IFFO RS Limited

T: +44 (0) 2030 539 195
E: Standards@iffors.com
W: www.iffors.com

Unit C, Printworks | 22 Amelia Street
London, SE17 3BZ | United Kingdom

Global Standard for Responsible Supply of Marine Ingredients
Fishery Assessment Methodology and Template Report V2.0

Fishery Under Assessment	Norwegian lobster *Nephrops norvegicus* ICES subarea 6
Date	January 2018
Assessor	Conor Donnelly

Application details and summary of the assessment outcome				
Name: Pelagia – Killybegs, Grimsby				
Address:				
Country: UK and Ireland		Zip:		
Tel. No.:		Fax. No.:		
Email address:		Applicant Code		
Key Contact:		Title:		
Certification Body Details				
Name of Certification Body:		SAI Global		
Assessor Name	Peer Reviewer	Assessment Days	Initial/Surveillance/Re-approval	Whole fish/ By-product
Conor Donnelly	Deirdre Hoare	1	Re-approval	By-product
Assessment Period	2017-2018			

Scope Details	
Management Authority (Country/State)	EU
Main Species	Norwegian lobster *Nephrops norvegicus*
Fishery Location	Northeast Atlantic ICES subarea 6
Gear Type(s)	Trawl, creel
Outcome of Assessment	
Overall Outcome	Pass
Clauses Failed	None
Peer Review Evaluation	Approve byproduct
Recommendation	Approval

Assessment Determination
Norway lobster in European waters are managed under the EU Common Fisheries Policy. Management includes setting of Total Allowable Catches, Minimum Conservation Reference Sizes (MCRS) and the Landing Obligation. Scientific catch advice is provided by ICES, who identify 34 Functional units (FU) for stock assessment purposes. Assessment units considered in this by-product report are as follows: • **Division 6.a, Functional Unit 11 (West of Scotland, North Minch)** • **Division 6.a, Functional Unit 12 (West of Scotland, South Minch)** • **Division 6.a, Functional Unit 13 (West of Scotland, the Firth of Clyde, and the Sound of Jura)** Norway lobster is subject to a species-specific management regime and is assessed under Clause C. Fishery removals of the stocks in FUs 11-13 are included in the stock assessment process and the stocks are considered, in their most recent assessment, to have a biomass above the limit reference point and so pass clause C. Norway lobster is classed as of least concern on the IUCN Red List of Threatened Species and is not listed on CITES (http://www.iucnredlist.org/details/169967/0, assessment dates from 2009). **Norway lobster in subarea 6 is recommended for approval under the IFFO RS Standard.**

Peer Review Comments

Notes for On-site Auditor

Species-Specific Results

Category	Species	% landings	Outcome (Pass/Fail)	
Category A			A1	
			A2	
			A3	
			A4	
Category B				
Category C	Norwegian lobster *Nephrops norvegicus*	NA	Pass (FUs 11-13)	
Category D				

[List all Category A and B species. List approximate total %age of landings which are Category C and D species; these do not need to be individually named here]

HOW TO COMPLETE THIS ASSESSMENT REPORT

This assessment template uses a modular approach to assessing fisheries against the IFFO RS standard.

Whole Fish

The process for completing the template for a **whole fish** assessment is as follows:

1. ALL ASSESSMENTS: Complete the Species Characterisation table, to determine which categories of species are present in the fishery.
2. ALL ASSESSMENTS: Complete clauses M1, M2, M3: Management.
3. IF THERE ARE CATEGORY A SPECIES IN THE FISHERY: Complete clauses A1, A2, A3, A4 for **each** Category A species.
4. IF THERE ARE CATEGORY B SPECIES IN THE FISHERY: Complete the Section B risk assessment for **each** Category B species.
5. IF THERE ARE CATEGORY C SPECIES IN THE FISHERY: Complete clause C1 for **each** Category C species.
6. IF THERE ARE CATEGORY D SPECIES IN THE FISHERY: Complete Section D.
7. ALL ASSESSMENTS: Complete clauses F1, F2, F3: Further Impacts.

A fishery must score a pass in **all applicable clauses** before approval may be recommended. To achieve a pass in a clause, the fishery/species must meet **all** of the minimum requirements.

By-products

The process for completing the template for **by-product raw material** is as follows:

1. ALL ASSESSMENTS: Complete the Species Characterisation table with the names of the by-product species and stocks under assessment. The '% landings' column can be left empty; all by-products are considered as Category C and D.
2. IF THERE ARE CATEGORY C BYPRODUCTS UNDER ASSESSMENT: Complete clause C1 for **each** Category C by-product.
3. IF THERE ARE CATEGORY D BYPRODUCTS UNDER ASSESSMENT: Complete Section D.
4. ALL OTHER SECTIONS CAN BE DELETED. Clauses M1 - M3, F1 - F3, and Sections A and B do not need to be completed for a by-product assessment.

By-product approval is awarded on a species-by-species basis. Each by-product species scoring a pass under the appropriate section may be approved against the IFFO RS Standard.

SPECIES CATEGORISATION

The following table should be completed as fully as the available information permits. Any species representing more than 0.1% of the annual catch should be listed, along with an estimate of the proportion of the catch each species represents. The species should then be divided into Type 1 and Type 2 as follows:

- **Type 1 Species** can be considered the 'target' or 'main' species in the fishery. They make up the bulk of annual landings and are subjected to a detailed assessment.
- **Type 2 Species** can be considered the 'bycatch' or 'minor' species in the fishery. They make up a small proportion of the annual landings and are subjected to relatively high-level assessment.

Type 1 Species must represent 95% of the total annual catch. Type 2 Species may represent a maximum of 5% of the annual catch (see Appendix B).

Species which make up less than 0.1% of landings do not need to be listed (NOTE: ETP species are considered separately). The table should be extended if more space is needed. Discarded species should be included when known.

The 'stock' column should be used to differentiate when there are multiple biological or management stocks of one species captured by the fishery. The 'management' column should be used to indicate whether there is an adequate management regime specifically aimed at the individual species/stock. In some cases it will be immediately clear whether there is a species-specific management regime in place (for example, if there is an annual TAC). In less clear circumstances, the rule of thumb should be that if the species meets the minimum requirements of clauses A1-A4, an adequate species-specific management regime is in place.

NOTE: If any species is categorised as Endangered or Critically Endangered on the IUCN Red List, or if it appears in the CITES appendices, it **cannot** be approved for use as an IFFO RS raw material. This applied to whole fish as well as by-products.

TYPE 1 SPECIES (Representing 95% of the catch or more)
Category A: Species-specific management regime in place.
Category B: No species-specific management regime in place.

TYPE 2 SPECIES (Representing 5% OF THE CATCH OR LESS)
Category C: Species-specific management regime in place.
Category D: No species-specific management regime in place.

Common name	Latin name	Stock	% of landings	Management	Category
Norway lobster	*Nephrops norvegicus*	FUs 11-13		EU, CFP	C

CATEGORY C SPECIES

In a whole fish assessment, Category C species are those which make up less than 5% of landings, but which are subject to a species-specific management regime. In most cases this will be because they are a commercial target in a fishery other than the one under assessment. In a by-product assessment, Category C species are those which are subject to a species-specific management regime, and are usually targeted species in fisheries for human consumption.

Clause C1 should be completed for **each** Category C species. If there are no Category C species in the fishery under assessment, this section can be deleted. A Category C species does not meet the minimum requirements of clause C1 should be re-assessed as a Category D species.

Species Name		Norwegian lobster *Nephrops norvegicus*	
C1	**Category C Stock Status - Minimum Requirements**		
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Pass
	C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	Pass
		Clause outcome:	Pass

Evidence

Norway lobster are managed under the EU Common Fisheries Policy and in Norwegian waters under their national management regime. TACs are set for the following ICES subareas and divisions (EU TAC unless otherwise stated, 2018 quotas shown, EU Council Regulation 2018/120):

- **3a (11,738 tonnes)**
- **2a and 4 (24,518 tonnes)**
- **4 (Norwegian waters, EU quota is 800 tonnes)**
- **6 and 5.b (12,129 tonnes)**
- **7 (29,091 tonnes)**
- **8.a-b, d-e (3,614 tonnes)**
- **8.c (0 tonnes)**
- **9 and 10 (381 tonnes)**

34 Functional units (FU) for assessment purposes identified by ICES. There is significant disparity between management areas (ie the TACs) and assessment units. Assessment units considered in this by-product report are as follows (see also Figure 1 below):

- **Division 6.a, Functional Unit 11 (West of Scotland, North Minch)**
- **Division 6.a, Functional Unit 12 (West of Scotland, South Minch)**
- **Division 6.a, Functional Unit 13 (West of Scotland, the Firth of Clyde, and the Sound of Jura)**
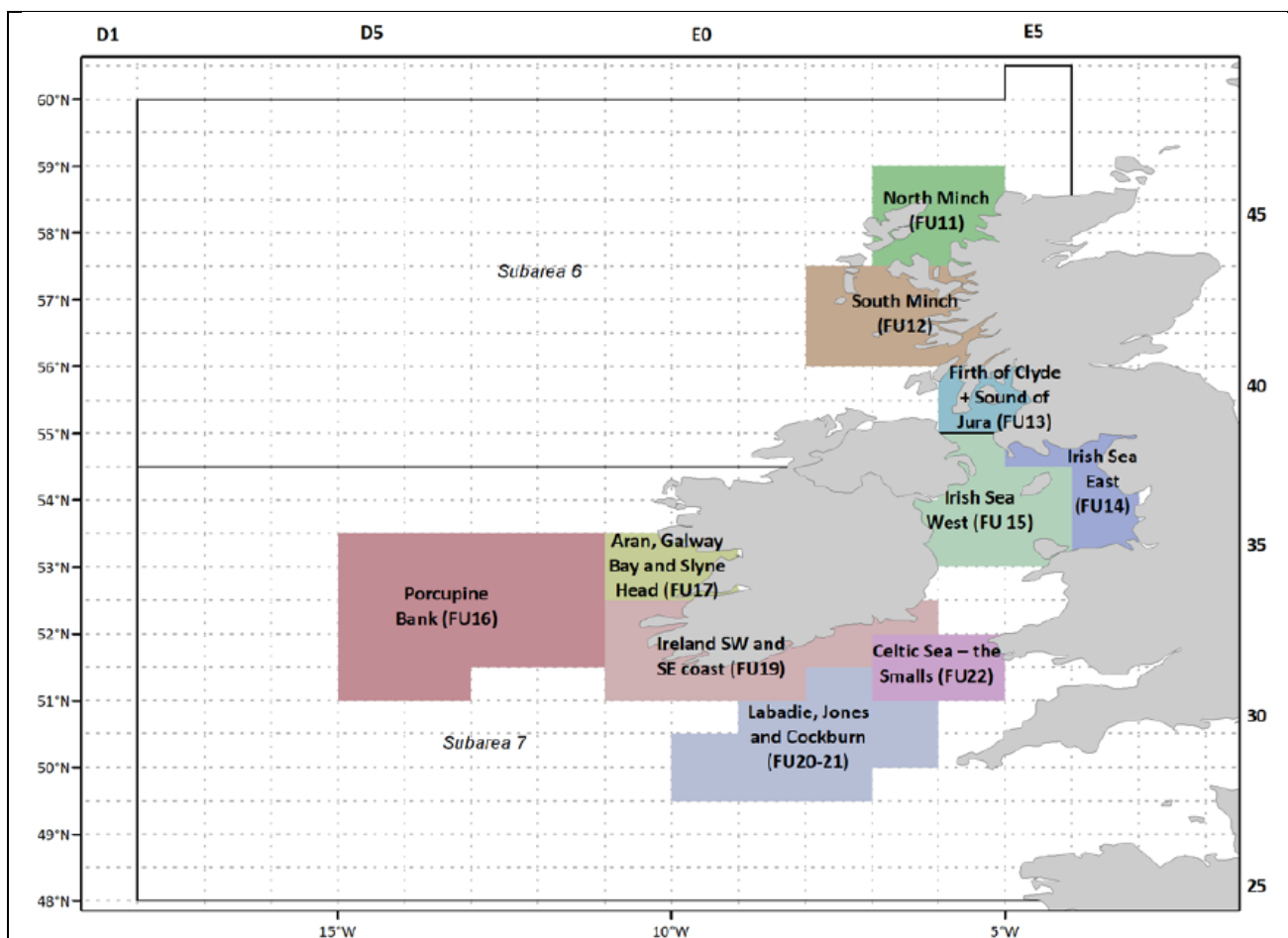
Figure 1. Norway lobster functional units in subareas 6 and 7. Source: ICES, 2017e.

Division 6.a, Functional Unit 11 (West of Scotland, North Minch)

ICES data category 1 stock for which analytical assessment possible. Assessment is an underwater TV survey. Input data comprise one survey index (UWTV-FU11); commercial catches (international landings, length frequencies from Scottish catch sampling); fixed maturity parameters from survey data; fixed natural mortalities and discard survival rate.

MSY Btrigger and Fmsy reference points defined. The historical harvest rate has fluctuated and is now just below FMSY. The stock has been above MSY Btrigger since 1998 (ICES, 2017e).

Fishery removals of this stock are included in the stock assessment process and the stock is considered, in its most recent assessment, to have a biomass above the limit reference point. FU11 passes clause C.

Division 6.a, Functional Unit 12 (West of Scotland, South Minch)

ICES data category 1 stock for which analytical assessment possible. Assessment is an underwater TV survey. Input data comprise Scottish catch sampling); fixed maturity parameters (from survey data) and natural mortality; discard survival rate.

MSY Btrigger and Fmsy reference points defined. The historical harvest rate has increased since 2014 but remains below Fmsy. The stock abundance has generally fluctuated above or around MSY Btrigger throughout the time series which dates back to 1995 (ICES, 2017f).

Fishery removals of this stock are included in the stock assessment process and the stock is

considered, in its most recent assessment, to have a biomass above the limit reference point. FU12 passes clause C.

Division 6.a, Functional Unit 13 (West of Scotland, the Firth of Clyde, and the Sound of Jura)
ICES data category 1 stock for which analytical assessment possible. Assessment is an underwater TV survey. Input data comprise one survey index (UWTV-FU13); commercial catches (international landings, length frequencies from Scottish and Northern Ireland catch sampling); fixed maturity parameters (from survey data); fixed natural mortalities and discard survival rate.

MSY Btrigger and Fmsy reference points defined. The catches and harvest rate presented in the ICES advice are for the whole functional unit (Firth of Clyde and Sound of Jura combined), owing to the uncertainties in the data by subarea. The combined harvest rate is considered to be more representative for the Firth of Clyde than for the Sound of Jura; it has fluctuated around the Fmsy for the Firth of Clyde. The abundance has been fluctuating above the MSY Btrigger in both the Firth of Clyde and the Sound of Jura since 1995 (ICES, 2017g).

Fishery removals of this stock are included in the stock assessment process and the stock is considered, in its most recent assessment, to have a biomass above the limit reference point. FU13 passes clause C.

References
ICES, 2017e. http://ices.dk/sites/pub/Publication%20Reports/Advice/2017/2017/nep.fu.11.pdf
ICES, 2017f. http://ices.dk/sites/pub/Publication%20Reports/Advice/2017/2017/nep.fu.12.pdf
ICES, 2017g. http://ices.dk/sites/pub/Publication%20Reports/Advice/2017/2017/nep.fu.13.pdf

Standard clauses 1.3.2.2

SOCIAL CRITERION

In addition to the scored criteria listed above, applicants must commit to ensuring that vessels operating in the fishery adhere to internationally recognised guidance on human rights. They must also commit to ensuring there is no use of enforced or unpaid labour in the fleet(s) operating upon the resource.

Appendix A - Determining Resilience Ratings

The assessment of Category B species described in this assessment report template utilises a resilience rating system suggested by the American Fisheries Society. This approach was chosen because it is also used by FishBase, and so the resilience ratings for many thousands of species are freely available online. As described by FishBase, the following is the process used to arrive at the resilience ratings:

"*The American Fisheries Society (AFS) has suggested values for several biological parameters that allow classification of a fish population or species into categories of high, medium, low and very low resilience or productivity (Musick 1999). If no reliable estimate of r_m (see below) is available, the assignment is to the lowest category for which any of the available parameters fits. For each of these categories, AFS has suggested thresholds for decline over the longer of 10 years or three generations. If an observed decline measured in biomass or numbers of mature individuals exceeds the indicated threshold value, the population or species is considered vulnerable to extinction unless explicitly shown otherwise. If one sex strongly limits the reproductive capacity of the species or population, then only the decline in the limiting sex should be considered. We decided to restrict the automatic assignment of resilience categories in the Key Facts page to values of K, t_m and t_{max} and those records of fecundity estimates that referred to minimum number of eggs or pups per female per year, assuming that these were equivalent to average fecundity at first maturity (Musick 1999). Note that many small fishes may spawn several times per year (we exclude these for the time being) and large live bearers such as the coelacanth may have gestation periods of more than one year (we corrected fecundity estimates for those cases reported in the literature). Also, we excluded resilience estimates based on r_m (see below) as we are not yet confident with the reliability of the current method for estimating rm. If users have independent r_m or fecundity estimates, they can refer to Table 1 for using this information.*"

Parameter	High	Medium	Low	Very low
Threshold	0.99	0.95	0.85	0.70
r_{max} (1/year)	> 0.5	0.16 – 0.50	0.05 – 0.15	< 0.05
K (1/year)	> 0.3	0.16 – 0.30	0.05 – 0.15	< 0.05
Fecundity (1/year)	> 10,000	100 – 1000	10 – 100	< 10
t_m (years)	< 1	2 – 4	5 – 10	> 10
t_{max} (years)	1 - 3	4 – 10	11 – 30	> 30

Taken from the FishBase manual, "Estimation of Life-History Key Facts":
http://www.fishbase.us/manual/English/key%20facts.htm#resilience]

Appendix B – Background on the 5% catch rule

The proposed fishery assessment methodology uses a species categorisation approach to divide the catch in the assessment fishery into groups. These groups are:

- **Category A:** "Target" species with a species-specific management regime in place.
- **Category B:** "Target" species with no species-specific management regime in place.
- **Category C:** "Non-target" species with a species-specific management regime in place.
- **Category D:** "Non-target" species with no species-specific management regime in place

The distinction between 'target' and 'non-target' species is made to enable the assessment to consider the impact of the fishery on all the species caught regularly, without requiring a full assessment be conducted for each. Thus 'target' species are subjected to a more detailed assessment, while 'non-target' species are considered more briefly. For the purposes of the IFFO RS fishery assessment, 'target' and 'non-target' species are defined by their prevalence in the catch, by weight. Applicants must declare which species are considered 'target' species in the fishery, and the combined weight of these must be at least 95% of the annual catch. The remaining 5% can be made up of 'non-target' species. Note also that ETP species are considered separately, irrespective of their frequency of occurrence in the catch.

The proposed use of 5% as a limit for 'non-target' species is one area in which feedback is being sought via the public consultation. The decision to propose a value of 5% ensures consistency with other fishery assessment programmes, such as the MSC which uses 5% to distinguish between 'main' and 'minor' species (see MSC Standard, SA3.4 and GSA3.4.2); and Seafood Watch, which uses 5% when defining the 'main' species for the assessment (see Seafood Watch Standard, Criterion 2). The value is also consistent with the approached used in Version 1 of the IFFO RS Standard, in which up to 5% of the raw material could be comprised of 'unassessed' species.