



MarinTrust Standard V2

By-product Fishery Assessment Whelk (*Buccinum undatum*) in ICES Divisions 4a-c, 6a, 7a, b, d-h, j (Irish Sea, NE Coast Scotland, England)

MarinTrust Programme

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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Whelk (<i>Buccinum undatum</i>)
	Geographical area:	FAO 27 North East Atlantic
	Country of origin of the product:	UK and Ireland
	Stock:	ICES Divisions 4a-c, 6a, 7a, b, d-h, j
Date	December 2022	
Report Code	GBR33	
Assessor	Léa Lebechnech	
Country of origin of the product - PASS	UK and Ireland	
Country of origin of the product - FAIL	/	

Application details and summary of the assessment outcome			
Company Name(s): Pelagia			
Country: UK and Ireland			
Email address: geraldine.fox@pelagia.com		Applicant Code:	
Certification Body Details			
Name of Certification Body:		Global Trust Certification	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Léa Lebechnech	Matthew Jew	0.5	Surveillance 1
Assessment Period	To December 2022		

Scope Details	
Main Species	Whelk (<i>Buccinum undatum</i>)
Stock	ICES Divisions 4a-c, 6a, 7a, b, d-h, j
Fishery Location	FAO 27 North East Atlantic (Irish Sea, NE Coast Scotland, England)
Management Authority (Country/ State)	Internationally, European union (Common fisheries policy) and domestic management; UK and Ireland
Gear Type(s)	Pelagic trawls, purse seine
Outcome of Assessment	
Peer Review Evaluation	Agree with recommendation
Recommendation	APPROVED

Table 2. Assessment Determination

Assessment Determination
If any species is categorised as Endangered or Critically Endangered on IUCN's Red List, or if it appears in the CITES appendices, it cannot be approved for use as MarinTrust raw material. Whelk (<i>Buccinum undatum</i>) does not appear as Endangered or Critically Endangered on IUCN's Red List, nor do they appear in CITES appendices; therefore, whelk is eligible for approval for use as Marin Trust v2.0 by-product raw material. There are some measures to manage the species. Currently, there is a Europe-wide minimum landing size of 45mm applied to whelk, although this has been increased to 70mm in the Isle of Man. There are no quotas set for the species neither management plan. There is no current information available on stock assessments, harvest control rules nor biological reference points for whelk in the assessment area. Consequently, and due to the comparative lack of scientific information on the status of the population a risk-assessment style approach has been taken and the fishery was assessed under Category D, using the risk-based Productivity, Susceptibility Analysis (PSA) approach, as per MarinTrust v 2.0 procedures for Category D species. With a productivity score of 1.85 and a susceptibility score of 1.75, whelk in ICES area Divisions 4a-c, 6a, 7a, b, d-h, j D1 (PSA) has achieved a PASS for the D1 Table (PSA). Therefore, whelk in Divisions 4a-c, 6a, 7a, b, d-h, j is APPROVED for the production of fishmeal and fish oil under the current MarinTrust v 2.0 by-products standard.
Fishery Assessment Peer Review Comments
The internal peer reviewer agrees with the assessor's evaluation, who correctly classified whelk (<i>Buccinum undatum</i>) in ICES Divisions 4a-c, 6a, 7a, b, d-h, j Northeast Atlantic under category D, as reference points are not defined to assess status of the stock relative to. With an average productivity score of 1.8 and an average susceptibility score of 1.75, whelk in FAO Area 27 Northeast Atlantic PASSES Clause D1 in accordance with Table D3. Therefore, whelk in FAO Area 27 Northeast Atlantic should be approved.
Notes for On-site Auditor
Need to know which fishing gear is used by the fishery fishing these whelks as by-catch. Flag country needs to be specified.

Species Categorisation

NB: If any species is categorised as Endangered or Critically Endangered on the IUCN Red List, or if it appears in CITES Appendix 1, it **cannot** be approved for use as an MarinTrust raw material.

IUCN Red list Category

By-product material from a species listed by IUCN (the International Union for Conservation of Nature) under the Red List for the following categories shall immediately fail the assessment;

- EXTINCT (E) AND EXTINCT IN THE WILD (EW)
- CRITICALLY ENDANGERED (CR) facing an extremely high risk of extinction in the wild.
- ENDANGERED (EN) facing a very high risk of extinction in the wild.

By-product material may be used from the following categories provided that all clauses in the MarinTrust standard are passed.

- VULNERABLE (VU) facing a high risk of extinction in the wild.
- NEAR THREATENED (NT) does not qualify for above now, but is close or is likely to qualify for, a threatened category in the near future.
- LEAST CONCERN (LC) Widespread and abundant.
- DATA DEFICIENT (DD) and NOT EVALUATED (NE)

Table 3 Species Categorisation Table

Common name	Latin name	Stock	Management	Category	IUCN Red List Category ¹	CITES Appendix 1 ²
Whelk	<i>Buccinum undatum</i>	ICES Divisions 4a-c, 6a, 7a, b, d-h, j	European union (Common fisheries policy)	D	NE	No

¹ <https://www.iucnredlist.org/>

² <https://cites.org/eng/app/appendices.php>

CATEGORY D SPECIES

Category D species are those which are not subject to a species-specific management regime. In the case of mixed trawl fisheries, Category D species may make up the majority of landings. The comparative lack of scientific information on the status of the population of the species means that a risk-assessment style approach must be taken.

D1	Species Name	Whelk (<i>Buccinum undatum</i>)	
	Productivity Attribute	Value	Score
	Average age at maturity (years)	4.7-7.5	2
	Average maximum age (years)	12	2
	Fecundity (eggs/spawning)	140	2
	Average maximum size (cm)	15	1
	Average size at maturity (cm)	5.1-7.6	1
	Reproductive strategy	Demersal (lay small spherical egg capsules deposited on hard surfaces such as rock or shell)	2
	Mean trophic level	>3.25 (First level carnivore)	3
	Average Productivity Score		1.85
	Susceptibility Attribute	Value	Score
	Availability (area overlap)	Medium overlap	2
	Encounterability (the position of the stock/species within the water column relative to the fishing gear)	Benthic species / pelagic gears	1
	Selectivity of gear type	Pelagic gears with mesh size usually greater than size at maturity of the species	1
	Post-capture mortality	Species retained (precautionary score)	3
	Average Susceptibility Score		1.75
	PSA Risk Rating (From Table D3)		Pass
	Compliance rating		PASS
	Further justification for susceptibility scoring (where relevant) For susceptibility attributes, please provide a brief rationale for scoring of parameters where there may be uncertainty affecting your decision		
	 Figure 1. Global distribution of the common whelk (<i>B. undatum</i>). Source : obis, 2017, https://obis.org/taxon/138878.		

References

Haig, J. A; Pantin, J.R., Salomonsen, H, Murray, L. G. & Kaiser, M.J. (2015). The size at maturity for the common whelk, *Buccinum undatum* in Welsh waters, with an industry perspective on minimum landing sizes. Fisheries & Conservation report No. 50, Bangor University. Pp.44:
https://www.researchgate.net/publication/280301789_Temporal_and_spatial_variation_in_size_at_maturity_of_the_common_welk_Buccinum_undatum.

Coleman, M.T. (2020). Spatial size at maturity and population dynamics of the common whelk (*Buccinum undatum*) in Orkney, Scotland: <http://dx.doi.org/10.13140/RG.2.2.10884.55681/1>.

Borsetti et al. Helgol Mar Res (2020) 74:5. Timing of the reproductive cycle of waved whelk, *Buccinum undatum*, on the U.S. Mid-Atlantic Bight: <https://doi.org/10.1186/s10152-020-00537-6>

Magnúsdóttir, H., University of Iceland (2020). Phenotypic and genotypic variation in the subtidal gastropod *Buccinum undatum*. Faculty of Life and Environmental Sciences University of Iceland: https://opinvisindi.is/bitstream/handle/20.500.11815/2123/PhDthesis_HildurMagnúsdóttir.pdf?sequence=1&isAllowed=y

Magnúsdóttir, H., University of Iceland (2010). The common whelk (*Buccinum undatum* L.): Life history traits and population structure 57pp. pdf: https://www.researchgate.net/profile/Hildur-Magnusdottir/publication/266404038_The_common_welk_Buccinum_undatum_L_Life_history_traits_and_population_structure/links/54f842150cf28d6deca1289e/The-common-welk-Buccinum-undatum-L-Life-history-traits-and-population-structure.pdf

Fahy, E. et al, Irish fisheries investigations N°6 (2000). A second assessment of the whelk fishery *Buccinum undatum* in the southwest Irish Sea with particular reference to its history of management by size limit. 73pp.: <https://oar.marine.ie/handle/10793/799>

Standard clauses 1.3.2.2

Table D2 - Productivity / Susceptibility attributes and scores.

Productivity attributes	High productivity (Low risk, score = 1)	Medium productivity (medium risk, score = 2)	Low productivity (high risk, score = 3)
Average age at maturity	<5 years	5-15 years	>15 years
Average maximum age	<10 years	10-25 years	>25 years
Fecundity	>20,000 eggs per year	100-20,000 eggs per year	<100 eggs per year
Average maximum size	<100 cm	100-300 cm	>300 cm
Average size at maturity	<40 cm	40-200 cm	>200 cm
Reproductive strategy	Broadcast spawner	Demersal egg layer	Live bearer
Mean Trophic Level	<2.75	2.75-3.25	>3.25

Susceptibility attributes	Low susceptibility (Low risk, score = 1)	Medium susceptibility (medium risk, score = 2)	High susceptibility (high risk, score = 3)
Areal overlap (availability) Overlap of the fishing effort with the species range	<10% overlap	10-30% overlap	>30% overlap
Encounterability The position of the stock/species within the water column relative to the fishing gear, and the position of the stock/species within the habitat relative to the position of the gear	Low overlap with fishing gear (low encounterability).	Medium overlap with fishing gear.	High overlap with fishing gear (high encounterability). Default score for target species
Selectivity of gear type Potential of the gear to retain species	a Individuals < size at maturity are rarely caught	a Individuals < size at maturity are regularly caught.	a Individuals < size at maturity are frequently caught
	b Individuals < size at maturity can escape or avoid gear.	b Individuals < half the size at maturity can escape or avoid gear.	b Individuals < half the size at maturity are retained by gear.
Post-capture mortality (PCM) The chance that, if captured, a species would be released and that it would be in a condition permitting subsequent survival	Evidence of majority released post-capture and survival.	Evidence of some released post-capture and survival.	Retained species or majority dead when released.

D3		Average Susceptibility Score		
		1 - 1.75	1.76 - 2.24	2.25 - 3
Average Productivity Score	1 - 1.75	PASS	PASS	PASS
	1.76 - 2.24	PASS	PASS	TABLE D4
	2.25 - 3	PASS	TABLE D4	TABLE D4