – Bestclim project).

Beyond compiling and comparing CPUE data with environmental data, the Bestclim project also included efforts in standardising the LPUE data, through several models. A Generalised Linear Model (GLM) was run using self-sampling LPUE data (from the 2009-2015 self-sampling programme). The main objective was to quantify the “Year” effect in order to represent annual changes in abundances. Preliminary results indicate that annual LPUE, filtered of seasonal, vessel, and area effects, have been increasing regularly from 2009 to 2015 (see Figure 10).

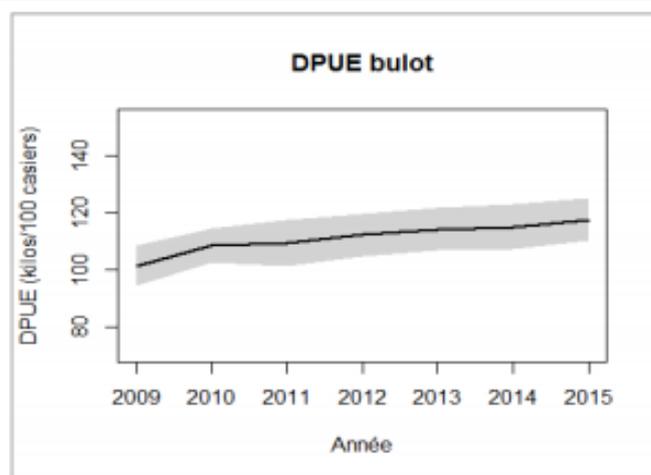


Figure 10. LPUE (=DPUE) estimates between 2009 and 2015. (Source: SMEL, CRPM Normandie, Université Caen - BOREA, IFREMER – Bestclim project)

A full report of the Bestclim project can be found here: <https://archimer.IFREMER.fr/doc/00422/53394/>.

The completion of the Bestclim project means that the semester 1 objectives of the year 2 milestone are met (see

Table 9).

The continuous monitoring and data collection component of the year 2 milestone has been met, as the client and stakeholders were able to present more recent LPUE data from the year 1 audit.

The client has confirmed that the findings of the Bestclim project were not discussed at the whelk commission meeting that took place in February (as it was understandably deemed more pertinent to dedicate this commission meeting to deciding upon management measures to respond to the LPUE value falling below the trigger point). As such, the objective for the second semester of the year 2 milestone cannot be deemed to be met. Though the majority of the objectives for the year 2 action plan have been met and different options for setting the limit reference point have been explored, the year 2 milestone stating “proposal put forward for a suitable limit reference point level” cannot be deemed to be met as these options have not been proposed at the whelk commission, which is the furnace of the decision making process in this fishery.

Status	Behind target. By the year 3 audit, the client must have a proposal put forward for a suitable limit reference point. Regarding the year 3 milestone, the proposal must lead to the new limit reference point being agreed by stakeholders and implemented into the management framework of this fishery.
Additional information	-

Table 8. Condition 2

Performance Indicator	1.2.3
Score	75

Condition	By the end of Year 4, there should be a review of the data being used to monitor the fishery and stock status, with an appropriate statistical analysis carried out to try as far as possible to reduce uncertainties associated with external variability or spatial variability in stock structure and dynamics and fishing pressure. The analysis may be used to inform future data gathering, such that data is gathered following a suitable statistical methodology where possible.
Milestones	Year 1: Review of the dataset, first attempt at analysis. Score: 75 Years 2-3: On-going review. Score 75 Year 4: establishment of a long-term analysis protocol as appropriate. Score: 80
Client action plan	See Table 10 for Client Action Plan for Conditions 1 and 2.
Progress on Condition (Year 1)	IFREMER has been conducting an initial analysis to review sources of LPUE data (which is the key indicator of stock status) and methods for standardising LPUE data in relation to year, fishing area and other variables. This work forms part of BESTCLIM, a multi-institute project, whose objectives include standardising LPUE data from the fishery and evaluating the robustness of stock assessment methodologies for data-limited stocks. The analysis is in the process of being updated with LPUE data up to 2018, a time period during which LPUE has declined. The analysis is expected to be completed and published in 2019. The audit team concluded that the dataset had been reviewed and an initial analysis undertaken, and therefore the 1 st year milestone had been met.
Progress on Condition (Year 2)	The COGECO project, launched in 2020 aims to harmonise data collection methods (in order to harmonise management) and compile all existing fisheries data across the Brittany and Normandy. This project aims to pick up where the Bestclim project left off. Further, the project will include Brittany data. See condition 1 Progress on Condition (Year 2) rationale for further details on the Bestclim project. Whelk data from the Sacrois dataset (provided by IFREMER) was sorted by vessels specialising in whelk (excluding mixed fisheries – cuttlefish trap fisheries data caused unacceptable levels of variability) over certain periods of the year, in such the process of developing a reference fleet has begun. Verification and validation of the landings data was undertaken so that fishing effort per area could be more accurately determined and followed in the future. The only action that remains unfulfilled from the year 2 client action plan (which covers both conditions 1 and 2) was the presentation of the results during the whelk commission. Given that the monitoring and data collection has continued (the completion of the Bestclim project and the launch of the COGECO project), the team believes that on-going review of the available datasets is taking place. For this reason, progress on Condition 2 is on target.
Status	On target
Additional information	-

Table 9. Client Action Plan for Conditions 1 and 2

Année 1 (Year 1)	Action
Premier semestre	Recensement des différentes informations existantes (fiche de pêche, données criées, données SMEL, bateaux référents, IFREMER....) Fixer la périodicité de recueil des données Review of the various existing information sources (logbook, auction data, SMEL data, reference fleet, IFREMER)

	Fix the periodicity of data collection
<p>En continu (selon périodicité définie)</p> <p>First semester Continuous (according to defined frequency)</p>	<p>Suivi et recueil des données</p> <p>Monitoring and data collection</p>
Année 2 (Year 2)	
<p>Semestre 1 (Semester 1)</p>	<p>Analyse statistique des données (2009- 2014) et recherche et validation des données les plus pertinentes pour un meilleur suivi de la pêche</p> <p>Tentative de définir un indice standardisé sur la base des données pleinement validées (Bestclim)</p> <p>Commencement du revue des points de références avec l'indice 'Bestclim'</p> <p>Statistical analysis of data (2009- 2014) and research and validation of the most relevant data for better monitoring of the fishery</p> <p>Attempt to define a standardized index on the basis of fully validated data (Bestclim)</p>
<p>En continu (selon périodicité définie)</p> <p>Continuous (according to defined frequency)</p>	<p>Suivi et recueil des données</p> <p>Monitoring and data collection</p>
<p>Semestre 2 (Semester 2)</p>	<p>Présentation des premiers résultats à la Commission Bulot y inclus la revue des niveaux des points de références. Si la revue montre que Dlim est au-delà du PRI, pas besoin de changer. Sinon, discussion sur nouvelle définition du Dlim.</p> <p>Presentation of the first results to the Commission Bulot</p>
Année 3 (Year 3)	
<p>Semestre 1 (Semester 1)</p>	<p>Analyse statistique des données (de l'année 2) les plus pertinentes retenues en vue de pondérer l'indice d'abondance.</p> <p>Statistical analysis of data (year 2) retained as most relevant to inform on index of abundance.</p>
<p>En continu (selon périodicité définie)</p> <p>Continuous (according to defined frequency)</p>	<p>Suivi et recueil des données pertinentes, notamment les données de 2000 à 2008 (récupérées auprès de l'IFREMER)</p> <p>Monitoring and collection of relevant data, including data from 2000 to 2008 (obtained from IFREMER)</p>
<p>Trimestre 4 (4th Quarter)</p>	<p>Bilan. Présentation et validation à la Commission Bulot, puis information des parties prenantes au JAC. Decision sur nouveau Dlim, si besoin.</p>

	Overview and validation at the Commission Bulot, then presentation to stakeholders at JAC
Année 4 (Year 4)	
Semestre 1 (Semester 1)	<p>Analyse statistique des données (de l'année 3 et historiques) Mise en place du suivi par le biais de l'indice d'abondance standardisé après avoir affiner cet indice d'abondance.</p> <p>Statistical analysis of data (year 3 and historical) Implementation of monitoring through standardized abundance index after having refined this index of abundance.</p>
En continu (selon périodicité définie) Continuous (according to defined frequency)	<p>Suivi et recueil des données Monitoring and data collection</p>
Trimestre 4 (4th Quarter)	<p>Bilan. Présentation et validation à la Commission Bulot, puis informations des parties prenantes au JAC Overview and validation at the Commission Bulot, then presentation to stakeholders at JAC</p>
Année 5 (Year 5)	
Semestre 1 (Semester 1)	<p>Analyse statistique des données (de l'année 4)- suivi de l'indice Statistical data analysis (year 4) and monitoring of index</p>
En continu (selon périodicité définie) Continuous (according to defined frequency)	<p>Suivi et recueil des données Monitoring and data collection</p>
Trimestre 4 (4th Quarter)	<p>Bilan. Présentation et validation à la Commission Bulot, puis présentation aux parties prenantes lors du JAC Overview and validation at the Commission Bulot, then presentation to stakeholders at JAC</p>

Table 10. Condition 3

Performance Indicator	1.2.4
Score	75
Condition	<p>Original condition: By the end of Year 3, the stock assessment approach should be peer-reviewed.</p>

	<p>Revised condition at Year 1:</p> <p>By the end of Year 4, the stock assessment approach should be peer-reviewed.</p>
<p>Milestones</p>	<p>Original milestones:</p> <p>Year 1: Commission and undertake peer review. Score: 75</p> <p>Year 2: Review conclusions of the review, evaluate if changes are required to the stock assessment approach. Score: 75</p> <p>Year 3: Agree and implement revised approach if necessary. Score: 80</p> <p>Revised milestones at Year 1:</p> <p>Year 2: Review results of current work on revising reference points and standardising data, and revise stock assessment approach as necessary. Score: 75</p> <p>Year 3: Commission and undertake peer review of stock assessment. Score: 75</p> <p>Year 4: Following peer review, revise stock assessment approach as required. Score: 80</p>
<p>Client Action plan</p>	<p>Original Client Action Plan:</p> <p>Year 1 – Discussion on formation of new ‘review group’ for data limited species</p> <p>Year 2 – Formation of group</p> <p>Year 3 – First meeting of group; presentation of whelk assessment for review and comment</p> <p>Revised Client Action Plan at Year 1:</p> <p>Year 2:</p> <p>Based on the different types of assessment, define the best option for peer review of the stock assessment.</p> <p><i>Sur la base des différents travaux réalisés définir la meilleure option pour l'examen peer review de l'évaluation du stock</i></p> <p>Year 3 :</p> <p>Assign a third-party expert to achieve the peer review. Completion of the peer review.</p> <p><i>Designer un expert tiers pour réaliser la peer review. Réalisation de la peer review.</i></p> <p>Year 4 :</p> <p>Following the review of this assessment, if necessary, revise the method for assessing the whelk stock.</p> <p><i>Suite à l'examen de cette évaluation, réviser si nécessaire la méthode d'évaluation du stock de bulot.</i></p>
<p>Progress on Condition (Year 1)</p>	<p>A Working Group has been set up for the Bay of Granville mollusc fisheries, and approaches for data limited species have been evaluated within IFREMER. The Client has therefore undertaken what was required under the Client Action Plan. However, the audit team noted that the condition required the stock assessment to be peer-reviewed by the 3rd surveillance audit, but that the milestones did not match the condition with the 1st year milestone requiring the peer review to have been commissioned</p>

	<p>and undertaken. In practice, therefore the 1st year milestone had not been met. Research is currently underway to develop a methodology for standardising LPUE data, which is the key stock indicator, and reference points are also under review. The audit team concluded therefore that the peer review of the stock assessment should be carried out when the revised stock assessment approach is in place. The condition and milestones have therefore been rewritten as follows:</p> <p><u>Condition:</u> By the end of Year 4, the stock assessment approach should be peer-reviewed.</p> <p><u>Milestones:</u></p> <p>Year 2: Review results of current work on revising reference points and standardising data, and revise stock assessment approach as necessary</p> <p>Year 3: Commission and undertake peer review of stock assessment</p> <p>Year 4: Following peer review, revise stock assessment approach as required.</p> <p>A revised Client Action Plan was submitted.</p>												
Progress on Condition (Year 2)	<p>Through the Bestclim project (full report: https://archimer.IFREMER.fr/doc/00422/53394/), different model approaches were trialled (GLM, SPiCT) the validation and analysis described in the condition tables for Conditions 1 and 2 were undertaken. Based on this work the preliminary decision has been to follow the reference points below (taken from the condition 1 table), following the initial analysis conducted by IFREMER. Thus, the current work on the stock has been reviewed (and further work is being undertaken), several models have been tested, and the approach has not been deemed to require revision. As such the year 2 milestone for this condition has been met, and progress against this condition is on target.</p> <table border="1"> <thead> <tr> <th>Reference point</th> <th>Kg / 100 pots</th> <th>Definition</th> </tr> </thead> <tbody> <tr> <td>Target (MSY)</td> <td>160</td> <td>2.0 x LRP</td> </tr> <tr> <td>Trigger</td> <td>110</td> <td>1.4 x LRP</td> </tr> <tr> <td>Limit</td> <td>80</td> <td>LRP</td> </tr> </tbody> </table> <p>Potential avenues for the peer review of the stock assessment have been identified, specifically going through IFREMER staff involved in the assessment of the lobster stock currently certified in the Normandy Jersey lobster fishery.</p>	Reference point	Kg / 100 pots	Definition	Target (MSY)	160	2.0 x LRP	Trigger	110	1.4 x LRP	Limit	80	LRP
Reference point	Kg / 100 pots	Definition											
Target (MSY)	160	2.0 x LRP											
Trigger	110	1.4 x LRP											
Limit	80	LRP											
Status	On target.												
Additional information	-												

Table 11. Condition 4

Performance Indicator	3.2.1
Score	60
Condition	By the end of Year 3, there need to be explicit management objectives for both Principle 1 (stock) and Principle 2 (ecosystem). They do not have to be expressed in terms of stock biomass, but should be consistent with keeping the stock at a level of high productivity. The objectives could be at the level of the Basse-Normandie fishery or at the Granville Bay level

Milestones	<p>Year 1: Start a process to agree a management target via the Commission Bulot, the JAC/JMC, or both, or some other process as appropriate. Score: 60</p> <p>Year 2: Agree set of objectives, consistent with maintaining the stock at a level of high productivity and minimizing ecosystem impacts. Score 60</p> <p>Year 3: Implement additional management, if required, to ensure that the target can be met. Score: 80</p>
Consultation on condition	<p>See table below</p>
Progress on Condition (Year 1)	<p>As explained for condition 1, the Client has had discussions with IFREMER and other stakeholders (including those at the wider Granville Bay level) reviewing the options for revision of the reference points and this work is clearly still ongoing. In parallel, the CRPM Normandie have carried out a review of those objectives deemed key to the management of the fishery. These objectives are yet to be formally agreed upon but are provisionally listed as follows:</p> <ul style="list-style-type: none"> - Explicit objective consistent with maintaining the stock at a level of high productivity (MSY equivalent); - Target of reduction in fishing effort is adapted to the resource: continued reduction in number of fishing licenses, closed periods and limited number of fishing days at 225 days at sea per year. - ‘Cohabitation’ with other passive or mobile gears so that gear loss is avoided; - Protection of habitats and waste at sea; - Control objective: Every year, the CRPM transmits the control objectives to the administration (list of licenses, priority measures to be controlled ...)
Progress on Condition (Year 2)	<p>The objectives listed above have been elaborated, acted upon (in some cases) and discussed at the whelk commission organised by the CRPM Normandie.</p> <p>The objectives listed below can be considered formally agreed:</p> <ol style="list-style-type: none"> (1) Productivity objective: - define an equivalent to MSY for the whelk stock → an option being considered is to set this as the highest stock status value in the time series (MECANOR, COGECO projects are underway to achieve this objective) (2) Reduction of fishing effort objective: → reduction in number of available licences (has been ongoing for several years) → limitation of the number of days at sea allowed by a whelk license (weekend closures, holidays, the month of January: a maximum of 225 days at sea is allowed) → quota reduction by 10% (latest measure, which has been formally implemented as of March 1st 2020) (3) Cohabitation objective: avoid gear loss (little progress on formal agreement or specific action to achieve this since Year 1) (4) Habitat protection and waste conservation objective: Article 4,11 of the whelk “arreté” (decree – the decree is translated into English here): “It is forbidden to discharge synthetic bait waste into the sea. This waste must be retained and landed ashore in containers for garbage collection.” <p>As such, most of the provisionally agreed objectives listed in year 1 have been acted upon since then. Thus, the team considers these management objectives to be agreed, since they have been put into practice, and stakeholders and fishermen have been consulted, through the whelk commission of the CRPM Normandie. These objectives (reduction in fishing effort, improved definition of MSY, reduction of marine waste) are consistent with maintaining the stock at a level of high productivity and minimizing ecosystem impacts. The objectives were not presented at the JAC, because the JAC did not take place this year. While the presentation of the objectives at the JAC figures in the action plan, the team believes that the milestone for year 2 is still met, because the objectives have been agreed with the stakeholder and put in place regardless of the cancellation of the JAC. The team therefore deems progress on this condition to be on target.</p>

Status	On target
Additional information	-

Table 12. Client Action Plan for Condition 4

Année 1 (Year 1)	Action
	<p>Recenser et lister les objectifs en termes de respect de la ressource et de l'environnement, y compris contrôles.</p> <p>Identify and list the objectives in terms of respect of the resource and the environment, including controls.</p>
Année 2 (Year 2)	
Semestre 1 (Semester 1)	<p>Présentation des objectifs « ressource » et « environnement » à la Commission Bulot et validation</p> <p>Presentation of the "resource" and "environment" objectives to the Commission Bulot and validation</p>
Trimestre 4 (4th Quarter)	<p>Présentation des objectifs aux parties prenantes lors du JAC</p> <p>Presentation of the objectives to stakeholders at JAC</p>
Année 3 (Year 3)	
Trimestre 1 (Semester 1)	<p>Définition des points de référence (selon IP 122) et présentation à la commission Bulot pour approbation et validation</p> <p>Definition of reference points (according to IP 122) and presentation to the Commission Bulot for approval and validation</p>
Semestre 2 (Semester 2)	<p>Détermination et validation des mesures à envisager selon les points de référence pré définis et des objectifs en Commission Bulot</p> <p>Identification and validation in Commission Bulot of measures to be considered according to pre-defined reference points and objectives</p>
En continu (Continuous)	<p>Suivi des indicateurs et des objectifs – réflexion sur d'éventuels nouveaux objectifs</p> <p>Monitoring indicators and objectives - reflection on possible new objectives</p>
Trimestre 4 (4th Quarter)	<p>Présentation des mesures au JAC</p> <p>Presentation of measures to JAC</p>
Année 4 et 5 (Years 4 & 5)	
En continu (Continuous)	<p>Suivi des indicateurs et des objectifs- réflexion sur d'éventuels nouveaux objectifs</p>

	Monitoring indicators and objectives - reflection on possible new objectives
Trimestre 4 (4th Quarter)	Présentation et validation à la Commission Bulot, puis présentation au JAC Presentation and validation to the Bulot Commission and then presentation to the JAC

Table 13. Condition 5

Performance Indicator	3.2.4			
Score	70			
Condition	By the end of Year 2, a formal research plan as a framework for guiding research should be prepared and adopted.			
Milestones	Year 1: Prepare draft plan. Score: 70 Year 2: Consult stakeholders and adopt research plan. Score: 80			
Client action plan	See below			
Progress on Condition (Year 1)	A draft research plan has been prepared by the CRPM Normandie, covering research activities under both Principle 1 and 2:			
	Suivis	Moyens	Finalité	Période
	Activités de la flottille	Profil flottille sous licences Mois navires (CRPM)	Amélioration des connaissances sur P1 et P2 Standardisation des navires / flottille de référence	2009-2022 Annuel
	Effort de pêche	Nombre de marées annuelles IFREMER Nombre de casiers sur flottille de référence	CPUE/ marée Test sur quelques années de CPUE/100cas	2009-2022 Annuel 2019
	Débarquements	Base de données CRPM et SIH	Volume global de la Pêcherie bulot	2009-2022 Annuel
	Evolution CPUE DPUE	Suivis en mer et Auto Ech SMEL Suivis FP et LB (IFREMER)	Recherche la tendance sur l'évolution des DPUE CPUE pour améliorer la définition points de référence	2009-2022 2019-2020
	Indices d'abondance	SIH CPUE marée et CPUE casiers	Recherche d'indice d'abondance standardisé Cond 1.2.3 Autres approches d'évaluation avec GT Mollusques – Cond 1.2.4	2009-2022 Fev- Décembre 2019
	Structure de taille	Observations en mer Observation à la débarque		2009-2022 Bi annuel
	Données indépendantes de la pêche	Données de Jersey à prendre en considération	Référence depuis 1996 - Suivi de la tendance CPUEJE pour les zones de pêche communes	1996-2022 (Fevrier)
	Comparaison Engins de pêche FR/JE	Moyens scientifiques conjoints MR Jersey /SMEL	P1 Recherche de CPUE Standardisée avec des engins pêche différents entre FR et JE	ponctuel Mars 2019
	Gestion des déchets	Dénombrer le nb de casiers perdus Et participation au recyclage plastique	Principe 2 objectifs environnementaux en plus des objectifs de gestion de la pêche Prévoir interdire rejets de plastiques	2019
	Espèces accessoires	Suivi des nasses	P2 répartition bulots/nasses	2009-2022 printemps
Progress on Condition (Year 2)	The research plan above can be considered to be adopted, given the implications of stakeholders in ongoing research projects (described in detail in Section 3.3.5) that cover several of the research axes listed in the plan. For example, the first six rows, regarding the collection of detailed information on the activity of the fleet, as well as the analysis of CPUE and LPUE trends, and the designation of a reference fleet (based on their fishing activity), reviewing and (if necessary) redefining reference			

	<p>points have been addressed in the Bestclim project. Bestclim involves SMEL, CRPM Normandie, the University of Caen, and IFREMER. The recently launched MECANOR project addresses these issues on a large scale (Northern France). The COGECO project, launched in 2020 fits into the research plan, as one of the objectives is the designation of time series and protocols to compare fishery independent data with the Jersey fishery-independent time series. The COGECO project not only aims to harmonise between Normandy and Jersey, Brittany waters are also included in the scope of the study. Thus, while there is no single research project addressing each and every point of the plan outlined above, these points are being addressed by several research plans that span across regional borders. The framework outlined above, has resulted in research objectives which are being addressed by several ongoing intra- and inter-regional projects.</p>
Status	Closed
Additional information	-

4.3 Progress on recommendation

Recommendation 1	Habitats
	<p>The team recommends that any lost whelk pots be reported on so that this can be monitored by the CRPM-BN/SMEL and any increase in risk to habitat structure and function can be determined</p>
	<p><u>Progress Year 1:</u> there was an incident in December last year when about 400 pots were lost due to entanglement in algae, following a storm. This appears to have been a freak event; however, incidences of gear loss will need to continue to be monitored at future surveillances.</p>
	<p><u>Progress Year 2:</u> According to stakeholders on site, 1.8% of deployed gear in 2019 was lost. To help with monitoring of gear loss, IFREMER Lorient are developing an App so that lost pots can be recorded.</p>

4.4 Client action plan

No updates to the client action plan were made since the year 1 surveillance audit.

4.5 Rescoring Performance Indicators

Amendments to the original scores and rationales are given in red, superseded text is struck through.

PI 3.2.4		The fishery has a research plan that addresses the information needs of management		
Scoring Issue		SG 60	SG 80	SG 100
a	Guide post	Research is undertaken, as required, to achieve the objectives consistent with MSC's Principles 1 and 2.	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.	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.
	Met?	Y	N Y	N
	Justification	<p>Research is conducted as required and in a timely fashion, by the SMEL principally, IFREMER providing additional analyses of catch data. Jersey also conducts some annual monitoring of whelk catches. However, there is no Research Plan to give evidence of a strategic approach, only part of SG80 is met.</p> <p>At the year 1 surveillance audit, the following research plan was presented to the team. It was still a draft at this stage, though it should be noted that several of the research activities were ongoing at the time the client drafted the plan. At this time, the following information gaps had been identified:</p> <ul style="list-style-type: none"> - Lack of communication channels impeding homogenized management across the regions exploiting Granville Bay marine resources (particularly whelk), - Limited information on the life history characteristics of some of the main target species (which includes whelk), - Lack of a reference fleet for whelk fishing effort, - Standardizing the data available on fishing effort on the whelk stock <p>The research plan presented below was designed to fill these information gaps.</p>		

Suivis	Moyens	Finalité	Période
Activités de la flottille	Profil flottille sous licences Mois navires (CRPM)	Amélioration des connaissances sur P1 et P2 Standardisation des navires / flottille de référence	2009-2022 Annuel
Effort de pêche	Nombre de marées annuelles IFREMER Nombre de casiers sur flottille de référence	CPUE/ marée Test sur quelques années de CPUE/100cas	2009-2022 Annuel 2019
Débarquements	Base de données CRPM et SIH	Volume global de la Pêcherie bulot	2009-2022 Annuel
Evolution CPUE DPUE	Suivis en mer et Auto Ech SMEL Suivis FP et LB (IFREMER)	Recherche la tendance sur l'évolution des DPUE CPUE pour améliorer la définition points de référence	2009-2022 2019-2020
Indices d'abondance	SIH CPUE marée et CPUE casiers	Recherche d'indice d'abondance standardisé Cond 1.2.3 Autres approches d'évaluation avec GT Mollusques – Cond 1.2.4	2009-2022 Fev- Décembre 2019
Structure de taille	Observations en mer Observation à la débarque		2009-2022 Bi annuel
Données indépendantes de la pêche	Données de Jersey à prendre en considération	Référence depuis 1996 - Suivi de la tendance CPUEJE pour les zones de pêche communes	1996-2022 (Fevrier)
Comparaison Engins de pêche FR/JE	Moyens scientifiques conjoints MR Jersey /SMEL	P1 Recherche de CPUE Standardisée avec des engins pêche différents entre FR et JE	ponctuel Mars 2019
Gestion des déchets	Dénombrer le nb de casiers perdus Et participation au recyclage plastique	Principe 2 objectifs environnementaux en plus des objectifs de gestion de la pêche Prévoir interdire rejets de plastiques	2019
Espèces accessoires	Suivi des nasses	P2 répartition bulots/nasses	2009-2022 printemps

The recently launched MECANOR project addresses these issues on a larger scale (Northern France). The COGECO project, launched in 2020 fits into the research plan, as one of the objectives is the designation of time series and protocols to allow the comparison of Basse Normandie and Brittany fishery independent data with the Jersey fishery-independent time series. The COGECO project not only aims to harmonise between Normandy and Jersey, Brittany waters are also included in the scope of the study. Thus, while there is no single research project addressing each and every point of

		the plan outlined above, these points are being addressed by several research plans that span across regional borders. The framework outlined above, has resulted in research objectives which are being addressed by several ongoing intra- and inter-regional projects. As such, SG80 is met.		
b	Guide post	Research results are available to interested parties.	Research results are disseminated to all interested parties in a timely_fashion.	Research plan and results are disseminated to all interested parties in a timely fashion and are widely and publicly available.
	Met?	Y	Y	N
	Justification	The results are presented to a wide audience of professional fishermen, scientists and managers through the CRPM-BN, national Committee CNPN and at JAC meetings in a timely fashion. Some of the research is published in the scientific literature (e.g. results of Buloclim) All elements of SG 80 are met		
References	Synthèse des études techniques menées par le CRPM (22/01/13), le SMEL et NFM entre 2002 et 2007; SMEL annual presentations to CRPM-BN Commision Bulot, and to JAC - 2013 Bilan 2009-2012, SMEL UMR Caen University on whelk reproduction, powerpoint presentations (2008, 2010);IFREMER synthesis for JAC meeting June 2010. Jersey Department of Marine Resources Annual Report 2013. Heude-Berthelin et al., 2011. Growth and reproduction of the common whelk			
OVERALL PERFORMANCE INDICATOR SCORE:				70-80
CONDITION NUMBER (if relevant):				5-N/A

4.6 Principle level scores

Table 14. Principle level scores

Principle	Score
Principle 1 – Target Species	83.1
Principle 2 – Ecosystem Impacts	88.3
Principle 3 – Management System	86.1

Table 15. Performance Indicator scores

Principle	Component	Wt	Performance Indicator (PI)		Score
One	Outcome	0.5	1.1.1	Stock status	90
			1.1.2	Reference points	75
			1.1.3	Stock rebuilding	-
	Management	0.5	1.2.1	Harvest strategy	95
			1.2.2	Harvest control rules & tools	90
			1.2.3	Information & monitoring	75
			1.2.4	Assessment of stock status	75
Two	Retained species	0.2	2.1.1	Outcome	80
			2.1.2	Management strategy	85
			2.1.3	Information/Monitoring	80
	Bycatch species	0.2	2.2.1	Outcome	100
			2.2.2	Management strategy	95
			2.2.3	Information/Monitoring	80
	ETP species	0.2	2.3.1	Outcome	100
			2.3.2	Management strategy	100
			2.3.3	Information strategy	100
	Habitats	0.2	2.4.1	Outcome	80
			2.4.2	Management strategy	80
			2.4.3	Information	95
	Ecosystem	0.2	2.5.1	Outcome	80
			2.5.2	Management	80
			2.5.3	Information	90
Three	Governance and policy	0.5	3.1.1	Legal &/or customary framework	100
			3.1.2	Consultation, roles & responsibilities	95
			3.1.3	Long term objectives	90

Principle	Component	Wt	Performance Indicator (PI)		Score
			3.1.4	Incentives for sustainability	80
			3.2.1	Fishery specific objectives	60
	Fishery specific management system	0.5	3.2.2	Decision making processes	100
			3.2.3	Compliance & enforcement	85
			3.2.4	Monitoring & management performance evaluation	80
			3.2.5	Management performance evaluation	80

5 References

Gascoigne, J., Sieben, C. and des Clers, S. 2017. MSC Public Certification Report for the Basse-Normandie Granville Bay Whelk Fishery. ME Certification Limited.

ICES, 2019. Lesser spotted dogfish (*Scyliorhinus canicula*) in Subarea 4 and in divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel). In ICES Advice on fishing opportunities, catch, and effort - Greater North Sea ecoregion Published 4 October 2019.

Sieben, C., and J. Addison, 2019. Marine Stewardship Council (MSC) Year 1 surveillance report, Basse-Normandie Granville bay whelk fishery on behalf of the Comité Régional des Pêches Maritimes et des Elevages Marins de Normandie,

6 Appendices

Appendix 1 Evaluation processes and techniques

Appendix 1.1 Site visit and stakeholder participation

The site visit was held at the Halle a Marées of Granville, on the 10th March 2020. The individuals met during the site visit and their roles in the fishery are listed in Table 16. Stakeholders were made aware of the site visit with the announcement of the fishery, the client further reached out to local stakeholders in preparation for the meetings.

Table 16. List of attendees at the on-site meetings.

Name	Organisation
Henry ERNST	CU Pesca
Chrissie Sieben	CU Pesca (Remote)
Roland QUARANTE	CRPM – co-président de la commission Bulot Manche Ouest
Lucile AUMONT	CRPM Normandie
Laurence HEGRON-MACE	SMEL
Dominique LAMORT	NFM
Jean-Baptiste FUCHS	NFM
Didier LEGUELINEL	CRPM – co-président de la commission Bulot Manche Ouest
Julie LEGLINEL	CRPM

Appendix 2 Stakeholder Input

Stakeholders provided input to this assessment during the site visit meeting, and then through sending relevant documentation identified as being important to the assessment after the site visit. No input was received through the stakeholder input template.

Appendix 3 Revised Surveillance Program

Table 17. Fishery surveillance programme

Surveillance level	Year 1	Year 2	Year 3	Year 4
Level 6	On-site surveillance audit	On-site surveillance audit	On-site surveillance audit	On-site surveillance audit & re-certification site visit

Table 18. Timing of surveillance audit

Year	Anniversary date of certificate	Proposed date of surveillance audit	Rationale
1	13 September 2018	25 February 2019	Client and Stakeholder availability
2	13 September 2019	10th March 2020	Client and Stakeholder availability

Other than holding the surveillance audit later than in the first year, there have been no changes to the surveillance program

Appendix 4 Harmonised fishery assessments

Table 19. Overlapping fisheries

Fishery name	Certification status	Performance Indicators to harmonise
Normandy Jersey lobster fishery	Certified	none

Table 20. Overlapping fisheries

Supporting information	
This fishery overlaps with the Normandy Jersey lobster fishery as they take place in the same body of water, Granville Bay. They are target different stocks, use different gears and different bait, and even fish different ecosystems. The overarching management framework is similar, and they are both under the Granville Bay Treaty, however there are no Performance Indicators to be harmonised.	
Was either FCP v2.1 Annex PB1.3.3.4 or PB1.3.4.5 applied when harmonising?	N/a
Date of harmonisation meeting	N/a
If applicable, describe the meeting outcome	
N/a	

Table 21. Scoring differences

Performance Indicators (PIs)	Fishery name	Fishery name	Fishery name	Fishery name
N/a				

Table 22. Rationale for scoring differences

If applicable, explain and justify any difference in scoring and rationale for the relevant Performance Indicators (FCP v2.1 Annex PB1.3.6)
N/a
If exceptional circumstances apply, outline the situation and whether there is agreement between or among teams on this determination
N/a