Sustainable Eel Group (SEG) Standard Assessment

De Palingfabriek B.V.

Assessment against:

- **Component 1:** Core requirements.
- **Component 4:** Eel buying and trading**.**
- **Component 5:** Eel farming.

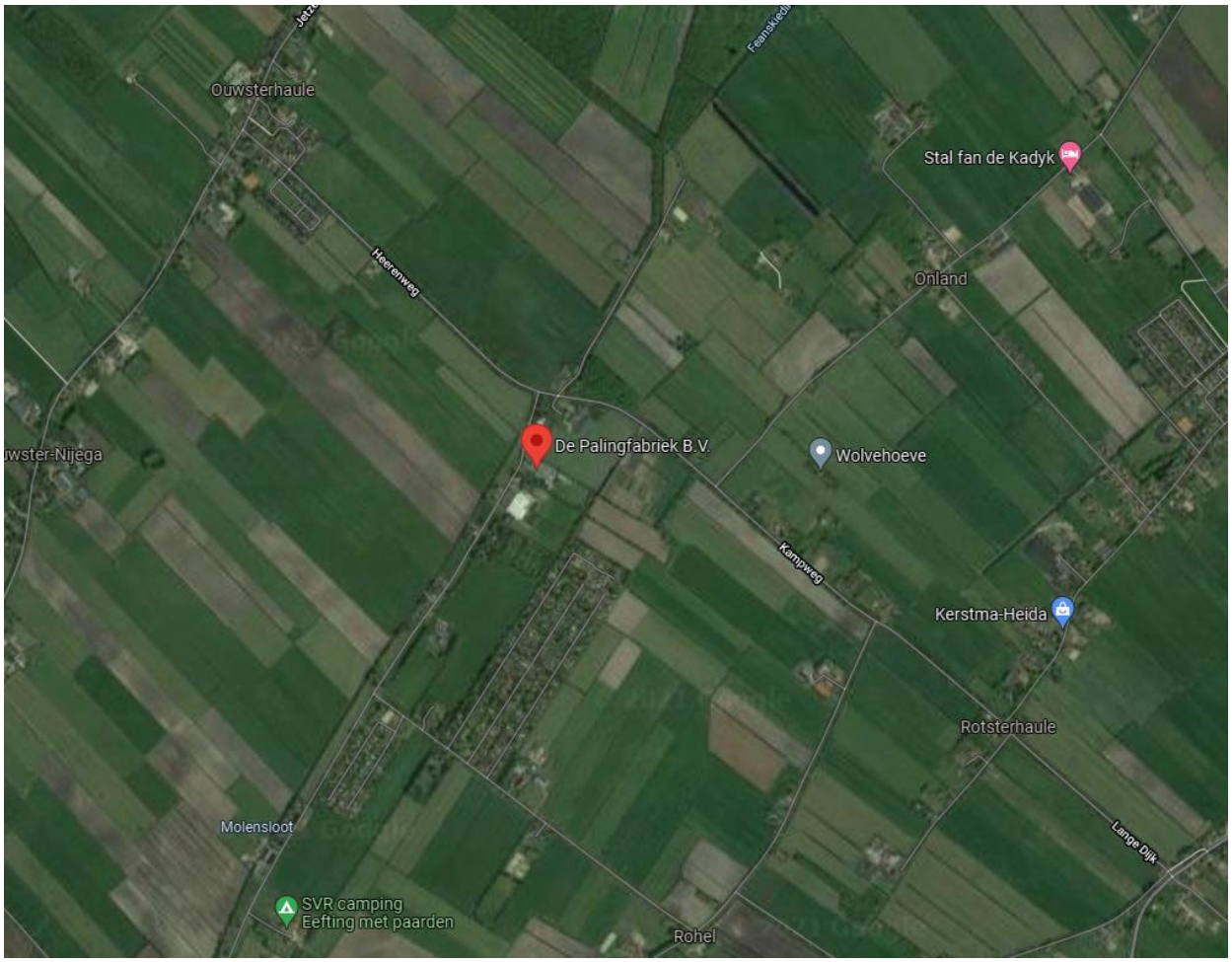
Completed by: Andres Fellenberg van der Molen	**On-Site Visit:** 7 October 2021	**Report date:** 25 November 2021
Reviewed and approved by:	**Mr. David Bunt** Sustainable Eel Group	**Certification Body** 30 December 2021

FINAL REPORT

Scope

This document represents the report completed following the 2021 audit carried out under the Sustainable Eel Group (SEG) Standard (Version 6.0a, Dec 2019) for De Palingfabriek B.V. This assessment has been conducted against Components 1, 4 & 5 of the standard.

The assessment is of a farming and trade of Eel located at Meerweg 1a, 8507 CA Rohel, The Netherlands.



1. Introduction

Rohel is a village in the municipality of De Friese Meren in the Dutch province of Friesland. It lies northeast of Lemmer, just southwest of Rotsterhaule and on the northeastern edge of Lake Tjeukemeer.
Rohel, Rotsterhaule and Sintjohannesga form a cooperative community in many respects. It is also known as a village of triples. In 2021 Rohel had 215 inhabitants. Most of them live in the village of Vierhuis. The village of Rohel has largely been swallowed up by the Tjeukermeer, leaving only a small part of the actual village.

"De Palingfabriek". Previously it was known as "Troelstra Aquaculture" which it was stablished in 1992. In April 2020, Chris Huisman and his girlfriend Jetske, are the new owners. Chris knew the company as a electrician, and he sometimes went to the farm to make improvements to the control panels and to fix breakdowns in the robots. This is how he came into contact with the eel farm. As he knew exactly how all the controls worked, so the owner approached him in 2017 to become a manager. They agreed that if Chris would take over the controls in the company, the owner would teach him the trade of "eel". The technical side of controls is difficult to pass on to someone else, because it is a "very specialised profession", but Chris was well versed in this. He just had to learn how to farm eels. In April 2020, Chris and Jetske took over the company. Chris now continuously supervises the company and takes care of the day-to-day management. He regulates, among other things, the buying and selling of Eel. Jetske does the complete administration. In addition, they have two staff members. As they have to be available 24 hours a day in connection with possible breakdowns, they live next door to the company. It has become "a way of life" for them.

The company presents an exceptional situation in this audit, as the company was acquired in 2020 by Mr. Huisman, and the first purchase by the new owner was in 2021. The year 2021 is defined and considered in this audit as the control year, as this is the year in which Mr. Huisman has decided on the company's new path.
"De Palingfabriek". buys in and grows on glass eels for on growing, sale and restocking.
The farm is designed around four separate water and filtration systems so that bio security is maintained and risk is minimised – one for Glass Eels, one for Fingerlings and two for growing on Eels. The farm has 27 stainless steel tanks and 10 plastic tanks with one system for Glass Eels, one for fingerlings and one for larger eels.

Christiaan Huisman: „Wat we hier doen, daar zijn we trots op. Iedereen mag dat zien." FOTO NIELS DE VRIES

2. The assessment

The assessor was Andres Fellenberg Van der Molen from Green Partner Audits & Consultancy B.V, who visited De Palingfabriek B.V. on 7th October 2021. The audit included the interview with the owner Mr. Chris Huisman.

2.1 Client Contact Details

Client Contact Name	Chris Huisman |Owner | De Palingfabriek B.V.
Client Address	Meerweg 1a, 8507 CA Rohel, The Netherlands
Client Email	
Client Phone Number	

3. Results of the assessment

The outcome of this assessment is as follows;

Component 1: General Requirements			Auditor's findings	Weighting	Score
1.1	Commitment to Legality		Responsible	1	1
1.2	Contribution to eel conservation projects		Responsible	1	1
1.3	The facility trades in certified responsibly sourced eels		Responsible	1	1
1.4	Traceability				
	1.4.1	Incoming products, separation and segregation	Responsible	1	1
	1.4.2	Outgoing products	Responsible	1	1
	1.4.3	Record keeping and documentation	Responsible	1	1
1.5	Biosecurity & welfare				
	1.5	Eel buying & trading	Responsible	1	1
	1.5	Wholesale / Retail / Processing	Responsible	1	1
			Total	**8**	**8/8**
			Percentage Responsibility Score	**100%**	

Component 4: Eel buying and trading.		Auditor's findings	Weighting	Score
4.0	Segregation of certified and uncertified Eel	Responsible	2	2
4.1	The Glass Eel holding facility is a registered Aquaculture Production Business	Responsible	2	2
4.2	Mortality in storage facility	Aspiring	2	2
4.3	Mortality during transport and initial holding if transported to farm	Responsible	2	2
4.4	Water quality	Responsible	1	1
4.5	Handling and welfare	Responsible	1	1
4.6	Transport	Responsible	1	1
4.7	The required percentage of glass eels is being used for restocking	Aspiring	2	0
		Total	**13**	**11/13**
		Percentage Responsibility Score	**84%**	

Component 5: Eel farming		Auditor's findings	Weighting	Score
5.1	The total mortality rate during the culture process is low	Responsible	2	2
5.2	The fish meal/oil ingredients in the feed come from a responsible source	Responsible	2	2
5.3	Feed is used as efficiently as possible	Responsible	2	2
5.4	Water quality	Responsible	2	2
5.5	There are minimal ecological impacts from effluent discharge	Responsible	1	1
5.6	Grading, slaughter and transportation are carried out with respect to welfare	Responsible	1	1
5.7	The farm provides Eel for restocking	Responsible	1	1

5.8	Eels for restocking are not graded out slow-growers	Responsible	1	1
		Total	**12**	**12/12**
		Percentage Responsibility Score	**100%**	

Summary of assessment and scoring		
Component	**Aspiring**	**Responsible**
1	0	8
4	2	11
5	0	12
Total	**2**	**12**
Total Responsibility Score		**31/33 = 94%**

4. Auditor conclusions

- **Component 1 General Requirements:** De Palingfabriek B.V. has scored 100% for Component 1; it should be considered **RESPONSIBLE** under the SEG standard.
- **Component 4 Eel buying and trading:** De Palingfabriek B.V. has scored 84% for Component 4; it should be considered **RESPONSIBLE** under the SEG standard.
- **Component 5 Eel farming:** De Palingfabriek B.V. has scored 100% for Component 5; it should be considered **RESPONSIBLE** under the SEG standard.
- **With an overall Responsibility score of 94%,** De Palingfabriek B.V. can be considered as **RESPONSIBLE** under the SEG standard and suitable for certification.

5. Recommendations:

It is recommended that the following improvements are implemented before the next audit:

1. Record all the company's social activities, including awareness and training about SEG and sustainability.
2. Add the SEG logo to De Palingfabriek's printing and stationery, particularly the paper where the invoices are printed.

Best Practices

- The company understands the definition and concept of sustainability and circular economy.
- The company's social commitment is related to various activities and charities:
    - 210 KG slaughtered eel went to Portugal for smokehouse with proceeds for medical care children orphanage.
    - 25 KG slaughtered eel went to Haule(Frl) market with proceeds for mentally handicapped children.
    - The Palingfabriek is the main sponsor of the Frisian eel smoking championships.
    - De Palingfabriek is sponsor of the Oudwoude eel-smoking competition.
    - The Palingfabriek is organiser of the eel smoking contest at the Palingfabriek in Rohel.
    - The Palingfabriek donates to the local community centre in Ouwsterhaule.
    - Construction of a shop in combination with guided tours, courses and tastings.
    - Entered into collaboration with a competition smoker. Since 2020, he has been smoking eel from the Palingfabriek with a market stall at all local markets in Friesland under the banner of the Palingfabriek.
    - 2 students passed their final exams at the Palingfabriek in 2020.
    - There are at least 2 internships for students every year.

6. Next Audit

After the audit, the client was assessed against the risk assessment set out in the methodology, set out in the table below.

Questions	Performance of the Client at Audit	YES	NO
1	Has the client been part of any external investigation which may be of concern to SEG AND/OR been suspended from any other certification standard?	Enhanced Surveillance	Go to Q2
2	Has the client received a borderline (*) pass for a Component in its previous audit?	Enhanced Surveillance	Go to Q3
3	Does the client only buy and sell product (does not physically handle it?)	Minimum Surveillance	Go to Q4
4	**All other scenarios**	**Standard Surveillance**	

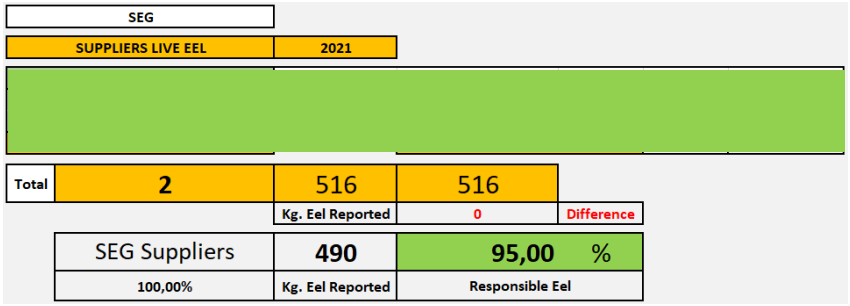
	Certification Audit	Year 1	Year 2	Year 3	Year 4 Recertification Audit
Minimum Surveillance	On-Site Audit	Remote Audit	Remote Audit	Remote Audit	On-Site Audit
Standard Surveillance	**On-Site Audit**	**No Audit**	**On-Site Audit**	**No Audit**	**On-Site Audit**
Enhanced Surveillance	On-Site Audit	On-Site Audit	On-Site Audit	On-Site Audit	On-Site Audit

As the client has been seen to fall into the Standard Surveillance bracket, the next audit will be due in October 2023 (in 2 years) and shall be an on-site audit.

Andres Fellenberg Van der Molen
Accredited SEG Assessor

7. The Assesment

The tables below give the assessment for each of the criteria in the standard and a rationale for the scores given above.

Component 1 – Generic requirements	
Criterion 1.1: Commitment to legality	
Responsible indicators	For at least the past two years: the organisation has not been found guilty for any offences relating to eel fishing or trading.
Aspiring indicators	For at least the past 12 months: the organisation has not been found guilty for any offences relating to eel fishing or trading.
Discussion	The company declared at the time of the assessment that there had not been any legal proceeding against the company under assessment in the past 2 years and that there were no ongoing investigations either.
Score	**Responsible**
Criterion 1.2: Contribution to Eel Conservation Projects. (Optional bonus score)	
Responsible indicators	The organisation donates at least 2% of its profits or at least 20% of its corporate responsibility programme to projects that make a positive contribution to eel conservation or population enhancement, such as Eel Stewardship Funds, River Restoration projects, conservation and education projects.
Aspiring indicators	The organisation donates 1 – 1.99% of its profits or 10 - 20% of its corporate responsibility programme to projects that make a positive contribution to eel conservation or population enhancement, such as Eel Stewardship Funds, River Restoration projects, conservation and education projects.
Discussion	The company's profits are paid into DUPAN on a range of 5-7%. This is a yearly contribution. Once a month, it is reported to DUPAN how much has been sold. €0.50 per kgs of round eels are then paid to DUPAN. In addition to its financial contributions, De Palingfabriek is actively involved in the community, contributing to sports and social activities. De Palingfabriek also participates in NeVePaling (Dutch eel traders' association). *Refer to evidence 1:1:1*
Score	**Responsible**
Criterion 1.3: The organisation trades in certified responsibly sourced Eel	
Responsible indicators	The organisation trades in at least 50% (by number) of certified responsibly sourced Eel and has the documentation to demonstrate that.
Aspiring indicators	The organisation trades in 10 – 49.9% (by number) of certified responsibly sourced Eel and has the documentation to demonstrate that.
Discussion	The total amount of glass eels purchased in 2021 was 516 kg. De Palingfabriek has only two suppliers: [redacted] The company present sufficient evidence that 95% of the glass eel is responsible. In conclusion, we can define that in 2021 95% of the Eel supplied to De Palingfabriek is responsible or certified as a reliable source. The supplier in 2021 is limited to one SEG supplier, [redacted]  SEG SUPPLIERS LIVE EEL 2021 [redacted] Total 2 516 516 Kg. Eel Reported 0 Difference SEG Suppliers 490 95,00 % 100,00% Kg. Eel Reported Responsible Eel *Refer to evidence 1:1*
Score	**Responsible**

Criterion 1.4: Traceability	
1.4.1: Traceability - Incoming product, separation and segregation	
Responsible indicators	• Certified and uncertified eel products can be clearly and easily traced back to their source. • Where a fishery or buyer, an electronic tele-declaration system is used • It operates a clear system which ensures that the product remains separated at all stages from arrival to dispatch from non-certified eel products. • The organisation ensures that any products wishing to make a claim as certified do not contain any non-certified eel-based ingredients. • If resolved through mass- or number- balance calculations, the margin of error does not exceed 2%
Aspiring indicators	• Certified and uncertified eel products can be traced back to their source. • If segregation is not possible, there are clear and auditable records of the numbers of certified and uncertified eels entering the organisation at each facility • It can demonstrate through auditable records that the number of certified eels exiting the organisation in a ear did not exceed the number that entered • If resolved through mass- or number- balance calculations, the margin of error does not exceed 5% or if a farm, the 2800 pieces per 1 kg of glass eels is applied.
Discussion	All eels owned by De Palingfabriek are certified and come from only two SEG suppliers. Therefore, the requirement of separation between SEG and non-SEG is not taken into account. In 2021 only supplier. The glass eel from the supplier is already mixed because 95% responsible source. The eels that are processed are easy to trace due to the tracking and documentation system that is presented by the company and controlled on-site during this 2021 audit. The farm has 27 stainless steel tanks and 10 plastic tanks with one system for Glass Eels, one for fingerlings and one for larger eels. The eels can be traced through the documentation for up to 7 years, according to Dutch regulations. *Refer to Criterion 1.3* *Refer to Evidence 1:1*
Score	**Responsible**
1.4.2: Traceability - Outgoing product	
Responsible indicators	• Where a fishery or buyer, an electronic tele-declaration system is used • Documentation is well maintained with a maximum of 2% error in the following: • The organisation correctly uses batch-coding for labelling certified product, which can be on the packaging for the product, or included in the documentation (e.g. invoice) with the assignment • All product to be sold as certified by an organisation is accompanied by an invoice which meets the following criteria: - Includes an appropriate batch code - Includes a record of the quantity (no. & weight) of product and to whom it was sold
Aspiring indicators	• Documentation is well maintained. If resolved through mass- or number- balance calculations, the margin of error does not exceed 5% in the following (or if a farm, the 2800 pieces per 1 kg of glass eels is applied): • The organisation correctly uses batch-coding for labelling certified product, which can be on the packaging for the product, or included in the documentation (e.g. invoice) with the assignment • All products to be sold as certified by an organisation are accompanied by an invoice which meets the following criteria: - Includes an appropriate batch code - Includes a record of the quantity (no. & weight) of product and to whom it was sold
Discussion	De Palingfabriek uses correct and accurate batch coding for product labelling and invoicing, including the order number, batch identification and traceability numbers required by the Dutch authorities and customers. At the same time, De Palingfabriek only has SEG suppliers at the 'real or

	true' responsible eel level of 95%, demonstrating De Palingfabriek's commitment to sustainable practices and the protection of Eel. De Palingfabriek's supplier delivers complete documentation per batch, including the INTRA code and full traceability from the catch of the glass eel, including the names of the fishermen and their vessels. *Refer to Evidence 1:3*
Score	**Responsible**
1.4.3: Traceability - Record keeping and documentation	
Responsible indicators	• The organisation operates a system that allows the tracking and tracing of all Eel from purchase to sale and including any steps in between. In the case of live eels this should include the ability to track each batch delivered to a buyer to be connected back to a water, a time period (maximum duration one month) and specific fisherman/vessel • If a fisherman or buyer, a tele-declaration system is used to report catches and trade • The organisation operates a system that also allows for the completion of a batch reconciliation of eel product by weight over a given period. • The organisation maintains records for a minimum of three (3) years.
Aspiring indicators	The above requirements are met except that: • Records have been maintained for less than three (3) years • If a fisherman or trader, a tele-declaration system is planned to be used to report catches and trade in the next season
Discussion	De Palingfabriek keeps records for seven years to date, following Dutch regulations, but we have to consider the company was acquired by the new owner in April 2020. The batch numbering of the supplier also accompanies eels received from an SEG source. Each sale of live eels is given a batch number defined by the company, specifying weight and size. A copy of this record is sent to the customer, while the original is kept for the company's internal records. Considering the records and on-site evidence, De Palingfabriek has solid record-keeping, documentation, and internal traceability in place. *Refer to Evidence 1:4*
Score	**Responsible**

Criterion 1.5: Biosecurity & welfare – Eel and eel products are provided with minimal risk of diseases, parasites and alien species	
Eel Fishing: Biosecurity measures are adopted	
Responsible indicators	• The fishery conducts good biosecurity measures such as the disinfection and drying of nets and equipment between each fishing in different waters. OR: • The fishermen only operate in the same river or estuary, with no risk of transferring diseases or alien species between catchments
Eel buying & trading: Biosecurity is present and disease is treated rapidly and appropriately	
Responsible indicators	• The use of chemicals follows legal requirements of the appropriate EU regulations and of the country concerned. • The facility has the appropriate permissions to operate from the relevant licensing authority • An effective and documented biosecurity plan is in place and there is evidence that it is being followed. • Records are available showing regular monitoring of health and possible signs of stress according to the facility's plan (including the completion of microscope parasite checks) and daily mortality is recorded. • Records are maintained according to the Medicines Regulations for use of any medicines and/or chemicals used in the facility.
Aspiring indicators	• The use of chemicals follows legal requirements of the appropriate EU regulations and of the country concerned. • The facility has the appropriate permissions to operate from the relevant authority

	• An effective and documented biosecurity plan is in place and there is evidence that it is being followed. • Eels are regularly monitored for health and possible signs of stress (although this might not be documented) and daily mortality is recorded. • Records are maintained according to the Medicines Regulations for use of any medicines and/or chemicals used in the facility.
Discussion	The owner and company's staff is regularly trained in hygiene and sanitation, as this is a legal requirement. The volume of chemicals used is so small that the effect on the water quality is virtually non-existent. There are good biosecurity measures in place with foot and handwashing control. No outside personnel are allowed onto the premises. De Palingfabriek has all the relevant permits and licences to operate as a company in accordance with the provisions of the Dutch authorities for the cultivation, processing and sale of fishery products. The company holds permit number NL21731 issued by the Dutch Food Standards Agency. De Palingfabriek has eliminated all use of medication and has focused on maintaining the health of the eels by guaranteeing an excellent level of water quality. In the remote case, that medication is required for the eels; this is defined via veterinary approval.
Score	**Responsible**
Eel farming: Biosecurity is present and disease is treated rapidly and appropriately	
Responsible indicators	• The facility has the appropriate permissions to operate from the relevant authority. • The use of chemicals follows legal requirements of the EU and of the country concerned • An effective and documented biosecurity plan is in place and there is evidence that it is being followed. • Daily records are available showing monitoring of fish health and signs of stress and daily mortality is recorded • Records are maintained according to the Medicines Regulations for use of any medicines and/or chemicals used in the facility • UV is used at an appropriate level and separation between tanks
Aspiring indicators	• The facility has the appropriate permissions to operate from the relevant licensing authority • The use of chemicals follows legal requirements of the EU and of the country concerned. • An effective and documented biosecurity plan is in place and there is evidence that it is being followed. • Eels are regularly inspected for disease (although this may not be documented) and daily mortality is recorded. • Records are maintained according to the Medicines Regulations for use of any medicines and/or chemicals used in the facility.
Discussion	De Palingfabriek has all the relevant permits and licences to operate as a company following the provisions of the Dutch authorities for the cultivation, processing and sale of fish products. The company holds permit number NL21731 issued by the Dutch Food Standards Agency. The company has eliminated all use of medicines and has focused on maintaining the health of the eels by ensuring an excellent level of water quality. In the unlikely event that medication is required for the eels, this is defined through veterinary approval. The company has a detailed daily record showing the monitoring of the health of the eels, including signs of stress and daily mortality. De Palingfabriek does not have a UV system on-site, but the level of water used, and the dedication and control available on site was monitored during this 2021 audit, so the need for UV can be ruled out. The nursery water does not contain any artificial additives. Employing reactors filled with biofilm (a group of micro-organisms), biological filtration takes place, resulting in clean breeding water. All water used in the nursery passes through a recirculation system. This means that all the water used is reused. This ensures extremely low energy consumption. The water flows through the system at 300 to 400 cubic metres per hour. The water in the tank is renewed 2.5 times per hour. The water passes through a biological filtration system and then returns to the tanks. A small amount is filtered

	out. This is the manure, which goes to the farm's own water purification system. The manure is separated from the water and the water disappears into the sewage system. In addition, there are all kinds of heat exchangers and all the waste heat is used.
Score	**Responsible**
Restocking: The risk of restocked eels introducing disease into wild populations has been assessed and is minimal	
Responsible indicators	Eels are tested before restocking and found to be free of disease AND/OR eels are from a known source which is tested on at least an annual basis and known to be free of disease.
Aspiring indicators	Eels are tested before restocking when first sourced from a new area, and periodically (at least annually) thereafter to ensure they are free from disease.
Discussion	The eels are under control concerning diseases; therefore, this is a part of the daily work process. The eels must pass the internal restocking control before they leave the premises. This process is directly controlled by Mr. Huisman; without his control, the eels do not leave the company. Considering that the eels come from a known source already controlled by SEG, it is possible to establish their traceability in case of disease. All documentation requested by customers and authorities in the international market is provided by the company in an appropriate form.
Score	**Responsible**
Wholesale / Retail / Processing: Hygiene Plans are followed and there are rare examples of infection	
Responsible indicators	Food processing hygiene plans are followed
Discussion	The company counts with an effective HCCP in place and constant monitoring via an independent external company. Dutch authorities request HCCP. The company has all permissions to operate and visually is easy to define De Palingfabriek's facilities as adequately managed.
Score	**Responsible**

Component 4 - Eel buying and trading	
Criterion 4.0: Segregation of certified and uncetified eels	
Weighting: 2	
Responsible indicators	Certified and non-certified are kept separated, from point of collection through holding to sale and onward transport
No Aspiring indicators	
Discussion	The process of separation of SEG and non-SEG eels is not applicable for De Palingfabriek, as they only work with two SEG suppliers and have a level of 95% glass eel responsible. However, the company's internal procedure provides the separation of eels per batch delivered per supplier. *Refer to Evidence 4:1*
Score	**Responsible**
Criterion 4.1: The Glass Eel holding facility is a registered Aquaculture Production Business	
Weighting: 1	
Responsible indicators	The Glass Eel holding facility is a registered Aquaculture Production Business
Aspiring indicators	The facility is not a registered Aquaculture Production Business, but has credible plans to register within the next 6 months
Discussion	De Palingfabriek is a company registered under the chamber of commerce of The Netherlands number 77741498, which establishes its registration as a fish processor under SBI number code 1020 following the policy and regulations set by national and EU Common Fisheries Policy (CFP) and rules for aquaculture.
Score	**Responsible**

Criterion 4.2: Mortality in storage facility	
Weighting: 2	
Responsible indicators	Mortality rate over the season is less than 2% on average.
Aspiring indicators	Mortality rate over the season is less than or equal to 5% on average but greater than or equal to 2%
Discussion	According to the information provided by Mr Huisman, mortality is less than 2.0%, presenting an effective form of control. *Refer to Evidence 4:2*
Score	**Responsible**
Criterion 4.3: Mortality during transport and initial holding if transported to farm	
Weighting: 2	
Responsible indicators	Buyers source at least 90% of their eels from certified suppliers OR Mortality during transport and for the first week at the farm is less than 2% on average
Aspiring indicators	Buyers source 50% - 89.9% of their eels from certified suppliers OR Mortality during transport and for the first week at the farm is less than or equal to 3% on average but greater than or equal to 2% on average.
Discussion	The Glass eels purchased are sourced from 100% SEG-certified suppliers, and the eels leaving in De Palingfabriek are 95% SEG-certified.
Score	**Responsible**
Criterion 4.4: Water quality	
Weighting: 1	
Responsible indicators	A system is in place that is expected to keep key water quality parameters within suitable tolerances for healthy eel survival (e.g. Ammonia, Suspended Solids, pH, oxygen) Water quality management procedures are in place including regular monitoring of relevant parameters which shows that water quality is always high and stable The facility operates a back-up system to ensure that water quality will not adversely affect survival rates in the case of an equipment failure
Aspiring indicators	A system is in place that is expected to keep key water quality parameters within suitable tolerances for healthy eel survival (e.g. Ammonia, Suspended Solids, pH, oxygen) The facility has a minimum of a back-up generator and oxygen supply
Discussion	Water quality plays an essential role at De Palingfabriek, as water control has made it possible to eliminate diseases and to avoid supplying the eels with medicines. The water at De Palingfabriek comes from a 40 metre deep well, which has the characteristic that it does not need to be handled in order to be used for the aquaculture of eels. The water is constantly monitored, and ammonia, solids, pH, and oxygen levels are checked regularly. The use of “well” water does not constitute a risk to the local water supply, and De Palingfabriek has the appropriate permits related to groundwater rights. Employing reactors filled with biofilm (a group of micro-organisms), biological filtration takes place, resulting in clean breeding water. All water used in the nursery passes through a recirculation system. This means that all the water used is reused. This ensures extremely low energy consumption. The water flows through the system at 300 to 400 cubic metres per hour. The water in the tank is renewed 2.5 times per hour. The water passes through a biological filtration system and then returns to the tanks *Refer to Evidence 4:3*
Score	**Responsible**
Criterion 4.5: Handling and welfare	
Weighting: 1	
Responsible indicators	Systems are in place and the facility is designed to keep handling to an absolute minimum Documented procedures are in place for handling, and handling, where necessary, is careful The infrastructure is designed to avoid injuries, and so that the use of nets is rarely necessary. When used, nets are small-mesh (1mm maximum)

	Eels are moved without being allowed to dry out.
Aspiring indicators	The facility may not be optimally designed, but systems are in place to avoid handling as much as possible within the constraints of the facility Handling, where necessary, is carefully planned and executed The infrastructure has been optimised as far as possible to avoid injuries Nets are small-mesh (1mm maximum) Eels are moved without being allowed to dry out.
Discussion	De Palingfabriek's facilities are optimised as much as possible to avoid handling to prevent injuries. The auditor checked the entire handling without presenting any substantial evidence of deficiencies in handling and eel welfare.
Score	**Responsible**
Criterion 4.6: Transport	
Weighting: 1	
Responsible indicators	There is a Transport Plan in place to minimise travel time – this meets the Transport requirements for vertebrates Packing is done in a way that minimises handling, time and stress Eels are kept cool and wet with an adequate supply of oxygen The operator holds the relevant transport authorisations
Discussion	De Palingfabriek's transport process from aquaculture to customers is 0. Customers usually come with their own vehicles to pick up the Eel, and De Palingfabriek makes it easy for them to load the vehicles in the most efficient and effective way without damaging the eels welfare. Handling is minimum, minimising time and stress. The clients vehicles are equipped with appropriate systems following all Dutch and European regulations in this matter.
Score	**Responsible**
Criterion 4.7: The required percentage of glass eels is being used for restocking	
Weighting: 2	
Responsible indicators	The buyer can provide documented evidence that they have sold at least 60% for restocking the required target percentage of its glass eels from the last season for the primary purpose of conservation / escapement.
Aspiring indicators	The buyer can provide documented evidence that they have reserved or made available at least 60% of the required target percentage of its glass eels from the latest season available for the primary purpose of conservation / escapement, OR The buyer can provide documented evidence that it has made available glass eels to the maximum level possible within the constraints of the implementation of the EMP in that country OR The buyer can provide credible evidence that restocking will occur in the forthcoming season.
Discussion	
Score	**Aspiring**

Component 5 - Eel farming	
Criterion 5.1: The total mortality rate during the culture process is low	
Weighting: 2	
Responsible indicators	The Percentage Mortality Rate of eels in culture is less than or equal to 10% on average in the current and previous year OR as an average of the previous five years An accurate daily log is maintained of the number and causes of mortality
Aspiring indicators	The Percentage Mortality Rate of eels in culture is between 10 and 15% on average in the current and previous years OR as an average of the previous five years. An accurate daily log is maintained of the number of mortalities

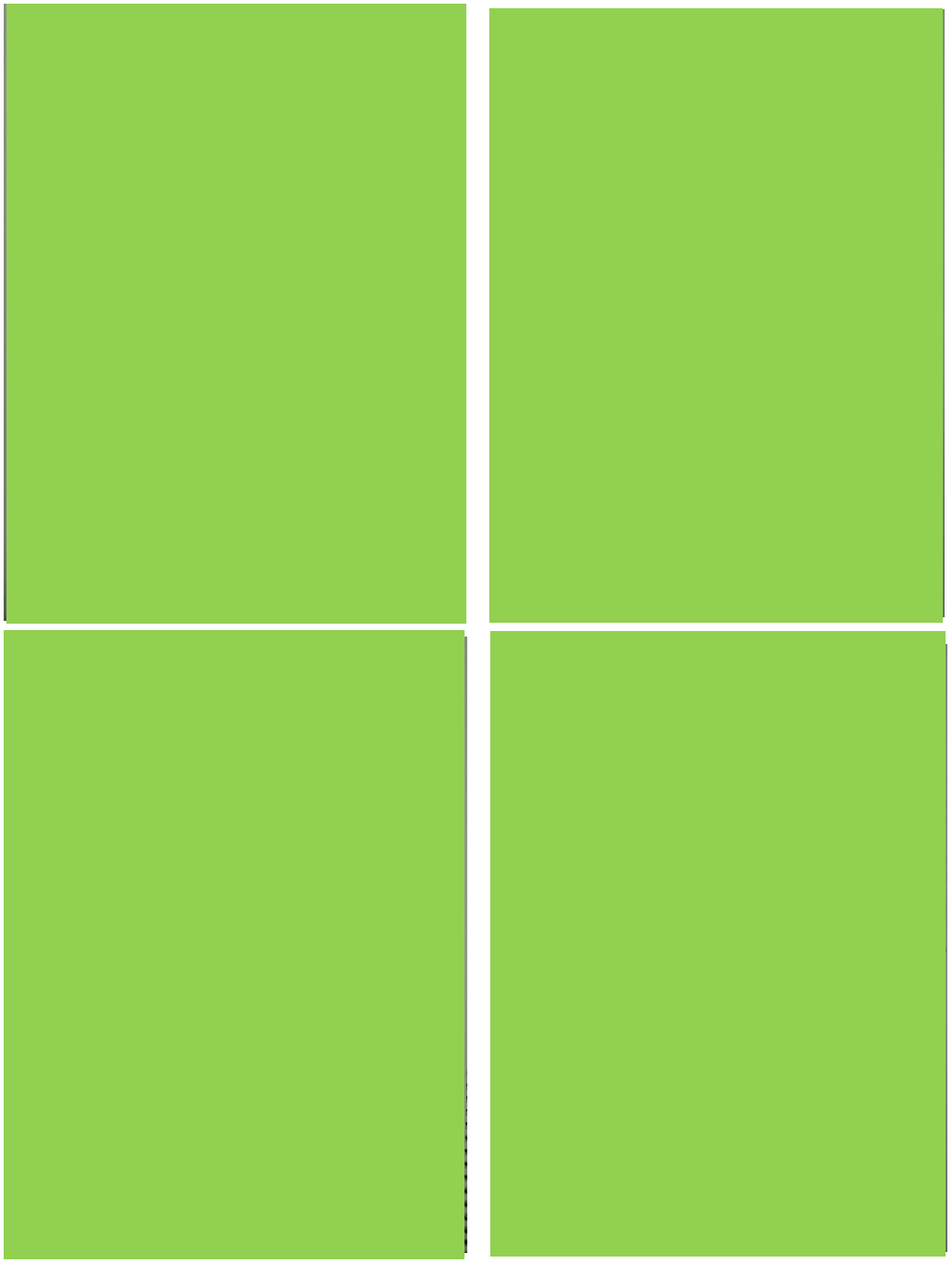
Discussion	De Palingfabriek recorded mortality per tank manually and recorded daily per dead Eel. Considering that the life cycle process of the Eel in aquaculture before consumption is two years, it can be defined for this audit that the mortality rate reaches less than 0.1%. Dutch law dictates that dead eels are required to be disposed of and that this is payable by weight. Detailed records are maintained in kilograms of all dead eels as they are collected from the tanks. Figures present the average monthly mortality of grown eels was about 120kg which related to the total 250,000 kg production is less than 0.1%
Score	**Responsible**
Criterion 5.2: The fish meal/oil ingredients in the feed come from a responsible source	
Weighting: 1	
Responsible indicators	Fish meal/oil in the feed (including juvenile feeds) is certified by IFFO or MSC or shown in some other way to be from responsible or sustainable sources
Aspiring indicators	Fish meal/oil in the feed (including juvenile feeds) is not certified by IFFO or MSC or shown to be from responsible sources, but there are credible plans to move to such a supplier within 2 years
Discussion	The assessment includes the raw materials that are used for the production of eel feed. The marine raw materials sourced during 2021 in regard to IFFO RS approval, MSC approval and compliance with Fish Source Score criteria in ASC standards. *Refer to Evidence 5:4*
Score	**Responsible**
Criterion 5.3: Feed is used as efficiently as possible	
Weighting: 1	
Responsible indicators	The average feed conversion ratios in the farm are as follows: • Glass eel to fingerlings: 1.1 or less • Fingerlings to 200g: 1.6 or less • Large eels: 2.0 or less
Aspiring indicators	The average feed conversion ratios in the farm are as follows: • Glass eel to fingerlings: 1.3 or less • Fingerlings to 200g: 1.8 or less • Large eels: 2.2 or less
Discussion	The feeding of the eels at De Palingfabriek is crucial for the health of the eels and the commercial success of the company. Feeding is handled directly by Mr. Huisman, who closely supervises this process to ensure that there is no feed wastage. The feeding process is carried out in different ways depending on the growth cycle of the glass eel. The first part of the cycle starts with glass eel tanks which are supplied with an automated system activated three times a day. The medium and large tanks use pendulum feeders, which are activated depending on the eel activity in the tanks. FCR figures were calculated for each of the size ranges identified in the standard as 1.0 - 1.1 for Glass eel to fingerlings and 1.3 - 1.5 for eels up to 200g and larger eels. Larger eels, which can exceed 1200 grams, have a higher FCR as stipulated in the reports, as they typically have a higher FCR, of course, than eels grown to 800g or more. *Refer to Evidence 5:1*
Score	**Responsible**

Criterion 5.4: Water quality	
Weighting: 1	
Responsible indicators	• A system is in place that is expected to keep key water quality parameters within suitable tolerances for healthy eel survival (e.g. Ammonia, Suspended Solids, pH, oxygen) • Water quality management procedures are in place including regular monitoring of relevant parameters which shows that water quality is always high and stable • Water quality monitoring is linked to an alarm-based system in the event of a sudden drop in water quality • The facility operates a back-up system to ensure that water quality will not adversely affect survival rates in the case of a power supply failure.
Aspiring indicators	• A system is in place that is expected to keep key water quality parameters within suitable tolerances (e.g. Ammonia, Suspended Solids, pH, Oxygen) • Water quality management procedures are in place and there is regular monitoring of relevant parameters which shows that water quality is always high and stable.
Discussion	Water quality plays an essential role at De Palingfabriek, as water control has made it possible to eliminate diseases and avoid supplying the eels with medicines. The water at De Palingfabriek comes from 80 metres deep well, which has the characteristic that it does not need to be manipulated or adjusted for use in eel aquaculture. The water is constantly monitored, and the levels of ammonia, solids, pH and oxygen are checked regularly. Water quality monitoring is linked to alarm systems in case of any sudden incidents concerning water quality. In addition, the entire water circuit is connected to an emergency generator to ensure the eels' survival and maintain a constant water cycle in the event of a power failure. *Refer to Evidence 5:2*
Score	**Responsible**
Criterion 5.5: There are minimal ecological impacts from effluent discharge	
Weighting: 1	
Responsible indicators	• The system is closed-circuit and has no discharge OR • Effluent discharge is regularly tested by the farm AND • Effluent discharge complies with all local and national requirements AND • Has not been found to be non-compliant in the past 5 years.
Aspiring indicators	• Effluent discharge is regularly tested by the farm AND/OR • Has been found to be non-compliant on no more than 1 occasion in the past 5 years.
Discussion	The discharge and water management is handled by Mr Huisman self, where not only the manure generated by the aquaculture process is effectively managed, but also the energy recovery has been added to this. The manure is removed periodically and given to local farmers to fertilise their land. No records have been found to indicate any infringements regarding the quality of the water discharged from the installation. De Palingfabriek follows the municipality's plans as stipulated in the Municipal Sewage Plan (GRP). *Refer to Evidence 5:3*
Score	**Responsible**
Criterion 5.6: Grading, slaughter and transportation are carried out with respect to welfare	
Weighting: 1	
Responsible indicators	• Grading is completed in an efficient manner • Slaughter is completed by a method that provides an instant death or renders them insensible to pain, i.e. electric stunning or percussive stunning. • Procedures are in place to ensure transportation provides suitable conditions for fish welfare.
Aspiring indicators	• Other, previously acceptable methods of stunning before slaughter are used, e.g. chilling, but there are credible plans in place to invest in the latest methods within the next 2 years

Discussion	De Palingfabriek has a 4-size grading machine. This machine fulfils the function of sorting the eels in an efficient way where the air pump moves the eels. The company does not have a slaughtering process in the facilities. Live eels leave the De Palingfabriek facility via logistical transports, which are entirely provided by De Palingfabriek's customers. Mr. Huisman never lets the eels go without water or dry out; the eels are separated after grading and lowered in temperature to allow them to 'purge' before the transport they will face.
Score	**Responsible**
Criterion 5.7: The farm provides Eel for restocking	
Weighting: 2	
Responsible indicators	The farm can provide documented evidence that 10% or more of the farm's annual eel production (by piece) has been provided for restocking for the purpose of conservation / escapement.
Aspiring indicators	The farm can provide documented evidence that it makes 10 % of their annual eel production (by piece) available for restocking for the primary purpose of conservation / escapement AND/OR for new clients, the farm can demonstrate that they have bookings for re-stocking in the following year at more than 10% of the predicted annual eel production (by piece) for the purpose of conservation / escapement.
Discussion	In 2021, the purchase of glass eel was 248 Kg for restocking; this means around 860.000 pieces, and this equates to 49% for the year based on the exact number of Kilograms brought to De Palingfabriek. There is sufficient on-site information regarding the quantities and traceability of these purchases which were made from SEG certified suppliers.
Score	**Responsible**
Criterion 5.8: Eels for restocking are not graded out slow-growers	
Weighting: 2	
Responsible indicators	The size range and quantities in the eels for restocking reflect 100% that for the age group in the whole farm
Aspiring indicators	The size range and quantities indicate no more than a 25% supplement of those for restocking are from slower growing fish of the same age group
Discussion	Eels purchased for restocking do not undergo sorting processes and therefore reflect and represent the actual state of glass eels from where they were caught and are kept separate from eels intended for processing and human consumption. Consequently, the size range received and the quantities of eels for restocking reflect 100% that of the age group received, which is unaltered and unmanipulated.
Score	**Responsible**

8. On-site Evidence per Component

Component 1			
Evidence	Evidence	Evidence	Description
1:1			100% of SEG Suppliers The sample year 2021 95% responsible eel
1:1:1			De Palingfabriek present to the public via their webpage the commitment to Eel.
1:2			The company has separate tanks, and each batch is managed separately and is not mixed to avoid cross-contamination between eels. De palingfabriek can define the source per batch and the eel time per tank.
1:3			Invoices to De Palingfabriek and delivery orders specifying batch, order and codes, including internal registers and internal traceability.

1:4		Receive documentation batch and electronic and manual documentation available on site.

Component 4			
Reference	Evidence 01	Evidence 02	Description
4:1	  		The tanks are clearly separated. The eels are not mixed in each tank. Each tank represents individual, isolated batches.
4:2			Mortality is controlled in detail with a daily log. Each tank presents individuals registers and maintain a low mortality level.

4:3	  	The water comes from our own well at a depth of 40 metres. The water quality and control are monitored on a daily basis.

Component 5			
Reference	Evidence 01	Evidence 02	Description
5:1	  		The tanks are clearly separated. The eels are not mixed in each tank. Each tank represents individual, isolated batches.

5:2		The water comes from his own well at a depth of 40 metres. The water quality and control are monitored on a daily basis.
5:3	 	The manure is removed periodically and given to local farmers to fertilise their land. A heat recovery system is present.
5:4		De Palingfabriek suppliares