

Eel Assessment – Royal Danish Fish A/S

Assessment against:

Component 1: Generic Requirements

Component 4: Culture Eel

Component 7: Traceability

Completed by
Richard C Wailes

9th August 2013

FINAL

1. Introduction

This document presents the report completed following the audit carried out under the Sustainable Eel Standard (Version 5, 21st June 2013), and Sustainable Eel Methodology (Version 1, 21st June 2013) against Royal Danish Fish A/S. This assessment has been completed against Components 1, 4 and 7 of the Standard only. Royal Danish Fish A/S were the first farm to be certified under the Standard in 2011 and pride themselves on their sustainability credentials

The assessment is of a large eel farming operation (900 tonnes plus per annum) opened in 1984, which incorporates a Fish processing, smoking and packing factory (Elite “Find Smiley” awarded from Fødevarestyrelsen in 2013). The farm has nearly 64 tanks (Hansthalm) ranging from 8m³ for the Glass/small eels to 70m³ and is based in two sites - Kærbæk, Grindsted for breeding/Glass Eels and the main farm at Hansthalm.

2. The assessment

The assessor was Richard Wailes of MacAlister Elliott and Partners Ltd, who visited Royal Danish Fish A/S on the 9th August 2013. The visit included a visit to both areas of the main site and included all the Eel Culture facilities, processing and packing areas. The Kærbæk site will be visited at a later stage (mid September) but all documentation was available for inspection and the outcome of this report is not compromised as procedures are identical to the Hansthalm operation.

3. Client Contact Details

Client Contact Name	Lars Lyng
Client Address	Nordre Strandvej 60-62, 7730 Hansthalm, Denmark
Client Email	lly@royaldanishfish.com
Client Phone Number	+ 45 96 55 07 00

4. Results of the assessment

The outcome of this assessment is as follows;

Royal Danish Fish A/S has passed Component 1: Commitment to Sustainability and legality

Royal Danish Fish A/S scored **8 green scores** and **0 amber scores** against Component 4 and therefore **should considered sustainable under the SEG standard.**

Royal Danish Fish A/S scored **3 green scores** and **1 amber score** against Component 7 and therefore **should considered sustainable under the SEG standard.**

One recommendation was raised by the auditor;

RECOMMENDATION 1: On the first shipment of Sustainable Eels to a client, a copy of the invoice and documentation should be sent to the Certification Body to confirm that the Component 7 (Section 3) full requirements are being met.

5. Next Audit

At the completion of the audit the client was assessed against the risk assessment set out in the Methodology. This is set out in the table below.

Question	Performance of 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 ¹ 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	Go to Q5

	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

¹ A borderline pass is considered a pass that occurs when one less amber indicator is received then would be required to fail (i.e. 5 Green indicators and 4 Orange indicators) or when a company is certified with equal number of orange and green indicators.

As the client has been seen to fall into the Standard Surveillance bracket, the next audit will be due on the 9th August 2015 (in 2 years' time) and shall be an onsite audit.

The tables below give the Standard and a rationale for the score given. The score is highlighted in the appropriate colour.

1. Component 1 - Commitment to Sustainability & Legality

1. Commitment to sustainability & legality (See Note 1)	
green score indicator	All trading and commercial relationships are aligned with SEG goals AND the organisation has declared to the assessor any historic conflicts of interest with regard to eel sustainability AND there is no evidence of illegal trading and/or of circumventing the EU Eel Regulation AND any evidence of illegality by commercial partners or other organisations is immediately reported to the appropriate authorities.
red score indicator	The organisation or a member of the organisation has been arrested on suspicion of illegal buying, holding, selling or trading of eels in the last 12 months, AND/OR for failure to declare eel fishing or trading activities appropriately to the authorities, AND/OR for other serious breaches of national or international eel regulations; AND/OR credible sources suggest that the organisation has been involved in serious breaches of national or international eel regulations in the last 12 months (the above applies to close business partners of the organisation, which members of the organisation must reasonably have known about, without the organisation informing the appropriate authorities); AND/OR the organisation is involved in activities which put in serious question their commitment to sustainability.
Discussion	Royal Danish Fish A/S has publically stated its commitment to the SEG Goals and built its operation around this before being originally certified in April/May 2011.
Score	A Green score is fully justified

2. Component 4 - Cultured Eel

1. The total mortality rate during the culture process is low (See note 14 and note 9)	
Weighting: 2	
green score indicator	The Percentage Mortality Rate (See note 14 for formula) 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 (See note 9 regarding first week mortality)
amber score indicator	The Percentage Mortality Rate (See note 14 for formula) 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. (See note 9 regarding first week mortality)
red score indicator	The Percentage Mortality Rate (See note 14 for formula) of eels in culture is greater than or equal to 15% on average in the current and previous year OR as an average of the previous five years. (See note 9 regarding first week mortality)
Discussion	RDF - Glass eel Mortality after 1 week until transport to Hanstholm 4,206% RDF- Grow out Mortality 3,43% Total for RDF: 4,21+3,43=7,64% (1 week after glass eel intake until sale). These figures were provided by the farm and verified on site Any dead eels are either converted into Biogas or incinerated
Score	A Green score is justified
2. The fish meal/oil ingredients in the feed come from a sustainable source (See Note 15 and 16)	
Weighting: 1	
green score indicator	Fish meal/oil in the feed (including juvenile feeds) comes from a fishery where the stock is at or above a target or precautionary reference point (for example is certified by a standard which is aligned with the FAO Code of Conduct for Responsible Fishing).
amber score indicator	Fish meal/oil in the feed (including juvenile feeds) <u>does not</u> come from a fishery where the stock is at or above a target or precautionary reference point (for example is certified by a standard which is aligned with the FAO Code of Conduct for Responsible Fishing) <u>but</u> the product <u>does come</u> from fish waste from processing that would otherwise be discarded.
red score indicator	One or more of the sources of fish meal/oil in the feed (including juvenile feeds) is from a depleted stock with no rebuilding plan in place AND/OR the product comes from fish waste from processing that would otherwise be discarded.
Discussion	Royal Danish Fish A/S have three suppliers of feed for their farms: Cod Roe for the first week of Glass Eel growth from Kimpex DK and Lanifisk – the fish is normally from the Danish fisheries landings which are all MSC certified. Feed from suppliers Biomar (for the larger eels) and Nutreco/Skretting (for the first stage post cod roe) – suppliers have been visited/audited/questioned by Certification Body staff to assess their sustainability. Statements of confirmation have been obtained from each and verified through www.fishsource.com . Feeding is on both a demand and timed basis depending upon the size of the eel in the tank
Score	Based on this a green score is justified
3. Feed is used as efficiently as possible (See note 17)	
Weighting: 1	
green score indicator	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
amber score indicator	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
red score indicator	The average feed conversion ratios in the farm are as follows: glass eel to fingerlings: greater than 1.3 fingerlings to 200g: greater than 1.8 large eels: greater than 2.2
Discussion	Examination of records show the following: Glass eels FCR 1.09 Glass eel to full size FCR 1.58
Score	Based on this a green score is justified
5. Water quality	
Weighting: 1	
green score indicator	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) AND water quality management procedures are in place including regular monitoring of relevant parameters which shows that water quality is always high and stable AND water quality monitoring is linked to an alarm-based system in the event of a sudden drop in water quality AND 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.
amber score indicator	A system is in place that is expected to keep key water quality parameters within suitable tolerances (e.g. Ammonia, Suspended Solids, pH, Oxygen) AND 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.
red score indicator	No water quality monitoring occurs AND/OR water quality is not held regularly at levels which are considered suitable for healthy eel survival.
Discussion	Water levels and quality parameters are monitored constantly with comprehensive records held and verified. This is linked to an alarm system which can activate the backup generators (2) if required. Temperature is held at 23c though this is changed prior to dispatch when the eels are purged. There are 2 filtration systems in place and nearly 99% of the water is recirculated which is provided from a number of 30m boreholes
Score	Based on this a green score is justified
5. There are no ecological impacts from effluent discharge	
Weighting: 1	
green score indicator	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.
amber score indicator	Effluent discharge is regularly tested by the farm AND/OR has been found to be non-compliant on 1 occasion in the past 5 years.
red score indicator	Effluent discharge is regularly tested by the farm AND/OR effluent discharge does not comply with all local and national requirements AND/OR has been found to be non-compliant on 2 or more occasions in the past 5 years.

Discussion	<p>Royal Danish Fish grow-out has a §5-approval with direct waste water discharge after cleaning for Phosphorous and Nitrogen with permitted amounts of:</p> <p>Nitrogen: Permitted N: 12.000 Kg and Actual N: 5054 Kg</p> <p>Phosphorous: Permitted P: 1900 Kg. Actual P: 1175 kg</p> <p>There have been no negative environmental reports from either site in the last five years</p>
Score	Based on this a green score is justified
6. Biosecurity is present and disease is treated rapidly and appropriately	
Weighting: 1	
green score indicator	The farm operates an effective and documented biosecurity plan for the prevention and protection of fish AND daily records are available showing regular monitoring of fish health and signs of stress AND records are maintained in relation to the name, administrator, amount, dates and reason for use of any medicines and/or chemicals used in the facility AND the use of chemicals follows legal requirements of the EU and of the country concerned.
amber score indicator	The farm follows bio-security measures (although this may not be documented) AND eels are regularly inspected for disease (although this may not be documented) AND records are maintained in relation to the name, administrator, amount, dates and reason for use of any medicines and/or chemicals used in the facility AND the use of chemicals follows legal requirements of the EU and of the country concerned.
red score indicator	The farm has no bio-security measures in place AND/OR eels are not inspected regularly for disease AND/OR no records are maintained with regards to the use of medicines and/or chemicals AND/OR legal requirements of the EU and country concerned are not met for the use of medicines or chemicals.
Discussion	<p>The Factory and Farm have strict Biosecurity measures and these are affirmed in the 2013 Find Smiley report (Fødevarestyrelsen). Everything is fully documented. The records for disease issues show nothing for the past two years.</p> <p>Royal Danish Fish –Grow out: No disease out-breaks in 2012. Analyses for Trichodina and Gyrodactylos and pseudodactylus are done approximately every 2 weeks and if increasing in presence, preventative formalin-treatment is used.</p> <p>Royal Danish Fish-Glass eel: No disease outbreaks in 2012 Stock tested negative for IHNV; IPNV and VHSV and Swim bladder Infection with Anguillidactylus crassus All treatments are strictly in accordance with Danish Regulations</p>
Score	Based on this a green score is justified
7. Grading, Slaughter and Transportation are carried out with respect to welfare (See note 18)	
Weighting: 1	
green score	Grading is completed in an efficient manner AND slaughter is completed by a

indicator	method that provides an instant death or renders them insensible to pain AND procedures are in place to ensure transportation provides suitable conditions for fish welfare.																																										
red score indicator	Grading is not seen to be completed in an efficient manner AND/OR slaughter is completed by a method other than one that provides an instant death or renders them insensible to pain instantaneously AND/OR transportation does not provide suitable conditions for fish welfare.																																										
Discussion	All grading are carried out fast and swift on DIAT-Graders, graded wet with sprayers and returned to water/Fish tanks inside 5-10 minutes. All live eels are sold ex works and transport is with skilled approved transport companies with further guidance provided by the Royal Danish Fish staff Eels are killed in ice prior to slaughtering with minimal pain. The Eel's welfare is of primary importance with light music and non direct lighting in place to reduce stress levels.																																										
Score	Based on this a green score is justified																																										
8. The farm provides eel for restocking (See note 19)																																											
Weighting: 2																																											
green score indicator	The farm can provide documented evidence that 10% or more of the farms (See Note 19 for calculation) annual eel production (by piece) <u>has been released</u> for restocking for the purpose of conservation / escapement.																																										
amber score indicator	The farm can provide documented evidence that it makes 10 % of their annual eel production (by piece) <u>available</u> 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.																																										
red score indicator	The farm does not make or has no evidence to show that it has made any eels available for restocking in the last year.																																										
Discussion	The figures provided by the farm are as follows: <table border="1" data-bbox="422 1350 1485 1637"> <thead> <tr> <th></th> <th></th> <th colspan="2">Glass eel</th> <th></th> <th>Restocking</th> <th></th> </tr> <tr> <th></th> <th></th> <th>Kg</th> <th>Pieces/Kg</th> <th>Pieces</th> <th>Pieces</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Restocking:</td> <td>2011</td> <td>3,129</td> <td>2600</td> <td>8,136,440</td> <td>972,200</td> <td>11.9</td> </tr> <tr> <td></td> <td>2012</td> <td>2,634</td> <td>2600</td> <td>6,847,750</td> <td>1,473,216</td> <td>21.5</td> </tr> <tr> <td></td> <td>2013</td> <td>2,172</td> <td>2600</td> <td>5,647,200</td> <td>1,600,000</td> <td>28.3</td> </tr> <tr> <td>Total 2011-2013</td> <td></td> <td></td> <td></td> <td>20,631,390</td> <td>4,045,416</td> <td>19.6</td> </tr> </tbody> </table>			Glass eel			Restocking				Kg	Pieces/Kg	Pieces	Pieces	%	Restocking:	2011	3,129	2600	8,136,440	972,200	11.9		2012	2,634	2600	6,847,750	1,473,216	21.5		2013	2,172	2600	5,647,200	1,600,000	28.3	Total 2011-2013				20,631,390	4,045,416	19.6
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Score	Based on these figures a green score is fully justified																																										

3. Component 7 - Traceability

This section is valid for any client taking ownership of SEG certified product and who wishes to sell it as such.

1. - Incoming Product (See Note 20)	
green score indicator	The organisation/fishery operates a system which allows incoming eel products to be traced back to a certified source.
red score indicator	The organisation/fishery is unable to demonstrate that product can be traced back to a certified source.
Discussion	All inputs are batched back to the supplier – documents were provided proving this (spreadsheets for last three years). UK Glass Eels have provided 1100kgs certified eels since 2011. There are also non certified eels in the farm from Anguilla Anguilla but these are kept well separated and also can be traced back to their source.
Score	Based on these figures a green score is justified
2. – Separation and Segregation of Product (See Note 21)	
green score indicator	The organisation operates a system which ensures that the product remains separated at all stages from arrival to dispatch from non-certified eel products AND the organisation ensures that any products wishing to make a claim as certified do not contain any non-certified eel-based ingredients.
red score indicator	The organisation has no system in place to ensure that certified and non-certified product remains separate at all stages OR non-certified and certified products have become mixed OR certified products (or products wishing to be certified) contain or could contain non-certified eel-based ingredients
Discussion	Eels are batched each year – 2011= Batch 1, 2012=Batch 2, 2013=Batch 3 – these batches are monitored as they move through the process (spreadsheet obtained showing their movement through the system). Any eels graded out (“Back-Graders”) are added to the non certified eels and not regarded as certified any more. SEG Certified product is fully separated at all stages from non certified eel (farm and processing side)
Score	Based on these figures a green score is justified
3. – Outgoing Product (See Note 22)	
green score indicator	The organisation only labels certified products with the ‘SES’ ecolabel once it has been approved to do so through the signing of an ‘SES’ ecolabel licence agreement. All product to be sold as certified by an organisation meets the following criteria: <ul style="list-style-type: none"> • Any product labelling shall be accompanied by the ‘SES’ logo. • Products shall be accompanied by an invoice which: <ul style="list-style-type: none"> ▪ Includes the prefix ‘SES’ in the product description; ▪ Includes a record of the volume/quantity of product and to whom it was sold; ▪ Includes the certificate code on the invoice • The certificate code must be clearly related to the certified product

	only
amber score indicator	The above requirements are met except that: <ul style="list-style-type: none"> Products have not been correctly labelled through the invoice
red indicator	Products or product invoices have been labelled as SES with the words SES or the SES Eco label despite not being completely derived from a certified source.
Discussion	Product is not currently be sold or labelled as SES certified despite being verified as such. Documentation is in place to add this on to invoices and a licence is being applied for to use the Ecolabel
Score	An Amber score can be rightly awarded
4. – Record keeping and documentation (See Note 23)	
green score indicator	<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 eel in each batch delivered to a buyer to be connected back to a water, a time period (maximum duration one month) and specific fisherman/vessel. 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
orange score indicator	The above requirements are met except that records have been maintained for less than three (3) years
red score indicator	The organisation’s tracking and tracing system shows evidence that certified and non-certified product have become mixed AND/OR batch reconciliation records are unable to confirm that outgoing quantities are in line with incoming quantities.
Discussion	There is a comprehensive and clear traceability trail for all certified eels and documentation was provided to prove this from UK Glass Eel stock to final invoices (through date and/or batch codes) Records are kept for at least three years (often more)
Score	Based on these figures a green score is fully justified