



SEG Standard Assessment
Mooijer-Volendam BV

Assessment against SEG Standard V6.0a: Component 1: Core requirements
Component 4: Purchase and trade of eels
Component 7: Processing, wholesale and retail supplies

Completed by
Richard Wailes

8th September 2021

Version: Final

Reviewed and Approved by Certification Body:
David Bunt, Sustainable Eel Group, 9 September 2021

1) Introduction

This document represents the report of the audit of 8th September 2021 carried out for Mooijer-Volendam BV based in Volendam, Netherlands concerning the compliance with the SEG (Sustainable Eel Group) Standard (version 6.0a, December 2019). This assessment was carried out in relation to components 1, 4, 7 of the SEG Standard.

The assessment is of a Processor / Retailer located in Volendam, Netherlands. This is a large very modern operation employing 150 staff selling and trading in multiple species (mainly pelagic) and certified against a number of Standards including IFS, GMP+ and MSC (45 staff involved with smoked fish). As well as processing fish and eels MV is a trader of both marine and other products which now represents about 75% of the turnover.

Previously Mooijer-Volendam BV owned an eel aquaculture operation – Natuurlijk BV but this is now closed and all eels are purchased from local farms (and some other processors due to the eel shortages at present).

It was noted that a small purchase of wild eels has been undertaken recently – this is largely due to the success of the restocking operations and the redesign of the dykes allowing the free movements of eels. These eels are kept separate and never mixed with the Aquaculture product.

2) The assessment

The evaluator was Richard Wailes of Fisheries Associates. The audit was carried out in the form of a remote discussion with Mr. Nicolas Kwakman (Quality Manager) via MS Teams due to the ongoing Covid-19 travel restrictions. The audit was conducted on the basis of documents presented before and during the audit which relate to the activities of the past and current year.



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3) Client Contact Details

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|-----------------------|--|
| Name/Company | Mooijer-Volendam BV |
| Postal address | Dwarskuul 2, 1131 PS , Volendam, Netherlands |
| Email address | nicokwakman@mooijer.nl |
| Phone number | 00 31 651 611 982 |

4) 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 (bonus) | Responsible | 1 | 1 |
| 1.3 The organisation 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 and well-being: | | | |
| 1.5.2 Eel purchase and trade: biosecurity is present, and disease is treated promptly and appropriately | Responsible | 1 | 1 |
| 1.5.4 Restocking: The risk of restocking eels introducing diseases into wild populations has been assessed and is minimal. | N/A | 1 | 0 |
| Total | | 7 | 7 |
| Percentage Responsibility Score: | | 100% | |

Finding: For component 1, the score is 100%, achieving a Responsible assessment.

| Component 4: Eel buying and trading | Auditor's findings | Weighting | Score |
|--|---------------------------|------------------|--------------|
| 4.0 Segregation of certified and uncertified eels | Responsible | 2 | 2 |
| 4.1 The glass eel holding facility is a registered aquaculture production business | Not applicable | 1 | 0 |
| 4.2 Mortality in storage facility | Responsible | 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 | Not applicable | 2 | 0 |
| Total | | 9 | 9 |
| Percentage Responsibility Score: | | 100% | |



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Finding: The Processing operation (including storage) achieved a score of 100% for component 4 and can therefore be considered responsible according to the SEG standard criteria.

| Component 7: Processing, wholesale and retail supplies | Score |
|---|-------|
| Comments: The company has been committed to the SEG Standard for three years and believes passionately in the responsible sourcing and processing requirements. From intake, care of the eels in tanks, humane slaughtering (electric) and processing (up to 1000kgs per day), efficient brining, up to date smoking and to finally the latest in packing techniques the operation is slick and hygienic. Currently nothing is shown on the packaging (MAP, VP) but may be added if the products start being sold by the big retail chains. In 2021 sales of certified eels were at 90% and this is expected to grow further. | 1 |

Finding: The Processing operation achieved a score of 100% for component 7 and can therefore be considered responsible according to the SEG standard criteria.

Summary of assessment and scoring

| Component | Not Met | Aspiring | Responsible |
|--|----------|----------|-------------|
| 1 | 0 | 0 | 7 |
| 4 | 0 | 0 | 9 |
| 7 | 0 | 0 | 1 |
| Total | 0 | 0 | 17 |
| Total Responsibility Score: = 17/17 | | | 100% |

Summary finding:

With a score of 100%, the organization Mooijer-Volendam BV meets the criteria for achieving SEG certification.

5) Recommendations:

There are no recommendations as Mooijer-Volendam currently are meeting the SEG Standard requirements in every area.



6) Next Audit

| Question | 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 | No Audit | Remote Audit | No 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 |

Based on the results of the audit, standard monitoring is recommended.



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7) The Assessment

The tables below detail the reasons for the ratings given above for each component.

| Component 1 – Generic requirements (Weighting: 1 for each criterion) | |
|--|--|
| 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 | Confirmation Statement received that there have been no eel related offences in the past two years. |
| Score | 1-Responsible |

| Criterion 1.2: Contribution to Eel Conservation Projects. (Optional bonus score) (The intention is for this to be mandatory from summer 2020) | |
|---|--|
| 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 is committed to being responsible – checks website for supplier’s accreditations and also it pays about 2.43% of its profits to the Eel Stewardship Funds through DUPAN (figures taken). They are also a major investor in laboratory ‘Glasaal Volendam BV’ where they are trying to take eels through the full breeding and growth cycle (currently up to 17 days of life) so that there will be no need for the use of wild glass eels in the future. It was also noted that Mooijer-Volendam have very high environmental standards being audited annually to the equivalent of ISO 14001. |
| Score | 1-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. |



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| Discussion | The company buys mainly responsibly certified eels, buying from three farms/suppliers – Salco Fishfarm Dronten BV, Troelstra Aquacultuur BV & Koman’s Vishandel BV which are all SEG approved (copies of documentation taken). About 1.3% of non-certified wild eels were purchased in 2020 and these are handled for a specialist local market. Upon purchase MV confirms the status and the three main suppliers all confirmed that the eels provided were from at least 50% certified stock. When MV start selling the finished product as fully SEG Certified they will ensure that the supplier can provide full evidence of the eels’ provenance. |
| Score | 1-Responsible |

Criterion 1.4: Traceability

1.4.1: Traceability - Incoming product, separation and segregation

| | |
|-------------------------------|---|
| Responsible indicators | <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • 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 year 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 | When eels arrive at the premises, they are given a unique batch number which links directly to the delivery note/invoice from the supplier. This Batch code follows the product through the holding tanks (separated by farm and batch), electric stunning operation, processing, smoking and packing and is finally shown on the labels on each pack. The batch code is key to the claim of certification and the procedures in place ensure that there are no possibilities of mixing certified and non-certified eels. With both IFS and MSC Standards in place there are no issues of mixing. The SAP system ensures clear and accurate documentation. |
| Score | 1-Responsible |

1.4.2: Traceability - Outgoing product

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|-------------------------------|--|
| Responsible indicators | <ul style="list-style-type: none"> • 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: |
|-------------------------------|--|



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| | <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> Includes an appropriate batch code Includes a record of the quantity (no. & weight) of product and to whom it was sold |
| Aspiring indicators | <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> Includes an appropriate batch code. Includes a record of the quantity (no. & weight) of product and to whom it was sold. |
| Discussion | The traceability is excellent overall with each batch being identified clearly right up to final label on the packaging. This links up with the invoices through date and a record which shows which products are sold on which day from which batch. There is minimal margin for error and documentation is sufficient. Checked – SAP system and Crystal Reports. |
| Score | 1-Responsible |

1.4.3: Traceability - Record keeping and documentation

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|-------------------------------|--|
| Responsible indicators | <ul style="list-style-type: none"> 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 | <p>The above requirements are met except that:</p> <ul style="list-style-type: none"> 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 | Full traceability in place with each stage of the process identified through batch code. A copy of reconciliation of Batch 20045 taken showing an overall yield of 77%. (this is also part of the IFS & MSC requirements). Records are kept for 5 years +. |



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| Score | 1-Responsible |
|--------------|---------------|

Criterion 1.5: Biosecurity & welfare – Eel and eel products are provided with minimal risk of diseases, parasites and alien species

1.5.2 Eel buying & trading: Biosecurity is present and disease is treated rapidly and appropriately

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| Responsible indicators | <ul style="list-style-type: none"> • 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 a possible sign 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 | <ul style="list-style-type: none"> • 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 | This is only applicable for the eels held in storage for up to 5 days prior to slaughter. No chemicals are used (apart from a small amount of salt), an effective biosecurity plan is in place (and being used), daily mortality is recorded (though minimum – less than 0.1%). This is part of the GMP+ & IFS requirements. |
| Score | 1-Responsible |

1.5.4 Restocking: The risk of restocked eels introducing disease into wild populations has been assessed and is minimal

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| 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 | N/A as not a farm |
| Score | N/A |



| Summary scores for Component 1 | |
|--|-------------|
| Not met | 0 |
| Not applicable | 1 |
| Aspiring | 0 |
| Responsible | 7 |
| Total possible | 7 |
| % Responsibility (Responsible / Total possible) | 100% |

| Component 4 - Eel buying and trading | |
|---|---|
| Criterion 4.0: Segregation of certified and uncertified eels | |
| Weighting: 2 | |
| Responsible indicators | Certified and non-certified are kept separated, from point of collection through holding to sale and onward transport. |
| Aspiring indicators | None. |
| Discussion | All eels notified SEG at the entrance are placed in 11 specific fish tanks - in fact at least 50% of the eels are certified (according to the suppliers though in fact the percentage is higher) so only the small volume of wild eels are kept separately. The procedures are clear on this. |
| Score | 2-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 | N/A as not a farm |
| Score | N/A |

| Criterion 4.2: Mortality in storage facility | |
|--|--|
| Weighting: 2 | |
| Responsible indicators | Mortality rate over the season is less than 2% on average. |



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| Aspiring indicators | Mortality rate over the season is less than or equal to 5% on average but greater than or equal to 2%. |
| Discussion | Mortality in the holding tanks (9) is minimal. Eels are stored for up to 5 days and any dead eels recorded daily – the mortality rate is negligible (less than 0.2%) |
| Score | 2-Responsible |

Criterion 4.3: Mortality during transport and initial holding if transported to farm

| | |
|-------------------------------|---|
| Weighting: 2 | |
| Responsible indicators | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | Not an issue as this is a processor but mortality during transport (own and approved) and in the holding tanks is negligible. 90%+ of all eels purchased are certified. |
| Score | 2-Responsible |

Criterion 4.4: Water quality

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|-------------------------------|---|
| Weighting: 1 | |
| Responsible indicators | <ul style="list-style-type: none"> 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 | <ul style="list-style-type: none"> 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 | The water used is drinking water. Checked twice annually by the local authorities and approved (copies of approvals taken). There is also a well water treatment facility in place and GMP+ approved. There is no need for a back-up system as the tanks are and can be used/emptied immediately in case of electrical failure |
| Score | 1-Responsible |

Criterion 4.5: Handling and welfare

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| Weighting: 1 | |
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| Responsible indicators | <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • 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 | Facility built in 2012 and has been designed to minimize handling with a quick and efficient product flow (intake, storage, stunning, brining, gutting, smoking, chilling and packing). There are documented procedures in place as part of the HACCP and Quality Manual. Eels are moved quickly and killed humanely with electricity – speed does not compromise quality. |
| Score | 1-Responsible |

| Criterion 4.6: Transport | |
|---------------------------------|---|
| Weighting: 1 | |
| Responsible indicators | <ul style="list-style-type: none"> • 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 | The fish are collected via a fish tanker truck with an oxygen supply. The Company has its own truck to collect the eels with the maximum distance with the current farms of 2 hours. The truck is designed for eel transport with aerated water in each compartment and is approved by the Authorities. |
| Score | 1-Responsible |

| Criterion 4.7: The required percentage of glass eels is being used for restocking | |
|--|--|
| Weighting: 2 | |
| Responsible indicators | <ul style="list-style-type: none"> • The buyer can provide documented evidence that <u>they have sold</u> at least 60% for restocking the required target percentage of its glass eels from the last season for the primary purpose of conservation / escapement. • The eels for restocking are representative of the stock – slow growers are not selected. |



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| Aspiring indicators | <ul style="list-style-type: none"> • The buyer can provide documented evidence that <u>they have reserved or made available at least 60%</u> 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 re-stocking will occur in the forthcoming season. • The eels for restocking are representative of the stock – slow growers are not selected. |
| Discussion | N/A as MV is not a glass eel trader. |
| Score | N/A |

| Summary scores for Component 4 | |
|--|-------------|
| Not met | 0 |
| Not applicable | 3 |
| Aspiring | 0 |
| Responsible | 9 |
| Total possible | 9 |
| % Responsibility (Responsible / Total possible) | 100% |



| Component 7 – Processing, wholesale and retail supplies | |
|--|--|
| Issues | This component describes the sometimes short, sometimes long chain from the eel leaving the fishery or fish farm, processed for human consumption (e.g. filleted, smoked), distributed to retailers and then sold to the consumer (e.g. the public, restaurants). |
| Notes | <p>In some cases, a number of processes might be carried out by the same business, e.g. some family businesses in Holland have their own eel farm, their own smoker and sell direct to the public.</p> <p>There are no separate criteria for processors, wholesalers and retailers, but the component is provided here to show how they are included in the supply chain. The most obvious and important component applying to these is Component 1.1, covering Commitment to legality, 1.3: Trading in certified eel and 1.4: Traceability.</p> <p>Where the facility undertakes other processes in this standard, e.g. perhaps eel farming, the business and assessor should decide the relevant parts to audit.</p> |
| Benefits | <ul style="list-style-type: none"> • Consumers have the opportunity and choice to purchase responsibly sourced eel |
| Targets & Measures | <ul style="list-style-type: none"> • An increasing number and proportion of processors, wholesalers and retailers provide certified eel, from 5% now to 90% in 10 years • An increasing proportion of total retail sales is of certified eel, from 5% now to 75% in 10 years |
| Discussion | The company has been involved with the SEG Standard for three years and believes passionately in the responsible sourcing and processing requirements. From intake, care of the eels in tanks, humane slaughtering (electric) and processing (up to 1000kgs per day), efficient brining, up to date smoking and to finally the latest in packing techniques the operation is slick. Currently nothing is shown on the packaging (MAP, VP) as the company is waiting for all its suppliers to be certified. Currently sales of potentially certified eels are at 90% and this is expected to grow further as the rest of the suppliers become certified. A full set of photos was taken showing the process from start to finish. |
| Score | 1 - Responsible |

| Summary scores for Component 7 | |
|--|-------------|
| Not met | 0 |
| Not applicable | 0 |
| Aspiring | 0 |
| Responsible | 1 |
| Total possible | 4 |
| % Responsibility (Responsible / Total possible) | 100% |