



Sustainable
Eel Group

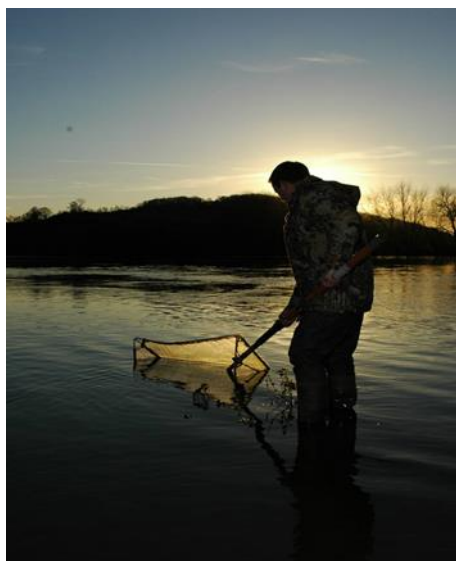
The Sustainable *Eel* Group Standard

To be known as:

The SEG Standard

A Code of Conduct for a Responsible Eel Sector

Version 6.0, Draft 2. For consultation 1 - 31 December 2017



The SEG Standard

Versions Issued

Version No.	Date	Description of Amendment
1	November 2010	Initial version prior to pilots
2	January 2011	Amendments following several pilots
3	13 May 2011	Amendments to standard following further pilots
4	15 Nov 2012	Addition of Traceability section, amendment of standard
5	21 June 2013	Review of all components of the standard, new draft prepared for review.
5.1	17 October 2016	Update to account for changes to SEG website as.org instead of.com
5.2	25 November 2016	Removal of link to extant document
6.0 Draft 1	1 June 2017	First draft of new Version 6.0, published for 2 months consultation
6.0 Draft 2	30 November 2017	Second draft of new Version 6.0, published for 1 month consultation

This Standard is the property of the Sustainable Eel Group. This version is a substantial amendment to Version 5 and Version 6, draft 1 and is published for consultation.

To comment on this document, download [this form](#)

(<http://www.sustainableeelgroup.org/wp-content/uploads/2017/01/SEG-Standard-FeedbackV1.2.docx>)
and send it to standard@sustainableeelgroup.org by midnight on 31 December 2017.

Copyright:

For further information please see:

www.sustainableeelgroup.org

Or contact us at:

standard@sustainableeelgroup.org

Registered address:

Fishmongers Hall, London Bridge, London. EC4R 9EL

1. Applicability & responsibility	<u>4</u>
2. The Sustainable Eel Group – our purpose	<u>4</u>
3. Purpose of the standard	<u>4</u>
4. Scope	<u>5</u>
5. Sustainability and the European Eel	<u>5</u>
6. Positive contribution	<u>12</u>
7. Other standards and ISEAL	<u>15</u>
8. Development process	<u>15</u>
9. Continuous improvement	<u>15</u>
10. How the standard works	<u>16</u>
10.1 Structure	
10.2 Components	
10.3 Methodology	
11. The Standard	<u>18</u>
• Component 1 – Core requirements	<u>18</u>
- Commitment to Legality & Sustainability	<u>18</u>
- Trading in responsibly sourced eel	<u>19</u>
- Traceability	<u>20</u>
- Biosecurity & welfare	<u>23</u>
• Component 2 - Glass eel fishing	<u>25</u>
• Component 3 - Yellow and silver eel fishing	<u>31</u>
• Component 4 – Eel buying and trading	<u>34</u>
• Component 5 – Eel farming	<u>36</u>
• Component 6 - Restocking	<u>40</u>
• Component 7 - Wholesale and retail supplies	<u>41</u>
• Component 8 - Contribution to Healthy Aquatic Ecosystems	<u>41</u>
12. Governance	<u>43</u>
12.1 Assurance	
12.2 Compliance	
12.3 Failures and Transgressions	
13. Measures	<u>50</u>
14. Glossary	<u>52</u>

1. Applicability and responsibility

The Sustainable Eel Group is responsible for the content and publication of the SEG standard. The latest version is published on our website at <http://www.sustainableeelgroup.org/seg-standard-2/>.

Users of the standard are responsible for ensuring they are using the latest version.

In the current review, the planned timetable is to publish the new version, Version 6.0, in February 2018. The development procedure and timetable is published at: <http://www.sustainableeelgroup.org/review-seg-standard/>.

Until version 6.0 is published, version 5.2 is the current standard to be applied.

2. The Sustainable Eel Group – our purpose

The Sustainable Eel Group is a Europe-wide collaboration of scientists, conservation groups, the commercial sector and advisors, dedicated to the recovery of the European eel. We are a not-for-profit, non-government organisation (NGO), registered in the United Kingdom, with an office in Brussels and with membership across Europe and beyond. Our influence must be Europe-wide to help the European eel, which, unlike e.g. the Atlantic Salmon, is a single, mixed, genetically similar, panmictic stock.

Our Vision

Healthy wild eel populations distributed throughout their natural range fulfilling their role in the aquatic environment and supporting sustainable use for the benefit of communities, local economies and traditions.

Our Mission

To provide the respected leadership alliance that enables and promotes the joined-up conservation and management of the eel in the Member States of Europe and beyond, linking all interests in an open and effective process to achieve SEG's Vision.

These are defined in more detail, with the strategies designed to achieve these, in our [Theory of Change](#).

Our work and this standard is designed to support the European Union [Council Regulation \(EC\) No 1100/2007](#) (hereafter referred to as the 'EU Eel Regulation'). This is for, as described in Article 1, 'the protection and sustainable use of the stock of European eel'.

3. The Purpose of this standard

This standard has been developed as part of the solution for the sustainable recovery of the European eel. The objectives of this standard are defined in the [Terms of Reference](#) for its development. They are summarised as follows:

Objectives

- The principal objective of the standard is to help to meet the vision defined in the [Theory of Change](#), i.e.
to increase the contribution of eel fishers, ranchers, aquaculturalists, traders and consumers of eel products to the restoration of healthy eel populations, distributed throughout their natural

range, fulfilling their role in the aquatic environment and supporting sustainable use for the benefit of communities, local economies and traditions.

- The standard is designed to ensure that implementation at the level of each individual certificate holder has a ***positive contribution to eel populations.***
- The standard will support the collection and availability of the data necessary to monitor the efficacy of the standard in achieving its objectives.

The standard is also designed to:

- Enable operators to demonstrate high and responsible standards and their commitment to sustainability
- Drive high and responsible standards throughout the supply chain, from fishery to market
- Diminish practices and markets that don't meet responsible standards
- Provide confidence to retailers and consumers who wish to buy responsibly
- Support the EU Eel Regulation

4. Scope

The standard applies to fishing, eel ranching and aquaculture of the European eel, *Anguilla anguilla* (L.) and to the trade and transportation of eels and eel products.

It includes provisions for the monitoring of the trade in eels and eel products from source to end consumer.

It includes provisions applicable to other organisations to be recognised in their support of the objective of healthy aquatic ecosystems.

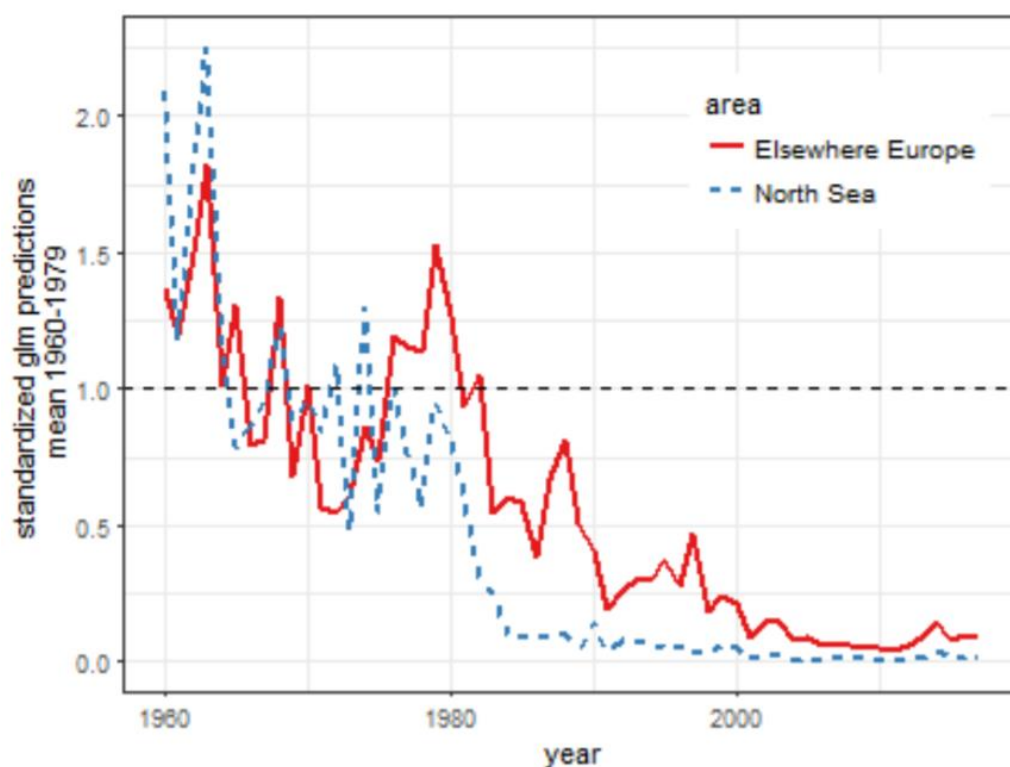
5. Sustainability, responsibility and the European eel

5.1 The Decline of the European eel

The decline of eel populations over the past 40 years has been well documented and is reflected in the graph below. It has led to:

- the development of the EU Eel Regulation to help protect and recover the stock
- being classified as 'Critically Endangered' by the [IUCN](#)
- the banning of exports of eel outside of the EU under the CITES Convention
- the creation of the Sustainable Eel Group.

WGEEEL recruitment index: geometric mean of estimated (GLM) glass eel recruitment for the continental North Sea and Elsewhere Europe series updated to 2017. Source: [ICES 2017](#)



The amount of glass eel arriving in continental waters declined dramatically in the early 1980s, and has been very low in all years after 2000. The reasons for this decline are uncertain but may include overexploitation, pollution, non-native parasites, diseases, migratory barriers and other habitat loss, mortality during passage through turbines or pumps, and/or oceanic-factors affecting survival and/or migrations. These factors will affect local production differently throughout the eel's range. In the planning and execution of measures for the protection and sustainable use of European eel, Management must therefore take into account the diversity of regional conditions ([ICES 2017](#)).

To reverse the decline and achieve recovery, ICES advice is to reduce all anthropogenic impacts to as close to zero as possible. The 2007 EU Eel Regulation required that all EU member states produce and implement Eel Management Plans (EMPs) to reduce those impacts, with the objective to '*reduce anthropogenic mortalities so as to permit with high probability the escapement to the sea of at least 40 % of the silver eel biomass relative to the best estimate of escapement that would have existed if no anthropogenic influences had impacted the stock*'. Some EMPs have focussed on reducing the impacts of industry and habitat degradation, some have focussed on reducing fishing, some have focussed on restocking and some have sought a balance of the three.

SEG agrees that anthropogenic impacts must be reduced as much as possible to help eel stocks recover more quickly. We wish to see that happen in a balanced way such that impacts of habitat destruction, entrainment, barriers to migration and fishing are considered according to their relative impact.

Whilst the EU Eel Regulation and many EMPs permit the continuation of eel fishing (albeit reduced), this standard is designed to require the most responsible standards across the eel fishing and supply sector

such that, where fishing and trade are permitted, the impacts are minimised. In fact, we believe that, done responsibly, the sector can make a **positive contribution** to eel populations, and this standard is designed to do that.

We have also started to include components targeted at e.g. energy and water companies and other corporations that affect the eel's environment, to complement or recognise where they have made improvements for the eel.

5.2 Discussion of terms and targets

Sustainability

We recognise that the term 'sustainable use' cannot be truly applied to the European eel until, over several generations and decades, the recruitment of glass eels and escapement of silver eels are at levels that are considered biologically safe. We believe this recovery will not be achieved without major interventions - short and longer term measures - including regulation of fisheries, restocking, trap and transport, screening of intakes, habitat improvement and the unblocking of migratory pathways – upstream and downstream.

The term 'sustainable' is open to interpretation and misuse, so here we will turn to two accepted definitions of the term.

Sustainable Development

The [Brundtland Convention](#) defined sustainable development as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'

It is commonly represented by the diagram below, indicating that sustainability is reached when there is a balance between environmental, economic and social needs.



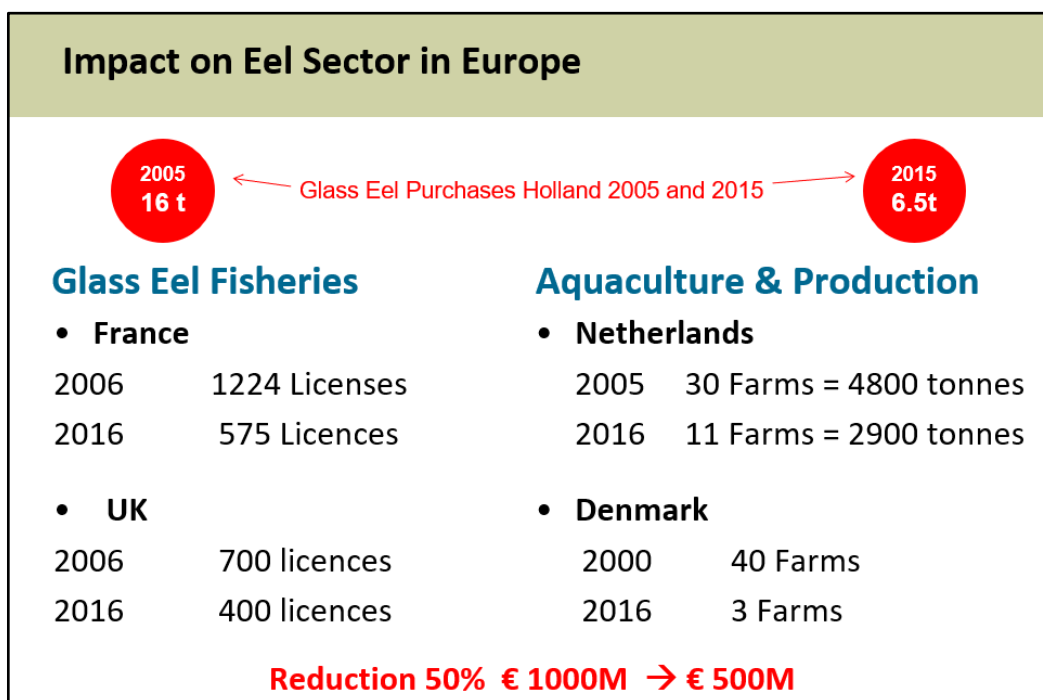
Adapted from the Brundtland Commission Report, 1987.

If we were to consider this in terms of sustainable development of a European Eel Sector, the following are activities or issues that we can consider in each of the categories:

Social	Environment	Economic
<ul style="list-style-type: none"> • Traditional forms of fishing – eg. hand-nets for glass eels, wicker baskets for yellow eels • Traditional forms of eating eel – eg. glass eels at Christmas, Spain; Smoked eel in the North of Europe, Jellied eel in London 	<ul style="list-style-type: none"> • Eel populations • Eel habitat • Aquatic ecosystems • Birdlife • Other wildlife, e.g. Otters 	<ul style="list-style-type: none"> • Fishing jobs • Retail sales • Hydropower • Energy production • Drinking water • Flood management • Navigation

Given the poor status of the eel and its habitat, we can consider that the environmental aspects of the above diagram are diminished and under pressure, and that to restore the balance, a reduction in other pressures should be applied. The decline in catches and reduction in fishing has had an impact on the economics of the commercial eel sector.

Whilst official figures are difficult to analyse, we estimate that the current economic value of the whole eel sector is €550M pa and employs about 10,000 people across Europe. This covers from eel fishing to farming, restocking, consumption, plus research, administration, conservation projects and mitigation measures. Due to the decline in eel populations, the value of the consumption sector is approximately half of what it was 10 years ago:



Source: Sustainable Eel Group 2017

Sustainable Fisheries

The term sustainable, in fisheries science and management, has another but specific meaning, which we must also consider here as we are dealing with a fish species that is subject to fishing.

In fisheries, as in other natural capital, the **sustainable yield** is that which can be extracted without reducing the population; i.e. it is the surplus that is required to maintain ecosystem services at the same or increasing level over time (Source: [Wikipedia](#)).

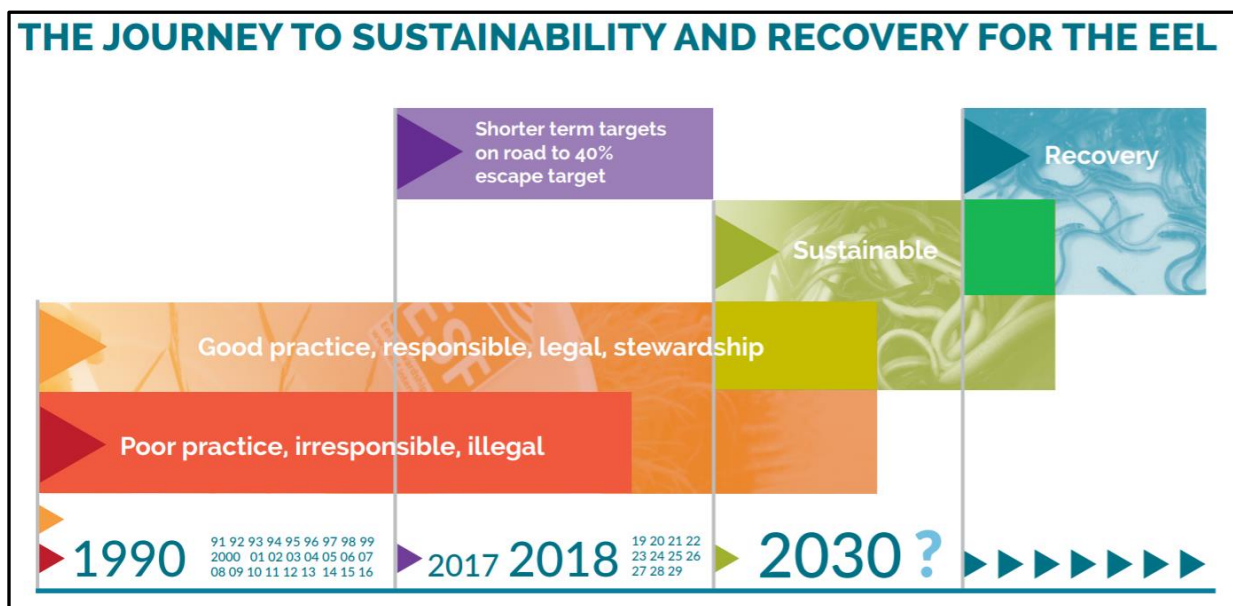
The **maximum sustainable yield (MSY)** is the largest long-term average catch or yield that can be taken from a stock or stock complex under prevailing ecological and environmental conditions (Source: [OECD](#)). This enables fisheries scientists to identify a **total allowable catch (TAC)** and from that to set **catch quotas**.

With a species in decline, such as the eel, sustainable yield for the total stock cannot be set until the species is in recovery, and regarded as biologically safe. Good information on stock dynamics is needed to be able to identify this. However, with a stock so widespread, varied and poorly understood and measured as the eel, it is currently very challenging to set.

So, this version of ‘sustainable’ for the eel is currently a long way off. And, if a measure of this is the Eel Regulation target of 40% silver eel escapement of pre-anthropogenic impacts, it is further away still. Very few catchments in Europe currently meet this target ([ICES 2017](#)).

5.3 The journey towards sustainability

If sustainability for the eel is in the future, then we consider that we are currently on a gradual and step-wise journey towards sustainability and recovery which may take several decades. So, this standard describes ‘good practice’ and ‘responsibility’. It doesn’t claim to describe the criteria at which it is considered ‘sustainable’, but, as ‘responsible’ - a step on the journey towards sustainability.



This standard is therefore positioned to be a code of conduct for a responsible eel sector, to help reverse the decline of the eel, on the journey towards sustainability and full recovery. In this phase, our first priority is ensuring a maximum exploitation level that allows the stock to recover.

So, this standard will be designed around the target of ‘responsible’ or best practice methods, aiming to move the sector on the journey to sustainability. It will use Bbest (see below) and % survival as one of the foundations of the tests for that target, and will also apply tests for whether those involved are making a ‘positive contribution’ for the eel.

We will follow the best available scientific information and advice available to us.

5.4 Targets

Member States are required to report the status of their eel stocks in each EMP in terms of best available estimates of stock indicators, as follows:

- **B0:** The amount of silver eel biomass that would have existed if no anthropogenic influences had impacted the stock.
- **Bcurrent:** The amount of silver eel biomass that currently escapes to the sea to spawn.
- **Bbest:** The amount of silver eel biomass that would have existed if no anthropogenic influences had impacted the stock, based on recent levels of recruitment, including restocking practices, hence only natural mortality operating on the stock

(Source: [ICES 2017](#))

Our long term vision for the size of the stock is the equivalent of that where all catchments are meeting the EU Regulation of 40% of pre-anthropogenic levels (B0).

Our medium-term vision for the size of the stock is the equivalent of that where all catchments are meeting Bbest.

40% of B0 is the EU Regulation target - 40% escapement target of pre-anthropogenic levels. This target is very difficult to achieve in catchments and river basins that have been so degraded through the loss of wetlands, barriers to migration and entrainment at water intakes. In 2015, only 53% of European Rivers achieved the Water Framework Directive target of Good Ecological Status ([reference](#)). The [State of Nature report](#) produced by the European Environment Agency in 2015 show that only 13% of habitats associated with wetland ecosystems showed a Favourable Conservation Status under EU Habitats Directive

River catchments that do achieve the 40% of B0 target, can be considered to be achieving the long term 'sustainable' target.

In steps towards that long term target, we adopt the following interim targets in this standard:

1. Until habitats are improved back to their 'pristine state' and 40% of B0 then becomes a realistic target, we consider that achieving a high proportion (70%+) of Bbest is a more suitable interim target, that reflects a responsible level of fishing and stewardship.
Achieving this would be meeting this standard's 'Responsible' level.
2. River catchments that are achieving a slower, but acceptable rate of recovery, 40 – 74.9% of Bbest, **will be considered to be meeting this standard's 'Aspiring' level.**

The diagram below is a schematic overview of different control levels, focused on the EU Regulation 40% of B0 level of control. It helps to indicate that lower levels of control (eg. 70% Bbest), can assist recovery, albeit at lower rates.

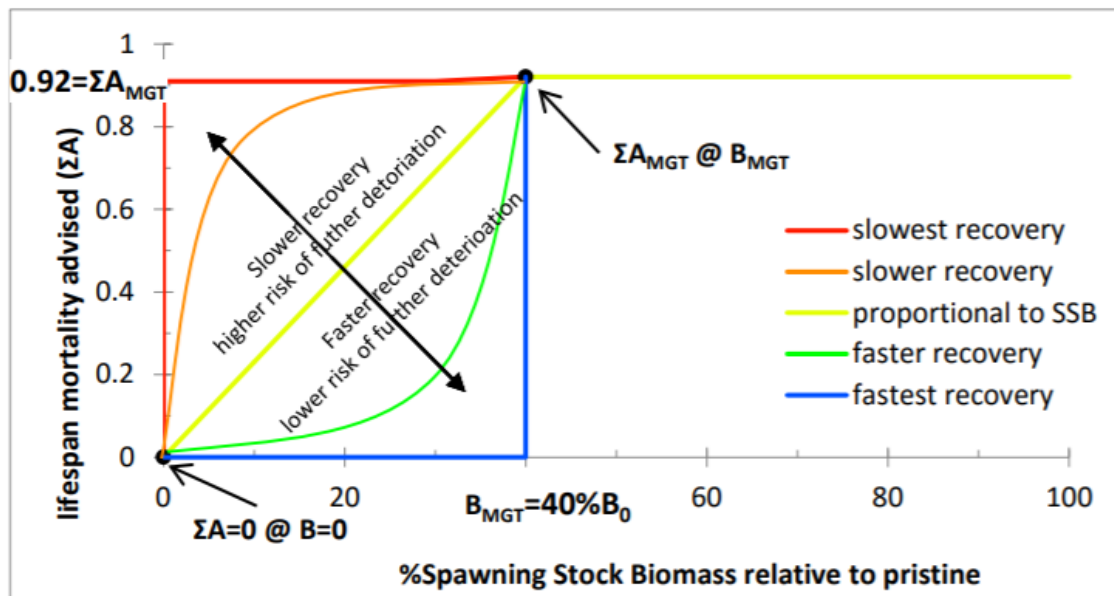


Figure 3.3. Schematic overview of different control rules. B_{MGT} is the escapement biomass management target fixed at 40% of the escapement to the sea of the silver eel biomass relative to the best estimate of escapement in pristine conditions. ΣA_{MGT} is the corresponding lifespan mortality rate. Below B_{MGT} different control rules are possible that lead to more or less fast recovery speed with more or less risk of further deterioration.

From [ICES 2016](#).

In this standard, we also start to address the impact that industry has on the water environment, eel habitat and eel migration. Indicators are presented such that corporations can demonstrate and be recognised for responsible activities designed to assist the recovery of the eel.

Note that as freshwater habitat and migratory pathways are improved, B_{best} will gradually increase and develop towards 40% of B_0 .

5.5 What the standard means

The basic meaning of activities that pass this standard is:

'Responsible sourced'

It means that those involved with the supply of eel have complied with the Code of Conduct for a Responsible Eel Sector.

Further, it refers to 'Eel that is traceable as caught from a fishery that is achieving its interim target silver eel escapement targets, is well managed, and has been caught, handled and traded using the current best and most responsible practices'.

5.6 Achieving ‘responsibility’

Organisations seeking certification will have their operations assessed. Those that meet the criteria for Responsibility will be designated ‘Responsible’, making a positive contribution to eel stocks, and meeting the standard.

Those that don’t meet the full criteria, but have met minimum criteria, will be designated as ‘Aspiring’. They will be invited to implement an improvement plan to achieve Responsibility at their next assessment. They will be recorded on the SEG Certification register as ‘Aspiring’ to make their designation clear.

6. Positive Contribution

6.1 Definitions

A key objective for the standard is to ensure that implementation at the level of each individual certificate holder has a **positive contribution to eel populations**. Here we define and describe what this means.

We apply two definitions of positive contribution, one of which has a higher threshold than the other, permitting scope for separation of scoring in applying the standard, and also providing a mechanism for continuous improvement.

Definition 1: Associated with a ‘Responsible’ Level of compliance

SEG standard compliant activities, e.g. fishing, make a positive contribution to eel populations compared to there being no eel sector – e.g. to there being no legal fishing.

In this example, we consider that certified practices result in or contribute to an increase in eel populations than if there was no commercial activity for eel at all; i.e. that the certified operator actually provides a positive contribution to eel stocks. This will seem counter-intuitive, particularly to those who aren’t fully aware of the intricacies of the eel sector. The reasoning behind this is described below*.

Certified suppliers will have to demonstrate, through independent assessment, how they play their part in providing this positive contribution in the supply chain. The standard is designed to help them show how they do that.

Definition 2. Associated with an ‘Aspiring’ level of compliance

SEG standard-compliant activities, e.g. fishing, make a positive contribution to eel populations compared to non standard-compliant activities, and are close to being classified as Responsible.

In this example, we apply tests to determine whether certified practices are more beneficial to eel populations than non-certified practices.

*** Reasoning behind how the commercial eel sector can demonstrate a position contribution to European eel stocks.**

We use the following reasoning to inform our definitions of ‘positive contribution’. These are based on best available science or information and references are provided where possible.

- Eel recruitment is from ‘glass eels’ reaching estuaries and rivers in Europe, having drifted across the Atlantic from the Sargasso Sea on the Gulf Stream.
- Concentrations of glass eels on western coasts – e.g. west of Portugal, Spain, France and UK is greater than on eastern coasts. West coasts are closer to the Gulf Stream and the Sargasso Sea.
- In some west coast estuaries, the geography is such that more glass eels are concentrated than are needed to populate the catchment. For example, in the Parrett in the UK, the glass eel run is estimated to have been 1 – 5 tonnes (3million – 15million glass eels) per year over the past 10 years. Environment Agency fisheries scientists have calculated the amount required to populate the Parrett catchment and meet the escapement target (to include accounting for natural mortality) to be 400kg (1.2M glass eels). Those fish in excess of that 400kg are most likely to die through density-dependent mortality and predation (though they do contribute to the ecosystem). Annual catches in the licensed fishery have averaged 0.5 - 2 tonnes per year (1.5M – 6M fish) over the same period. The fishery effectively takes some of the ‘surplus’ (**) eels, and the sustainable catch is calculated as 2.5 tonnes per year (Reference: England Environment Agency, personal communication, August 2017). Fishermen have sometimes recently provided juveniles for stocking locally – over barriers and into under-populated wetlands. This provides a positive contribution too and should be recognised.
- In some other west coast estuaries, there are barriers to migration such as hydropower, water supply and flood management dams. An example is the Arzal in Brittany, (France) where, in 1970, a dam was built 10km upstream of the tidal limit and blocking, almost entirely, access for eels and migratory fish to the catchment ([Elie & Rigaud, 1987](#)). The great majority of glass eels then had nowhere to go in the catchment and concentrated below the dam, increasing their vulnerability to predation by birds and fish. The fishery is mainly located just below the dam where the glass-eels are concentrated. In 1995, a first fish ladder was built but was not very effective. In 2007, a second fish ladder was built and seemed to improve migration ([Briand et Sauvaget 2009](#)). Despite these, upstream migration is still impeded. So, many glass eels are caught (an average of 12 tonnes per year during the period 1995-2009), but with a decreasing trend (see table 1 - in [Briand and Sauvaget 2009](#)) and put to better use, eg. restocking, elsewhere. Whilst we would prefer to see such migration pathways opened up to make better use of the Arzal catchment, until there is investment at such locations, this is use of the stock that provides a positive contribution in the mean-time. This should be regarded as an ‘emergency measure’, pending the opening of migration pathways. We would also wish to see stocking into the Arzal system and help migration back out to sea as part of those measures.
- Fishing for these surplus glass eels and making good use of them in the supply chain in the sector is the basic premise for the commercial eel sector being able to provide a positive contribution to eel populations.
- The majority (at least 60%) should go for restocking, under the terms of the EU Eel Regulation. The remainder go into aquaculture where high survival rates (80% - as opposed to 5 – 30% in the wild ([ICES 2017](#))) and high growth rates produce high quality food for human consumption and livelihoods for associated businesses and economies.

- Use of farmed eels for consumption reduces the pressure on wild yellow and silver eels from fisheries where the eels are destined to become the spawning escapement.
- Overall, the use of surplus glass eels provides a positive contribution to recruitment and population locally and elsewhere in Europe, whilst also providing a market for high quality and high value food for humans.
- In addition, certified organisations are encouraged to make direct or indirect contributions to [Eel Stewardship Funds](#) (ESFs) to progress projects that improve habitats and migration pathways for eels.

** ‘Surplus’ is defined as those in excess of the number required to fully populate the catchment and would be expected to achieve B0.

6.2 Stocking

A discussion about positive contribution and the EU Eel Regulation wouldn't be a complete without a discussion of stocking as an eel management / recovery measure.

Some countries have adopted stocking in their eel management plan. For example, Sweden, which has low glass eel recruitment regards it as essential to help meet their silver eel spawning escapement ([Brämick et al, 2015](#)). Some, e.g. Ireland, have favoured closing fisheries to reduce that anthropogenic effect whilst others – eg. England & Wales, which has good recruitment, especially on the west coast, have favoured focusing on reducing barriers to migration.

Stocking of juvenile eels from areas of abundance to those with low recruitment has been happening since at least the early 1900s, when translocating glass eels from the Severn in the UK to Germany and Sweden are first recorded. Stocking into Dutch waters has happened for centuries ([Pawson 2012](#)). There have been numerous studies to review the effectiveness of stocking, with as many concluding that stocking is effective, as those challenging that view.

A review of studies in [2012 by Mike Pawson](#) concluded that there was no clear answer on whether, overall, stocking led to a greater number of spawners and subsequent recruits. He provided some conclusions, areas of discussion and recommendations for further research.

A summary conclusion by Pawson was:

We do not yet know whether there is any net benefit of translocation and restocking to the European eel population. This does not, however, mean that there are no benefits to be gained from stocking. As long as glass eels in some estuaries that continue to receive substantial recruitment are prevented from ascending local rivers because of permanent barrages, catching and translocating them with minimal mortality to productive habitats, from which they can escape back to the sea, must be a beneficial option.

But also, a conclusion by [Willem Dekker in 2016](#) was:

As successful as restocking might have been locally, it has not markedly changed the overall trends and distribution patterns or halted the general decline of the stock and fishery.

Whilst stocking is an accepted measure in the EU Eel Regulation, and this standard seeks to support the regulation, it is assumed to be an acceptable technique. The standard sets criteria for doing it responsibly, and according to best practice.

We (SEG and fisheries authorities around Europe), will continue to review the evidence on the effectiveness of restocking and practices to ensure that Eel Management Plans and this standard are consistent with the latest science.

7. Other standards and ISEAL

In developing this standard, we have referred to other respected fisheries standards operated by the [Marine Stewardship Council](#) (MSC), and the [Aquaculture Stewardship Council](#) (ASC) and adopted good practice from them. Where appropriate we aim to be compatible with existing standards rather than develop new ones, to reduce the burden on those seeking certification. For example, if a business meets the MSC's Chain of Custody criteria, this will meet many of the SEG standard Traceability requirements.

In 2010 the Sustainable Eel Group approached the MSC to apply their standard to eel fisheries. It was concluded that the MSC standard could not be applied for a number of reasons – mostly because of the size, diversity and extensive range of the stock and the fisheries, the extensive impact of human impacts across the range and because there are limited controls on impacts on the eel in its range outside of the EU. MSC certified fisheries are more finite, easier to define, assess and understand their stock dynamics. The European eel is one panmictic stock, extending from the western Atlantic Ocean to the Mediterranean and Baltic Seas, and the estuaries, rivers and lakes of Europe, Scandinavia and North Africa. There are many fisheries catching at all life stages between glass eels and silver eels. In summary, it was too complex for MSC to apply it. So, SEG developed its first eel standard in 2010, but basing it wherever possible on MSC principles and experience. For example, the Traceability component is heavily based on the MSC Chain of Custody requirements.

The Sustainable Eel Group is seeking membership of the [ISEAL Alliance](#), to give independent assessment and credibility of our aims, objectives and this standard. The 2017 review of this standard is being conducted according to ISEAL principles as part of the process to support that membership.

8. Standard development process

The development and review of the standard is governed by the procedure published on our website at: <http://www.sustainableeelgroup.org/standard-development/>.

9. Continuous improvement

The standard itself is open to continuous improvement. Version 6 will be the sixth substantive version of the standard since it was first introduced in November 2010. It is improved each time to take account of latest best practice and available scientific knowledge.

In addition, the standard is designed to require those certified to a lower level to demonstrate improvement in their practices between successive assessments.

Together, these aim to continuously raise the standards applied in the eel sector to increase protection and benefit to the eel.

10. How the standard works

10.1 Structure

The standard is structured as follows:

Heading	Description
Component	The broad topics of the standard; the different parts of the eel sector
Issues	The challenges in each component that the standard aims to improve or address
Notes	Guidance, explanation, clarification or definitions on how to interpret and use the indicators
Benefits	The positive impact or benefit that this part of the standard is designed to make
Rationale	The reasoning behind the impact /benefit – how that benefit will work
Criteria	The tests against which the organisation will be assessed
Indicators	These are measures that complement the criteria to help indicate if, and to what level, the criteria are being met
Targets & Measures	These are performance or ‘impact’ measures for each component – to help monitor the effect of the standard in its positive contribution

10.2 Components

The eel sector is composed of many parts, starting with fishing, through transport, holding, and farming to restocking or wholesale and retail supply to the consumer. This standard is designed for each part of the supply chain to show that it is achieving best practice, is acting responsibly and playing its part in a positive contribution for the eel.

The standard is divided into the following components:

Component 1:	Core requirements: <ul style="list-style-type: none">○ Commitment to legality and sustainability○ Trading in responsibly sourced eel○ Traceability○ Biosecurity & welfare
Component 2:	Glass eel fishing
Component 3:	Yellow and silver eel fishing
Component 4:	Eel buying and trading
Component 5:	Eel farming
Component 6:	Restocking
Component 7:	Wholesale and retail supplies
Component 8:	Contribution to healthy aquatic ecosystems

Component 1, 'Core Requirements', must firstly be met by any organisation that wishes to be assessed against any of the other components. This has no exceptions and is mandatory.

After meeting Component 1 an organisation must then achieve the criteria under all the other components which apply to them. For example, a company that both buys and sells glass eels and cultures them, would need to pass both Component 4 – Eel buying & trading, and Component 5 – Eel farming.

10.3 Methodology

The assessment is to apply to (1) the organisation assessed and (2) to a traceable certified source of eel. This is a change to the previous standard where organisations were certified based on demonstrating that they were meeting the standards needed to have the ability to provide certified eel. This standard will only apply to those who achieve the criteria and have a traceable supply of certified eel.

- Each component consists of a series of criteria for which there are two scoring indicators: 'Responsible' and 'Aspiring') These levels equate to the two levels of 'positive contribution' defined in Section 6, above.
- Points are awarded according to each of the two indicators. The resulting score will be a '% Responsibility' score.
- Organisations with a 50% or greater Responsibility score will achieve a Responsible level certificate award.
- Organisations must pass all criteria to least the Aspiring level for a certificate to be awarded. Failure of any one criterion will result in failure to achieve the standard.
- Organisations not achieving a 50% Responsibility score will be recorded as achieving an Aspiring level. They will not have achieved the Responsible level and will not be awarded a certificate. They will be invited to implement an improvement plan for re-assessment and will be required to demonstrate improvements in order to achieve the Responsible level. The Certification Body can consider providing a conditional pass for marginal non-achievements where there is a credible plan to take corrective action and receive re-assessment within a short timescale.
- Organisations not yet achieving a 80% Responsibility score will be required to identify and make improvements to achieve a higher score by their next assessment.
- In any case, assessments and certificates will report the number of each Responsible and Aspiring indicators achieved and the overall Responsibility score to indicate the extent to which they have achieve the standard. These will be published on the SEG website in assessment reports.
- Some criteria are weighted, to take account of more important aspects of the standard.
- Assessments against the standard are carried out by an assessor working for the Certification Body (independent of SEG, appointed under contract), who must follow the requirements set out in the methodology. Awards are made by the Certification Body under agreement and an assurance process with SEG. A surveillance audit process is in place to monitor the on-going performance of certified organisations, and any certification under the standard may be suspended or removed from the organisation concerned if the requirements of the standard are breached. Assessment reports and decisions made will be published on the SEG website to be available to external stakeholders for transparency and scrutiny. These procedures are described in more detail in Section 12: Governance, and in further detail still in the document '202 SEG Standard Assurance Methodology' which will be published once complete in the [SEG Standard section](#) of the SEG website.

11. The Standard

Each component of the standard is set out in this section. Guidance notes are provided where supplementary explanation or clarification may be required.

Component 1 – Generic requirements

Criterion 1.1: Commitment to legality & sustainability

Issues	<p>Illegal trade (trafficking) has increased in recent years. Although export out of the EU has been banned, demand from Asia has encouraged an illegal market (trafficking) of 30 – 50% of the glass eel catch in recent years (reference). There is over-supply in some places that is helping to meet that demand.</p> <p>SEG is clear that the road map for recovery of the European eel population, as set out in the EU Regulation, cannot be followed unless commercial activity is carried out in full compliance with the law and in full transparency.</p> <p>The whole supply chain should be aiming to only meet the reasonable level of legal demand, i.e. what we know the European market to be. This standard is designed to achieve that.</p>
Notes	The requirements in this component of the standard must be met by any organisation wishing to be certified against any other part of this standard, regardless of the specific nature of its activity.
Benefits	<ul style="list-style-type: none"> • Discourages and reduce illegal practices and trading • Discourages and reduce unsustainable practices • Increased commitment to sustainable recovery of the European eel
Rationale	By encouraging a legal and responsible market via the SEG standard, illegal and unsustainable practices will be discouraged and phased out.
Targets & Measures	<ul style="list-style-type: none"> • The illegal trade (measured as the unaccountable reported catch in Europe) reduces by 10% per year over the next 10 years. • In 10 years (2028) the level of illegal trade has reduced from 30 - 50% of the total catch to less than 5%.
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.

Criterion 1.2: Contribution to Eel Conservation Projects. (Optional bonus score)

Issues	<p>The destruction of eel habitat and the implementation of thousands of weirs, sluices, barriers, abstractions, pumps and hydropower schemes have progressively reduced the eel's range in freshwaters since the start of the industrial revolution. To undo that will cost billions, take decades and require enormous political will.</p> <p>The costs are being borne to some degree via legislation and Eel Management Plans to require companies and countries to undo the damage caused by their actions.</p> <p>Eel conservation projects are those such as habitat restoration, eel passes, removal of barriers and screening of pumps to mitigate for the degradation caused.</p>
---------------	---

Notes	<p>Organisations are invited to make financial contributions to eel conservation projects as a positive contribution to aid the eel's recovery, particularly if or where it is challenging to demonstrate appositive contribution elsewhere (e.g. eel farms for consumption and wholesalers / retailers)</p> <p>Eel Stewardship Funds (ESFs) have been set up and are convenient mechanisms for companies, organisations or individuals to make financial contributions to eel conservation projects and a hence a positive contribution for the eel.</p> <p>See also Component 8.</p>
Benefits	<ul style="list-style-type: none"> • Increased conservation projects and eel escapement • Improved financial viability of NGOs to undertake eel conservation work
Rationale	By increasing financial contributions, more work targeted at eel conservation, protection and improvement can be undertaken to speed up the journey to the eel's recovery and sustainability
Targets & Measures	<ul style="list-style-type: none"> • The number of businesses and the total financial contributions will be measured. Existing ESFs raise approximately €1M per year. An aspirational target is to double that in 5 years and to reach €3M in 10 years • The outcomes of those contributions to be monitored and measured to that a tangible impact on eel populations can be identified and best value from financial contributions achieved
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 - 2% 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.

Criterion 1.3: The facility trades in certified responsibly sourced eel

Issues	<p>In previous versions, the standard could be achieved by demonstrating the procedures and processes to have the ability to trade in certified eel. This caused some confusion as it made it difficult for traders to know who was holding certified product. The new standard intends to give assurance and clarity that those who hold the standard are achieving the high standards expected, <u>and</u> have supply of certified responsibly sourced eel, traceable back to the fishery.</p> <p>Some commentators have indicated that allowing suppliers to have both certified and uncertified eel could allow some to mix those supplies and present uncertified eels as certified. We believe that any such practices can be detected through mass-balance calculations during assessment for traceability. Other standards such as MSC and ASC permit other fish products at the trader's site. The higher indicator is achieved if the operator trades in a majority of certified eel.</p>
---------------	--

Benefits	<ul style="list-style-type: none"> • Improved clarity over the meaning of the standard • Increased take-up of the standard • Increased market share for certified eel and decreased market share for uncertified eel
Rationale	With the focus on supplies rather than just processes, we anticipate greater demand for certified sources and reducing demand for uncertified sources, bringing an increasing proportion of businesses seeking the responsible route on the journey to sustainability
Targets & Measures	<ul style="list-style-type: none"> • The number of businesses achieving the standard increases by 20% per year, over the next 10 years, from 14 now, to 60 in 2028 • The proportion (by percentage weight) of the market that is from certified responsible sources increases by 15% per year, from 5% now to 75% in 2028
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 facility trades in 5–49.9% (by number) of certified responsibly sourced eel and has the documentation to demonstrate that.

Criterion 1.4: Traceability

Issues	Good record keeping that can be audited is essential to be able to provide the evidence that the claims a business makes for its products are genuine. Customers seek the assurance of the standard to show that the product they are buying is what it is claimed to be, i.e. from certified responsible sources. However, no audit system is criminal-proof and it is open to fraud; hence spot-checks and vigilance by suppliers and customers will be required to maintain the credibility and security of the standard and those certified.
Notes	<p>If the client has demonstrated Traceability via another standard, that evidence can be used here</p> <p><i>Incoming Product</i></p> <p>The client will need to have full traceability and provide access to the certificates of all certified suppliers with whom they deal, to prove to the auditor that they are certified. These will need to be backed up by incoming invoices from these suppliers showing the purchase of certified product.</p> <p><i>Separation and Segregation</i></p> <p>Separation can be achieved through physical or temporal separation. However it is done, it must ensure that mixing will not occur. Certified products cannot contain any non-certified eel.</p> <p><i>Outgoing Product</i></p> <p>It is a requirement that all products that wish to be labelled as meeting the standard also carry the relevant documentation. Organisations will need to use the standard batch-coding to identify products as certified on labels or invoices. Invoices will also need to have the quantity of certified product. This code needs to link clearly to the certified product (so if non-certified product is also included on the invoice, it is clear that this product is not included).</p> <p>It is not required that end-consumers are provided with an invoice meeting these requirements but they should receive documentation (receipt and product packaging) showing that the product is certified. Records will still need to be kept regarding the</p>

	<p>quantities sold to end consumers. A separate document explaining batch coding is available from the SEG website.</p> <p>Record Keeping and Documentation</p> <p>The key to traceability is good record-keeping. Organisations will need to be able to produce records that allow for the tracking of product throughout their ownership. They will also be required to produce records that allow an auditor to view the quantity (in weight) of product that has been bought, lost and sold. The auditor will want to be able to ensure that the amount of certified product leaving the chain of custody is the same or less than the corresponding amount bought.</p> <p>Note glass eels shrink during storage (they aren't fed), so weight change is an important element of rectifying 'eels in' with 'eels out' for a batch. However, for this case there is a trade-off between frequent record-keeping and mortality induced by handling so that good husbandry dictates that handling is minimised – this means weighing only when necessary.</p> <p>Tele-declaration systems</p> <p>New IT technology has been implemented in parts of France, and is being trialled in the UK, for fishermen to record their catches on a tele-declaration system, and for buyers to record what they have bought and sold. This provides a more efficient method for fishermen, buyers and fisheries authorities to record catches. It also provides a mechanism to improve traceability, by providing a more robust and real-time account of who has handled what quantity of glass eels and when. We believe that responsible operators will wish to use these new systems</p>
Benefits	<ul style="list-style-type: none"> • Assurance to customers that they are purchasing genuine certified product • Credibility of the standard • Increased market share of certified responsibly sourced eel and reduction of uncertified eel • Increasing traceability through the supply chain leading to a reduction in illegal exports
Rationale	Traceability, auditable good record keeping, trust and honesty are core to the standard working. From experience, a minority are likely to abuse the system, but, through audits and reporting, they will find themselves excluded.
Targets & Measures	<ul style="list-style-type: none"> • Auditors report a high confidence (90%+) in the quality of records of a high proportion (90%+) of those assessed • All those handling certified eel are using the batch-coding to label the product and do so correctly • Reports of transgressions are handled promptly and fairly • Increasing proportion of fishermen and buyers use a tele-declaration system
1.4.1: Traceability - Incoming product, separation and segregation	
Responsible indicators	<ul style="list-style-type: none"> • Certified eel products can be clearly and easily traced back to a certified 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 eel products can be traced back to a certified source. • It operates a 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 5%
----------------------------	--

1.4.2: Traceability - Outgoing product

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: <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 are accompanied by an invoice which meets the following criteria: <ul style="list-style-type: none"> - Includes the relevant 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 with a maximum of 5% 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 are accompanied by an invoice which meets the following criteria: <ul style="list-style-type: none"> - Includes the relevant batch code • Includes a record of the quantity (no. & weight) of product and to whom it was sold

1.4.3: Traceability - Record keeping and documentation

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

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

Issues	<p>Transporting live fish carries with it the real risk of transporting other organisms, and therefore the risk of spreading disease and invasive species, whether into the wild or into an eel farm, with disastrous consequences for the environment or the business. Examples include the parasites such as the swim-bladder nematode, <i>Anguillicola crassus</i>, viruses such as EVEX (Eel Virus European X) <i>Herpesvirus anguillae</i> and alien species such as the invasive shrimp, <i>Dikerogammarus villosus</i>.</p> <p>Certified eel farmers and traders should not buy and resell infected eels. A certified eel trader must be responsible for the health status of the eels sold for stocking purposes. At processors, the preparation of food requires a fully documented hygiene system to ensure food is fit for human consumption.</p> <p>Good biosecurity is important for any business, and this standard is intended to provide assurance, that the supply chain applies high standards and with minimal risk of spreading disease and alien species. However, whilst the standard can help to minimise risk of spread, it cannot eradicate or prevent the spread of these organisms.</p>
Benefits	<ul style="list-style-type: none"> • Minimise the risk of the spread of diseases and alien species • Assurance to customers that certified eels are disease and alien species-free
Rationale	By requiring all sections of the supply chain to seek assurances on the bio-security of those they purchase from, and applying their own high bio-security standards, this will maximise the safety and security of products from source to end supply.
Targets & Measures	<ul style="list-style-type: none"> • All suppliers have high quality, effective, bio-security plans • All customers provide and seek evidence of bio-security before buying • There are no, or very rare, examples of a disease or alien species associated with a batch of certified eel

Eel Fishing: Biosecurity measures are adopted and the fishery has had rare instances of disease

Responsible indicators	<ul style="list-style-type: none"> • The fishery conducts good biosecurity measures such as the disinfection and drying of nets between each fishing trip. • There have been no instances of disease or alien species from the fishery in the past 5 years.
Aspiring indicators	<ul style="list-style-type: none"> • The fishery conducts good biosecurity measures such as the disinfection and drying of nets between fishing from different waters. • There have been no instances of disease or alien species from the fishery in the past 2 years.

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

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. • An effective and documented biosecurity plan (including the washing and disinfection of equipment) is in place. • 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). • 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.
-------------------------------	---

	<ul style="list-style-type: none"> • Water, supplies of eel, and use of equipment are managed such that it is not possible to infect one tank or batch of eels from another. • The facility has the appropriate permissions to operate from the relevant licensing authority • The facility provides health check certificates to show batches being free of disease and alien species and there have been no bio-security issues in the past 5 years.
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 licensing authority • The facility follows bio-security measures (including the washing and disinfection of equipment) although this is not documented. • Eels are regularly monitored for health and possible signs of stress (although this might not be documented). • 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. • Water, supplies of eel, and use of equipment are managed such that it is not possible to infect one tank or batch of eels from another. • The facility provides health check certificates to show batches being free of disease and alien species and there have been no bio-security issues in the past 2 years.
Eel farming: Biosecurity is present and disease is treated rapidly and appropriately	
Responsible indicators	<ul style="list-style-type: none"> • 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. • The farm operates an effective and documented biosecurity plan for the prevention and protection of fish. • Daily records are available showing monitoring of fish health and signs of stress • 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. • Water, supplies of eel, and use of equipment are managed such that it is not possible to infect one tank or batch of eels from another. • The facility provides health check certificates to show batches being free of disease and alien species and there have been no bio-security issues in the past 5 years
Aspiring indicators	<ul style="list-style-type: none"> • 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. • The farm follows bio-security measures (although this may not be documented). • Eels are regularly inspected for disease (although this may not be documented). • 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. • Water, supplies of eel, and use of equipment are managed such that it is not possible to infect one tank or batch of eels from another. • The facility provides health check certificates to show batches being free of disease and alien species and there have been no bio-security issues in the past 2 years.

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
Wholesale / Retail / Processing: Hygiene Plans are followed and there are rare examples of infection	
Responsible indicators	Food processing hygiene plans are followed and there have been no instances of infection in the past 5 years
Aspiring indicators	Food processing hygiene plans are followed and there have been no instances of infection in the past 2 years

Component 2 - Glass eel fishing

Issues	Size of market
	Glass eel fishing forms by far the greatest portion of the overall catch of eels (by number). Catches are about 60 tonnes per year in recent years (180 Million glass eels). Commercial fishing is from a relatively small number of estuaries (25 - 30) on the west coasts of Morocco, Portugal, Spain, France and the UK where there are local concentrations of glass eels. There is little or no glass eel fishing in the hundreds of other estuaries around Europe. This standard is designed to demonstrate a positive contribution from those that are fished.
	Sustainable, responsible and acceptable fisheries
	A discussion about what constitutes a responsible or acceptable fishery, and therefore able to provide a positive contribution, is provided in Sections 5. and 6. above. In summary: a 'Sustainable' fishery, is one where the river is meeting the long term 40% of B0 target. If / where they exist, double-scoring for 'Responsibility' is given. A responsible fishery is one meeting the 70% of Bbest target. An 'acceptable' fishery, is one where the escapement targets are not being met due to short-term anthropogenic impacts, where there are short and longer term measures or plans to overcome that impact, and where a crop of glass eels is recognised by the local fisheries authority to be making a positive contribution to eel stocks as an 'emergency measure', pending those anthropogenic impacts being resolved (an example is the Arzal fishery described in Section 6). 'Aspiring' fisheries are such 'Acceptable' fisheries, or where between 40% and 70% of Bbest is being met (see also Section 5.4).
	Traceability – sale to certified buyers
	There is an obvious temptation to sell to buyers who will offer the best price. That price is determined by the market and the illegal market often offers a higher price. Certified buyers must sell only to legal markets so it follows, that to be responsible, certified fisheries should only sell to certified buyers. Other mechanisms such as tele-declaration systems are also being used to improve traceability and therefore discourage and also measure the extent of the illegal markets down to the fishery level.

Notes	<p>Fishery data</p> <p>Good fishery data are important to enable effective fisheries management by local, national and European fishing authorities.</p> <p>Survival & eating glass eels</p> <p>It is obviously important to maximise welfare and survival for glass eels to then maximise their contribution. There will inevitably be some mortalities and those can be kept, frozen and supplied for an albeit diminishing market in eating glass eels. In some places in Europe there are local traditions based on eating glass eels, e.g. it is a Christmas tradition in parts of Spain. However, the reduction in glass eel catches has led to substitutes being developed for these traditions.</p> <p>SEG does not support the capture of glass eels for direct consumption as we believe it is poor use of the stock and does not support a positive contribution. We do support the use of the small proportion of glass eels that don't survive fishing, holding and transportation. Dead glass eels command a lower (about half) price than live, so there is a financial incentive to maximise survival.</p> <p>Unit of fishery</p> <p>Fisheries can be assessed at a range of size of 'units', from individual fishermen, through groups, co-operatives, to a whole estuary. Smaller units, eg. a single fisherman, brings individual responsibility but greater cost per fisher (of assessment). Larger units bring economies of scale, and the whole group of fishermen must trust each other to operate according to the required standards and regulations. Contract agreements / conditions of use will be provided so that individuals and collectives understand their responsibilities.</p> <p>Where assessment for individuals is prohibitively expensive, we will seek to facilitate collaboration to bring groups together to conduct multiple single assessments to make it more affordable.</p> <p>Progress with Eel Management Plans</p> <p>In assessing progress of an eel management plan, the assessor will seek evidence from the relevant agencies to identify whether there is credible progress with the majority of management actions. For an Aspiring score, over 50% of actions must be in place or achieving good progress. For a Responsible score the minimum is 75%.</p> <p>Note also that for countries where the EU Regulation does not apply, a similar standard that is at least the equivalent of that set out in the EU Regulation and is based on the implementation of an eel management plan approved by an international scientific committee.</p> <p>Eel Management District</p> <p>The Eel Management Districts described in Criteria 2.1 and 3.1 are the smallest level of catchment at which silver eel escapement targets have been set. Depending on the country, these may be individual rivers, groups of catchments (river basins) or, in some cases, whole countries.</p> <p>Mortality rates during fishing for glass eels</p> <p>It would be more straightforward to have only a direct statement about the mortality rate, but stakeholders were concerned that: i) the mortality rate is variable e.g. over the season; ii) the mortality rate is difficult to measure because eels may look fine but have invisible injuries that subsequently cause mortality outside the specified timeframe and iii)</p>
-------	---

it would be relatively easy for fishermen to ‘put on a good show’ for inspectors in this regard (for example, poor physical condition can be masked by raising salinity of the tank water with salt to between 10 and 16 ppt). Therefore, we have chosen to include a series of criteria about the fishing method, such that the standard requires fishermen to use techniques that are known by the industry to result in low mortality rates. These are in line with the French [‘Good Practice Guide for Glass Eel Fishing & Restocking’](#).

Mortality rates in glass eel fishery and in storage

The quality and survival of glass eels caught depends on the combination of the following parameters:

1. The gear used. Hand operated dip or scoop nets are the most gentle, but are less efficient than boats. When using boats, scoop nets or trawls (‘pibalours’ in France) might be used. When these are used the quality of glass eels depends on:
2. The speed of the vessel
3. The duration of the trawl
4. The configuration of the net
5. The handling and storage of the fish, eg. the use of vivier tanks

In France, the following criteria are described for different categories of fishing in their [Good Fishing Practice Guide](#)

Criteria	Methods	Category 1	Category 2	Category 3
Estuarine environment	a. Open	X	X	
	a. Not open			X
	b. Turbid		X	X
	b. Clear	X		X
Gear used	Net Ø 1.20m	X	X	X
	Pibalour		X	X
Power of vessels	< 100hp	X	X	X
	> 100hp			X
Ratio between filtered and flowing volume	Low	X	X	
	High			X

For the purposes of this standard, Category 1 equates to a Responsible level of fishing and Category 2 to Aspiring.

Mortality from fishing can become apparent during the period of glass eel storage, rather than in the fishery itself. Since the glass eel catch over several days tends to be amalgamated in one tank in the holding facility, it is not possible to separate out a time period to allocate this mortality to the fishery vs. the holding facility – eg. by saying that mortality during the first 24 hours is due to the fishery while after that it is due to conditions during holding. Thus, the maximum mortality rate for the fishery covers the whole time period that the glass eels are in the holding facility. The standard for glass eel buyers (Component 4) also includes a mean mortality requirement, which is lower than the maximum mortality requirement for the fishery, although covering the same time period. This arises because the glass eel fishery component (Component 2) requires a maximum permissible rate for each batch, while the glass eel storage component (Component 4) sets a maximum for the average rate across the whole season. Note that these two rates are not additive – both must be achieved.

Note that the setting and calculation of mortality rates has caused difficulties for each clients and assessors. Suggestions for solutions for this standard are welcomed. **It will be most helpful to separate the action of fishing and the action of fish storage.**

Design of net for glass eel fishing

The crucial element in the design of fishing gear for glass eels is that it does not allow the eels to become trapped in the mesh – this leads to mechanical injuries which eventually leads to mortality even if such injuries are not immediately visible. For the cod end and for hand-held nets, this is generally solved by ensuring that the mesh size is small enough so that no part of the glass eel fits through. For the rest of a towed net, the mesh size can either be small enough as above, or large enough that glass eels can pass through without injury (in practice, most swim away from the mesh, ensuring that they remain in the net). For the cod end, we have been prescriptive about mesh size, but for the remainder of the net, fishermen may find their own solutions, as long as they fulfil the criterion of not causing injury or abrasion and/or refer to the France Good Fishing Practice Guide.

Vivier tank

This is a tank for holding live fish with systems to replenish water, and monitor and maintain water quality standards appropriate to the fish species and life stage. **We will develop best practice specifications of a design for a Vivier tank.**

By-catch in glass eel fisheries

In order to evaluate impacts of the fishery on by-catch over a fishing season, the assessor will require evidence which will to include:

- Species represented in the by-catch
- A quantitative or qualitative evaluation of the quantity of each species caught over a given period (e.g. per tow or dip, per night)
- The measured or likely population status of these species in the area of the fishery (noting that rare, endangered or protected species are dealt with separately)
- Protocols or methods for dealing with by-catch
- The actual or likely discard survival

Some species are of course an acceptable by-catch, assuming fished according to regulations.

‘Negligible impacts’ are defined as a low rate of by-catch plus a low rate of discard injury or mortality plus by-catch only from species which are abundant in the area. ‘Low-level’ impacts are where two of these criteria are met. In ‘severe’ impacts, none of the criteria may be met in full. Where only one criterion is met in full, the assessor shall use their judgement in deciding the outcome.

Infrequent but large catches of gelatinous zooplankton in glass eel nets during bloom periods may be excluded from these criteria.

Mortality during first week in culture

It was agreed between glass eel buyers and eel farmers represented in a stakeholder group in 2011 that mortality during the first week in the eel culture facility is related to handling during fishing, holding and/or transport, rather than to factors under the eel farmer’s control. This period therefore may be left out of calculations for mortality rates during culture.

	<p>Good data</p> <p>Good data are defined as those that can be used for statistical analysis within accepted scientific limits.</p> <p>Quotas and Sustainable Yield</p> <p>Given the size, range and diversity of the stock of the European eel, it is not yet possible to properly set overall Total Allowable Catch, Sustainable Yield or Catch Quotas, though it may be possible in individual fisheries where data are reliable.</p>
Benefits	<ul style="list-style-type: none"> • Glass eels are fished from a place only where they can provide a positive contribution • Survival is maximised • Impact on the environment / other species is minimal • Good fishery data enable effective fisheries management • Glass eels are sold to SEG certified buyers to maximise the market in responsibly sourced fish and reduce the supply for illegal trafficking
Rationale	The rationale is described for each of these above
Targets & Measures	<ul style="list-style-type: none"> • The amount (weight) and proportion (%) of glass eels caught from each certified and non-certified fisheries will be monitored. The proportion from certified fisheries increases from 5% to 90% over the next 10 years. • Survival rates will be monitored and targets set to seek a continuous improvement in survival. Current overall rates are not known, but long term targets are a minimum of 95% • Fishery authorities will develop increasing confidence in fishery data, including catch per unit of effort, to make fisheries management decisions • The unaccountable & probable sale to uncertified & illegal exports to be measured through mass-balance analysis of catch-declaration systems, to support the target in Component 1, i.e. In 10 years (2028) the level of illegal trade to reduce from 30 - 50% of the total catch to less than 5%.

Criterion 2.1: Eel fishing is in a catchment that is meeting its escapement targets

Weighting: 2

Sustainable Indicator (worth 2 x Responsible Indicator score)	There are good data which show to the satisfaction of the fisheries authority that the EU silver eel 40% escapement target (40% B0) is being achieved for the river or in the eel management district.
Responsible indicators	There are good data which show to the satisfaction of the fisheries authority that at least 70% of the Bbest target for silver eel escapement is being met in the river or eel management district.
Aspiring indicators	Eel fishing is in a place accepted by the fishery authority as providing a positive contribution to the eel stock or, the river or RBD is meeting 40% - <75% of the Bbest target.

Criterion 2.2: There is good progress with the Eel Management Plan for the river or District

Weighting: 2

Responsible indicators	There is credible progress with at least 75% of the actions for the implementation of the Eel Management Plan for the river or eel management district.
-------------------------------	---

Aspiring indicators	There is credible progress with at least 50% of the actions for the implementation of the Eel Management Plan for the river or eel management district.
Criterion 2.3: The fishery is well-managed	
Weighting: 2	
Responsible indicators	<p>Fishers are licensed and provide catch and effort data via a tele-declaration system.</p> <p>Data on catch and effort are collected and analysed regularly by the fishery authority (at least annually at the end of the season).</p> <p>There is a data set for at least the last 5 years that is considered by the fishery authority to be accurate, useful for statistical purposes and provide a comprehensive picture of the glass eel fishery under assessment.</p> <p>Fishermen only use legal gear; enforcement is in place throughout the fishing area with no evidence of systematic non-compliance.</p>
Aspiring indicators	<p>Fishers are licensed and provide catch and effort data.</p> <p>Data on catch and effort are collected and analysed regularly by the fishery authority (at least annually at the end of the season).</p> <p>There is a data set for at least the last 3 years that is considered by the fishery authority to be accurate and provide enough information on the glass eel fishery under assessment for management and to track annual trends in glass eel arrival.</p> <p>Fishermen only use legal gear and there is no evidence of systematic non-compliance.</p>
Criterion 2.4: Mortality during fishing is minimised	
Weighting: 2	
Responsible indicators	<ul style="list-style-type: none"> Fishing is by hand-held nets and has effective nearby holding facilities OR Fishing from vessels meets the following criteria: <ul style="list-style-type: none"> i) fishing is at slow speed (no more than 1 knot relative to water); ii) haul duration is on average no longer than 20 minutes, with the maximum duration not more than 30 minutes; iii) mesh size of cod end no greater than 1mm; iv) rest of the net designed such that glass eels do not become trapped or abraded; v) vivier tank on board and in use vi) fishermen maintain accurate daily records of mortality. OR Fishermen can demonstrate that the mortality rate of the catch over the duration of holding in the storage facility is less than 4% for each batch captured. OR Fishing methods (in France) meet the criteria in Category 1 of the France Good Practice Guide
Aspiring indicators	<ul style="list-style-type: none"> Fishing from vessels meets the following criteria: <ul style="list-style-type: none"> i) fishing is at slow speed (no more than 1.5 knots relative to water); ii) maximum haul duration no longer than 30 minutes; iii) mesh size of cod end no greater than 1mm; iv) rest of the net designed such that glass eels do not become trapped or abraded; v) vivier tank on board and in use; vi) Fishermen maintain accurate daily records of mortality. OR Fishermen can demonstrate that the mortality rate of the catch over the duration of holding in the storage facility is between 4% and 8% for each batch captured. OR Fishing methods (in France) meet the criteria in Category 2 of the France Good Practice Guide

Criterion 2.5: The fishery has negligible impacts on by-catch species	
Weighting: 1	
Responsible indicators	<ul style="list-style-type: none"> • The fishery has a negligible impact on by-catch • By-catch is returned to the water alive as gently and rapidly as possible.
Aspiring indicators	<ul style="list-style-type: none"> • The fishery has low-level impacts on by-catch • By-catch is returned to the water alive as gently and rapidly as possible.
Criterion 2.6: The fishery has negligible impacts on rare or other protected species	
Weighting: 1	
Responsible indicators	The fishery has no direct interactions resulting in mortality or injuries with other species that are considered vulnerable, threatened, endangered or are protected under national or international law.
Aspiring indicators	Interactions, resulting in mortality or injury, with other species that are considered vulnerable, threatened, endangered, or are protected under national or international law, are rare and have no overall measurable impact on the population.
Criterion 2.7: The fishery has negligible impacts on habitats	
Weighting: 1	
Responsible indicators	The fishing gear does not cause any damage to the benthos.
Aspiring indicators	Damage to the benthos by gear is limited or minimal.
Criterion 2.8: Bonus Score: Fishermen donate a proportion of their catch for a local positive contribution	
Weighting: 1	
Responsible indicators	Fishermen have donated an average of at least 5% of their catch in the past 2 years to local stocking programmes, e.g. translocating over barriers to aid upstream migration and recruitment in the catchment

Component 3 - Yellow and silver eel fishing

Issues	<p>Yellow and silver eel fisheries have greatly reduced in the past 10 years – in part because of the reduction in eel populations making it less viable, and in part because many countries' fishery authorities closed or reduced fishing as part of their Eel Management Plans. Where this fishing continues, we seek for them to become certified. There has only been one certified yellow eel fishery, and there are none at present.</p> <p>Eating wild yellow and silver eels</p> <p>Yellow and silver eels are maturing eels. Those in the wild have survived the period of greatest mortality and are adapted to life in the environment. These fish are those that have the greatest opportunity to survive to migrate to the Sargasso to spawn. This is why many Eel Management Plans have stopped or reduced yellow and silver eel fishing.</p> <p>Due to the importance of these eels as potential spawners, the standard is designed to only support fishing where the River or District is meeting the escapement target.</p>
---------------	--

	Fishing methods In a future version of the standard we expect to be able to specify greater detail on differences between fishing methods and other parameters relevant to yellow and silver eel fishing.
Notes	Many notes, e.g. Unit of Fishery, Definition of a sustainable fishery, Good data, are the same as for Glass eel fishing, above, and for brevity, are not repeated here.
Benefits	<ul style="list-style-type: none"> • Impact on the environment / other species is minimal • Good fishery data enable effective fisheries management
Rationale	Where yellow and silver eel fishing exists, we wish to enable it to become and show itself to be responsible via the SEG standard
Targets & Measures	<ul style="list-style-type: none"> • The amount (weight) and proportion (%) of yellow and silver eels caught from each certified and non-certified fisheries will be monitored. The proportion from certified fisheries increases from 0 % to 50% over the next 10 years • Fishery authorities will develop increasing confidence in fishery data to make fisheries management decisions

Criterion 3.1: Eel fishing is in a catchment that is meeting its escapement targets

Weighting: 2

Sustainable Indicator (worth 2 x Responsible Indicator score)	There are good data which show to the satisfaction of the fisheries authority that the EU silver eel 40% escapement target (40% B0) is being achieved for the river or in the eel management district.
Responsible indicators	There are good data which show to the satisfaction of the fisheries authority that 70% of the Bbest target for silver eel escapement is being met in the river or eel management district.
Aspiring indicators	Eel fishing is in a place accepted by the fishery authority as providing a positive contribution to the eel stock or, the river or RBD is meeting 40% - <75% of the Bbest target.

Criterion 3.2: There is good progress with the Eel Management Plan for the river or District

Weighting: 2

Responsible indicators	There is good progress with at least 75% of the actions for the implementation of the Eel Management Plan for the river or eel management district.
Aspiring indicators	There is good progress with at least 50% of the actions for the implementation of the Eel Management Plan for the river or eel management district.

Criterion 3.3: The fishery is well-managed

Weighting: 2

Responsible indicators	<ul style="list-style-type: none"> • Fishers are licensed. At least 90% provide catch and effort data • Data on catch and effort are collected and analysed regularly by the fishery authority (at least annually at the end of the season)
-------------------------------	---

	<ul style="list-style-type: none"> • There is a data set for at least the last 5 years that is considered by the fishery authority to be accurate, useful for statistical purposes and provide a comprehensive picture of the glass eel fishery under assessment • Enforcement is in place throughout the fishing area with good evidence of high levels of compliance with fishing regulations.
Aspiring indicators	<ul style="list-style-type: none"> • Fishers are licensed. At least 75% provide catch and effort data • Data on catch and effort are collected and analysed regularly by the fishery authority (at least every 2 years) • There is a data set for at least the last 3 years that is considered by the fishery authority to be accurate and provide enough information on the glass eel fishery under assessment for management and to track annual trends in glass eel arrival • Enforcement is in place throughout the fishing area with good evidence of high levels of compliance with fishing regulations.

Criterion 3.4: The fishery has negligible impacts on by-catch species

Weighting: 1

Responsible indicators	<ul style="list-style-type: none"> • The fishery has a negligible impact on by-catch • By-catch is returned to the water alive as gently and rapidly as possible • Dead by-catch is landed and recorded and utilised appropriately where possible • The fisheries show initiatives to reduce the amount of dead by-catch
Aspiring indicators	<ul style="list-style-type: none"> • The fishery has low-level impacts on by-catch • By-catch is returned to the water alive as gently and rapidly as possible.

Criterion 3.5: The fishery has negligible impacts on rare or other protected species

Weighting: 1

Responsible indicators	The fishery has no direct interactions resulting in mortality or injury with other species that are considered vulnerable, threatened, endangered or are protected under national or international law.
Aspiring indicators	Interactions, resulting in mortality or injury, with other species that are considered vulnerable, threatened, endangered or are protected under national or international law, are rare and have no overall measurable impact on the population.

Criterion 3.6: The fishery has negligible impacts on habitats

Weighting: 1

Responsible indicators	The fishing gear does not cause any damage to the benthos.
Aspiring indicators	Damage to the benthos by gear is limited or unusual.

Criterion 3.7: Fishermen donate a proportion of their catch for a positive contribution

Weighting: 1

Responsible indicators	Fishermen have donated an average of at least 10% of their catch in the past 2 years to local stocking programmes, e.g. translocating over barriers to aid downstream migration and escapement
Aspiring indicators	Fishermen have donated an average of at least 5 - <10% of their catch in the past 2 years to local stocking programmes, e.g. translocating over barriers to aid downstream migration and escapement

Component 4 - Eel buying and trading

Issues	<p>Glass eel buyers hold an integral, important but also challenging position in the supply chain. They are relatively few, and are considered by some to ‘control’ the market and in some places there are monopolies, whilst in others there are sufficient to enable competition. Their relationship with fishermen is crucial – mutual trust and loyalty are important – and this relationship has often influenced changes to more sustainable fishing practices as buyers have become more aware of market pressures.</p> <p>Buyers also have the challenge of winning tenders from customers in a very competitive market (where the driver has too often been cost rather than quality & sustainability), and then seeking to balance that with the uncertainty of supply when the number of returning glass eels or fishing conditions might not provide the market demand.</p> <p>On top of this there is an illegal trade to Asia. The higher prices are a temptation to some and this can significantly affect market demand and prices.</p> <p>Millions of glass eels pass through a small number of buyers so issues such as welfare and influence are important for many factors around responsibility.</p>
Notes	<p><i>Mortality during transport and initial holding if transported to farm</i></p> <p>Assessors’ experience has strongly advised that the previous indicator of measuring mortality over the first week in the holding facility was unworkable. The advice is to:</p> <ul style="list-style-type: none"> - Emphasise purchase from good quality (certified) sources and - To develop Transport Best Practice criteria. <p>So, the standard currently specifies sourcing from certified suppliers pending the development of best practice criteria for Transport and holding of glass eels.</p> <p><i>Careful handling</i></p> <p>Careful handling will involve, amongst other things, no dropping or tipping from any height, no drying out, minimal contact with sharp edges or corners, nothing in which the tail could be caught; moving the eels with water rather than nets where possible, and the procedure to be planned in advance and completed as quickly as possible.</p> <p><i>Design of glass eel holding facilities</i></p> <p>To be ideal for glass eel holding, there should be, for example, no sharp corners or edges, no excessive flow rates and no abrupt changes in flow rate. Some buyers may use facilities that have been adapted rather than specially designed, and thus may not be ideal.</p> <p><i>Transport</i></p> <p>No animal shall be transported unless it is fit for the intended journey, and all animals shall be transported in conditions guaranteed not to cause them injury or unnecessary suffering.</p> <p>Animals that are injured or that present physiological weaknesses or pathological processes shall not be considered fit for transport.</p> <p>We will develop best practice for transport for a future version of the standard.</p> <p>We were not able to design an ‘aspiring’ score criterion for transport – anything less than the optimum standard is not acceptable.</p>

	<p><i>Restocking requirements under the EU Regulation</i></p> <p>The EU Regulation requires that 60% of glass eels from fisheries should be made available for restocking.</p>
Benefits	<ul style="list-style-type: none"> • Increased supply, demand and proportion of certified eels in the market • Improved welfare and survival of eels during handling • Reduction in demand and supply of eels for illegal export leading to a reduction in illegal trafficking
Rationale	The rationale in the issues and notes are described above.
Measures	<ul style="list-style-type: none"> • The amount (weight) and proportion (%) of eels traded by each certified and non-certified traders will be monitored. The proportion from certified traders increases from 5% to 90% over the next 10 years • Survival rates will be monitored and targets set to seek a continuous improvement in survival
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 Businesses
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%
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
Aspiring indicators	Buyers source 50% - 90% of their eels from certified suppliers
Criterion 4.4: Water quality	
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

Criterion 4.5: Handling and welfare

Weighting: 1

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.

Criterion 4.6: Transport

Weighting: 1

Responsible indicators	<ul style="list-style-type: none">• Transport is carefully planned to minimise travel time• 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 for animal welfare• When developed, transport conditions meet Transport best practice criteria
-------------------------------	--

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 <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.
Aspiring indicators	<ul style="list-style-type: none">• The buyer can provide documented evidence that they <u>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.

Component 5 – Eel farming

Issues	High survival rates and growth rates in fish farms compared to the wild enable the efficient use of millions of glass eels for restocking, and for the provision of high quality food for human use. However, fish farms must be well run to be both profitable and responsible. Poor husbandry can lead to disease, high mortalities and pollution. Feed is often made with other fish species and these should be from certified sources. The farm should be contributing to restocking to play its part in achieving what SEG believes to be a positive contribution.
---------------	--

If the Eel Farm has achieved another fish farming standard, evidence presented for that can be used in assessment here.

Mortality rate during culture

Unlike for the fishery, traceability at the farm level should ensure that mortality can be measured directly and evaluated reliably by the assessors. In practice, calculating mortality can be a difficult task and finding a single method to fit all farms is problematic. It has been decided that a direct approach is the most feasible for use across the culture industry. The following methodology should therefore be used;

1. (Total Mortality (by piece) in the year / Total Stock (by piece) in the year) X 100
2. This then needs to be multiplied by the average time that an eel will spend in the system.
3. This should be completed on a yearly basis by the farm

An example:

A farm has recorded a total stock for the year of 1.8 Million eels (Calculated using an average weight). During the year it records a total mortality of 100,000 eels (Calculated using an average weight). This provides the following calculation;

$$(100,000/1,800,000) \times 100 = \underline{4.4\%}$$

On average, an eel will spend a maximum of two years in the facility meaning this mortality rate needs to be doubled, giving a total mortality percentage of 8.8%. The farm would therefore achieve the higher indicator for this.

It is emphasised that the farm manager will be asked to provide the calculation directly. The workings, including evidence of how the figures have been achieved, will need to be provided to the assessor.

Feed

For feed products other than pelleted feed (eg. cod roe), it is the responsibility of the organisation under assessment to show that the source is sustainable. Feed companies should be prepared to provide the sources and breakdown of feed ingredients, which should be from MSC accredited fisheries.

[IFFO](#), the Marine Ingredients Organisation, accredit fish feed for sustainability, so use of IFFO accredited feed can be a good way to meet this criterion.

Feed conversion ratios

A good Feed Conversion Ratio (FCR) is key to ensuring that the farm is operating efficiently and using its feed in an effective manner. The FCR will vary depending on the size of the fish and so three separate FCRs are given. FCR figures should be verified whenever possible by the assessor to ensure they have been calculated correctly.

Note that these figures are from eel farmers – no national or international standards appear to exist for eel farming.

Slaughter Methods

The [European Food Standards Agency](#) describes that eels should be stunned using electric or pervasive stunning before killing. That best advice and practice is applied here.

Restocking of Cultured Eels

The requirement for restocking eels during culture distinguishes between the actual provision of eels for restocking and eels being 'made available' for re-stocking (i.e. a

	<p>willingness on the part of the eel growers to provide eels for restocking as and when there is a market, even if the market is less lucrative than the market for eel product).</p> <p>Whichever is used, the farm must be able to provide evidence to support this and to show that the eels are going for the purposes of restocking (documentation for the purchasers stating this intended purpose would act as sufficient evidence here). Restocking in this context refers to restocking for the primary purpose of enhancing escapement.</p> <p>Restocking percentages should be calculated by piece, although an average weight may be used to calculate this. The calculation to be used would be:</p> <p>((Year Restocking Total (by piece)/ Year Production (by piece)) x100 = % Restocked per year</p> <p>Eels used for restocking are not graded out. There have been a number of suggestions/examples – given by people working in the sector – that ‘slow-growers’ are used for stocking. This skews the freshwater population in a way that is unnatural.</p>
Benefits	<ul style="list-style-type: none"> • Survival is maximised • Eel farms play their part in providing next benefit • Food for human consumption is provided with minimal impact on the environment
Rationale	The rationale in the issues and notes are described above.
Targets & Measures	<ul style="list-style-type: none"> • An increasing number and proportion of farms, from 2 and 5% to 35 and 90% in 10 years are certified. • In 10 years, the total proportion of certified eel that passes through eel farms is 90%.
Criterion 5.1: The total mortality rate during the culture process is low	
Weighting: 2	
Responsible indicators	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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
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 12 months
Criterion 5.3: Feed is used as efficiently as possible	
Weighting: 1	
Responsible indicators	<p>The average feed conversion ratios in the farm are as follows:</p> <p>glass eel to fingerlings: 1.1 or less</p> <p>fingerlings to 200g: 1.6 or less</p> <p>large eels: 2.0 or less</p>
Aspiring indicators	<p>The average feed conversion ratios in the farm are as follows:</p> <p>glass eel to fingerlings: 1.3 or less</p>

	<p>fingerlings to 200g: 1.8 or less</p> <p>large eels: 2.2 or less</p>
Criterion 5.4: Water quality	
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 • 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	<ul style="list-style-type: none"> • 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.
Criterion 5.5: There are minimal ecological impacts from effluent discharge	
Weighting: 1	
Responsible indicators	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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.
Criterion 5.6: Grading, slaughter and transportation are carried out with respect to welfare	
Weighting: 1	
Responsible indicators	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Other, previously acceptable methods of stunning before slaughter are used, eg. chilling, but there are credible plans in place to invest in the latest methods within the next 2 years
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) <u>has been provided</u> 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) <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.
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.

Component 6 - Restocking

Issues	A discussion about in restocking is provided in Section 6.2. Whilst stocking is an accepted measure in the EU Eel Regulation, and this standard seeks to support the regulation, the standard sets criteria for doing it responsibly, and according to best practice.
Benefits	<ul style="list-style-type: none"> Escapement of silver eels in the target catchment is increased by restocking, towards or beyond the 40% target
Rationale	As described in Section 6, this depends on the assumption that taking Glass eels from areas of abundance and stocking them to areas of low recruitment, leads to an increase in the eel populations overall in European, Scandinavian and North African waters, and a corresponding increased escapement of silver eels, leading to increased spawning and subsequent increased recruitment of glass eels.
Targets & Measures	<ul style="list-style-type: none"> Silver Eel escapement in the recipient catchment is measured with increasingly confident calculation by the local fisheries authority Restocking and the impact on eel escapement is measured Silver eel escapement is increasing towards or at the 40% target

Criterion 6.1: Restocking is carried out in accordance with an approved EMP, in order to improve escapement to or above the 40% target and is approved by the relevant agency

Weighting: 1

Responsible indicators	<ul style="list-style-type: none"> The eel management plan is approved and the restocking is part of the agreed programme that should with reasonable confidence lead to the 40% escapement target being achieved in the future. Fishing of restocked eels does not have any measurable impact on escapement.
Aspiring indicators	<ul style="list-style-type: none"> The management plan is approved and there is evidence that it is being implemented. The restocking is a part of the management plan. Fishing of restocked eels may have measurable impacts on escapement.

Criterion 6.2: Survival and growth rates of restocked eels, and escapement from the system, can be estimated

Weighting: 1

Responsible indicators	<ul style="list-style-type: none"> A monitoring programme calculates survival rates and growth rates of restocked eels such that there is good evidence that restocking is significantly enhancing eel biomass and contributing to escapement. There is active research on means of improving the restocking programme or restocking techniques.
-------------------------------	--

Aspiring indicators	<ul style="list-style-type: none"> • A monitoring programme estimates survival, growth and escapement. The existing evidence suggests that restocking is enhancing eel biomass and contributing to escapement.
Criterion 6.3: The restocked area is suitable for eel growth, survival and escapement	
Weighting: 1	
Responsible indicators	<ul style="list-style-type: none"> • Ecological information suggests that the system into which eels are restocked is suitable eel habitat (eg. type of water body, productivity, former presence of eels). • There are no significant barriers to escapement of silver eels from the system OR systems are in place which demonstrably allows a significant proportion of silver eels to circumvent these barriers (eg. effective passes trap and transport). • Stocking is carried out at densities appropriate to the capacity of the environment (productivity, temperature).
Aspiring indicators	<ul style="list-style-type: none"> • It is reasonable to assume by analogy with other systems the system into which eels are restocked is good eel habitat. • If there are barriers to escapement of silver eels, plans are being put in place to allow a reasonable level of escapement which will be implemented in time to allow this restocking cohort to contribute to escapement. • Stocking is carried out at densities appropriate to the capacity of the environment (productivity, temperature).

Component 7 – Wholesalers and retailers

Issues	<p>Wholesale and retail 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).</p> <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>
Notes	<p>There are no separate criteria for Wholesalers and Retailers, but the component is provided here to show how they are included in the supply chain.</p> <p>The most obvious and important component applying to these is Component 1, covering Commitment to Legality and Sustainability; Trading in certified eel and 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 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

Component 8 – Contribution to Healthy Aquatic Ecosystems

Issues	Many companies have a social & corporate responsibility programme, to make contributions to society outside of their core business, and beyond their legal obligations.
---------------	---

Notes	<p>Where they make a contribution that benefits the eel, they could be recognised via the SEG standard.</p> <p>There are potentially many other factors to consider when considering a company's ethical and environmental credentials, and there are other standards to cover those. This standard will therefore, by necessity, be kept simple. It is likely to develop with experience of its use.</p> <p>Eel Stewardship Funds are being established to provide a convenient mechanism for companies, organisations and individuals to make financial contributions towards eel conservation projects.</p> <p>A healthy aquatic ecosystem is defined as one that meets the criteria for 'Good Ecological Status' under the Water Framework Directive. Where we can be more specific with factors for good eel habitat and migration, particularly for specific locations and projects, we will also apply those.</p>
Benefits	<ul style="list-style-type: none"> • Increased investment to improve the health of aquatic ecosystems, aiding the recovery of the European Eel • Companies able to be recognised for their work • Companies able to choose the European eel as a species to support
Rationale	By providing the opportunity of certification, more companies might choose the eel as a cause to support, leading to greater investment and faster recovery
Targets & Measures	<ul style="list-style-type: none"> • Annual increase in the number of companies seeking the SEG standard, from 0 now to 20 in 10 years • 10% pa increase in the value of eel conservation and restoration projects, doubling from £20M per year now to £40M in 10 years
Criterion 8.1: The company has a good environmental record	
Responsible indicators	<ul style="list-style-type: none"> • There have been no prosecutions or warnings for breaches of environmental regulations in the past 5 years • There is a certified Environmental Management System in place such as ISO14001
Aspiring indicators	<ul style="list-style-type: none"> • There have been no prosecutions or warnings for breaches of environmental regulations in the past 2 years • There is a certified Environmental Management System in place such as ISO14001, or the company is actively pursuing one
Criterion 8.2: Contribution to eel conservation projects	
Responsible indicators	<ul style="list-style-type: none"> • The company operates a social & corporate responsibility programme and at least 20% of that budget is allocated 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	<ul style="list-style-type: none"> • The company operates a social & corporate responsibility programme and at least 10% of that budget is allocated 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.

12. Governance

This section describes the rules and procedures for the governance of the standard. It describes the role of different groups, procedures for assessing compliance with the standard, and procedures for dealing with alleged breaches.

Whilst the standard is 'owned' by the Sustainable Eel Group, its content and implementation are delegated to the SEG Standard Panel. This Panel is (1) independent of the SEG Board and (2) has science and conservation interests only; it has no commercial interests and no potential for a conflict of interest. Membership is listed on the [SEG website](#).

12.1 Assurance Code

The assurance code, being developed to meet ISEAL requirements, will be produced in more detail and published on our website in the SEG-Standard section, under [About the SEG Standard](#).

The following provides a summary. This is currently under development, so is not complete yet. It will be competed and updated early in 2018.

General Terms

Certification Body (CB): A Certification Body is an organisation qualified to complete fishery audits and that has been approved by SEG to complete audits against the standard. They will be included in a list on the SEG website.

Client: a person, business or other entity seeking certification under the SEG standard.

Sustainable Eel Group (SEG): The Sustainable Eel Group (SEG) was formed to take action to support the recovery of the European Eel. SEG is responsible for the creation and maintenance of the SEG standard.

Sustainable Eel Group Standard, or SEG Standard: The standard against which all audits shall be carried out. The standard is divided into 8 separate components against which clients may be assessed.

Sustainable Eel Standard Panel: This is the Panel which is responsible for the development of the standard and overseeing the issuance of new certificates. Note that the Panel is independent from the SEG Board. Also, it has no commercial representatives so that there is no conflict of interest in undertaking its role. Membership of the Panel is published on the SEG website [here](#).

Certification Body (CB) Eligibility

Audits against the standard can only be completed by a registered Certification Body (CB) as approved by the Standard Panel. Registration shall require the applicant CB to:

1. Provide evidence to SEG of other suitable certification standards for which the applicant is accredited;
2. Show the completion of relevant training of auditors against the standard;
3. Have completed one shadowed audit (shadowed by a member of the SEG standard panel) for each part of the standard to be assessed by the applicant.

Upon successful completion of these tasks the 'applicant CB' will be approved by the SEG Standard Panel as a 'registered CB' and included in the approved list that will be made available on the SEG website.

Application for Certification

A client wishing to be assessed against the standard shall initially contact a relevant Certification Body. At this point the Certification Body shall send the client the following;

- The SEG Standard (current version)
- An Application Form which shall specify:
 - The client's name and address
 - Whether they have been certified against any part of the standard previously
 - A brief description of the client's business
 - The Components against which they wish to be certified
 - What evidence is required to be sent pertaining to Component 1 of the Standard

Upon receipt of a completed application form the Certification Body (CB) shall determine whether the client is suitable for certification against the SEG Standard. Should the initial application assessment be positive the Client shall be sent a contract determining the cost of the audit and setting out the terms and conditions for completion of the audit. This contract should also clearly state the Components against which the client shall be audited.

Only upon receipt of a signed contract shall the CB complete the audit of the client.

Auditing against the Standard

The SEG Standard has been designed on a Component basis with each component relating to a separate area of the industry. The components are listed below:

Component 1:	Core requirements: <ul style="list-style-type: none">○ Commitment to legality and sustainability○ Trading in sustainably sourced eel○ Traceability○ Biosecurity & welfare
Component 2:	Glass eel fishing
Component 3:	Yellow and silver eel fishing
Component 4:	Eel buying and trading
Component 5:	Eel farming
Component 6:	Restocking
Component 7:	Wholesale and retail supplies
Component 8:	Contribution to healthy aquatic ecosystems

Organisations looking to become certified against the standard must firstly be assessed against Component 1. There are no exceptions to this requirement. It is mandatory and must be completed prior to any site visit being implemented. Should the client not meet the requirements for Component 1 then certification will not be approved until such time as this component is met.

On compliance with Component 1 an organisation must then achieve a pass (50% or greater 'Responsibility score) under all the other components which apply to them. For example, a company/organisation that both fishes for glass eels and cultures them would need to pass both Component 2 – Glass Eel Fishing and

Component 5 – Eel Farming. The CB should assess the organisation against each required component individually.

The CB is required to prepare an Assessment Report at the end of the audit process which clearly sets out the performance of the client against each separate component (although this may be completed in a single report). It then awards the Certificate and reports to the SEG Standard Panel.

12.2 Compliance

Initial Certification Audit

An on-site audit will be required for the initial certification of all clients. This will consist of the following:

1. **Initial meeting.** During this the client shall be informed of what will be audited and the scope for the rest of the audit. The client shall be asked to outline its process from start to end. During this initial meeting the client must be made aware that the CB must have access to all records held by the Company in order to be able to verify their findings.
2. **Tour of site.** The CB shall complete a full audit of the client's operation
3. **Discussion and assessment against standard.** The CB shall assess the client against the standard. The CB shall collect evidence at every stage.
4. **Final meeting.** Final discussion and initial findings.

Following the completion of an initial certification audit the CB shall complete a report setting out the client's performance against each of the requirements for the component(s) against which they have been assessed.

The report will make a recommendation on certification (against each of the Components that have been assessed). The client must achieve all indicators in order to be approved against any particular component.

The draft assessment report will first be sent to the client for comment. Should the client not comment within two weeks of the report being sent, the CB shall produce the final report with no further amendments.

The final report (incorporating any clarifications agreed through the client's comments) shall then be sent to the CB's Director, who has the authority to award the Certificate under contract agreement with SEG. In marginal cases, the CB may refer to the SEG Panel for a final decision.

Copies of Certificates, Assessment Reports and correspondence with the client will be provided to SEG for publication on the [SEG website](#).

Issuing Certificates

Certificates will be issued by the Certification Body and shall include the following details:

- The client's name and address
- The components that the client is certified against
- The certificate number
- The issue date
- The expiry date (usually four years after the issue date)

The certificate will last for a maximum of four years but may be withdrawn at any time should evidence become available to demonstrate the client is no longer meeting the standard.

The client will be sent a copy of the certificate, conditions for its use, and improvements expected by the next audit. SEG will maintain and publish a register of all certified clients at:

<http://www.sustainableeelgroup.org/the-sustainable-eel-standard/assessed-organisations/>

Transferability of Certificates

Certificates are not transferable between companies. So, when a certified company merges with, acquires or is acquired by another company, the certificate cannot be transferred to the new company(ies).

Surveillance Audits

A certified client shall be required to follow a set surveillance audit program as determined by a risk assessment process completed by the CB at the completion of each audit. This risk assessment shall be implemented by the completion of the following scoring table (which should be included in the audit report):

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	

The relevant audit frequencies are provided in the table below:

	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

¹ A borderline pass, under the previous standard, was 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 amber indicators) or when a company is certified with equal number of amber and green indicators.

Remote Audit

A remote audit shall consist of a desk based study. The client shall be asked to provide documentation showing the system in place. Should the documentation provided not be satisfactory then an on-site audit may be required.

Certified companies will be sent a reminder that a surveillance audit is due two (2) months before the anniversary date of the audit. It is then the certified organisation's responsibility to book and organise the audit. All audits must be completed up to a maximum of three (3) months after the anniversary date. Should this not occur, the certificate of the organisation will be cancelled, unless the organisation can demonstrate extenuating circumstances and also provide a suitable time-frame for the completion of the audit.

Un-scheduled Audits

Should it be felt necessary, the SEG Standard Panel may request a CB to complete an un-scheduled audit against any component(s) of the SEG Standard.

The un-scheduled audits may take either the form of an on-site or remote audit (this will be specified by SEG directly). The costs of the un-scheduled audit will be covered by SEG.

Should the CB find no major² changes to the client's certification then the CB shall create a summary report only to be sent to the client and SEG sub-group.

Should major changes to the client's certification be noted during the un-scheduled audit, a complete report shall be drafted and sent to the client and SEG. In this case the costs of the audit shall be re-funded by the client to SEG. Should the client refuse to refund SEG then certification shall be suspended until such time as the outstanding money is reimbursed to SEG.

12.3 Use of batch-codes and the SEG label

In future, all batches of responsibly sourced eel will be accompanied by a Batch Code and associated with the SEG logo. This batch code can be on a label on the packaging of the delivery or on the paperwork accompanying it – the delivery note and/or invoice.

The provision of a SEG certificate does not provide a client with permission to use the logo on its products. The logo is owned by SEG. In order to gain permission to use the logo the following process is required:

1. The client must have been audited and have been approved against Criteria 1.2 and 1.3, trading in certified eel and traceability.
2. The client must agree to comply with the SEG Standard Certificate Conditions of Use, and packaging / labelling must comply with the SEG Guidance for Production of SEG Standard labels.

Note that this will be a 'business to business' assurance scheme; it is not consumer facing.



² A major change is defined as one that results in a client's certification status being revoked.

Details on the Conditions of the use of the Certificate, label and printing of labels will be available on the SEG website: www.sustainableeelgroup.org under the section '[About the SEG Standard](#)'.

12.4 Failures and Transgressions of the Standard

Failures

Should the client fail an initial audit, the certificate will not be awarded, however, the client will be provided with a full report detailing the reasons for the failure and the measures that need to be undertaken to satisfy the criteria for awarding the certificate. In the case of a re-audit the certificate will be suspended until such time as the failure has been rectified.

Transgressions

If there is credible information or significant suspicion that a client is not achieving a component of the standard between audits, the SEG Standard Panel will investigate the facts. Depending on the seriousness of the alleged breach, it may be deemed necessary to suspend the client's certificate whilst the investigation is carried out. Investigation may include requiring the CB to undertake an unscheduled audit. The client may be required to provide evidence to answer questions posed in an investigation. If the client is unable to provide proof of their case in support of their re-assessment, the Standard Panel will apply the 'balance of probability' test in forming their view.

If the client is found to be guilty of the allegations, the certificate may be withdrawn for periods between 3 months and 2 years, depending on the severity of the transgression and any mitigating circumstances.

Investigating alleged breaches of the Standard will be undertaken with great care and balanced objectivity. Clients should be considered innocent until proven guilty, though the balance of probability test will be applied. It is noted that in the competitive world of business, information can be provided vindictively by rivals. At the same time, the credibility and reputation of the SEG Standard must be maintained.

Observers are encouraged to report of suspected transgressions by contacting: standard@sustainableeelgroup.org All reports will be treated sensitively and in confidence.

Investigation Procedure

The following procedure will be applied. It has been developed based on experience of such reports since 2011.

1. SEG Panel Chair receives report or information of alleged transgression. This could be a press report or from an informant in the sector.
2. SEG Panel Chair seeks to verify the report via independent sources, such as police and local enforcement authorities, to understand if the report is credible.
3. Allegations are presented to the client, and the client asked to provide an explanation and their version of events. Clients will be advised that there is a possibility of suspension of the certificate whilst the investigation is carried out
4. Depending on the outcome of those initial enquiries, the SEG Panel may need to undertake a more detailed investigation – to interview the client and potential witnesses (however, if there is a legal case, access to evidence may be limited)

5. If, on the balance of probability, it is concluded that there is a case to answer, the certificate will be suspended, pending the outcome of further investigations. The suspension will be stopped if and when credible evidence is presented that reverses the balance of probability of guilt.
6. Note, suspension does not mean withdrawal of a certificate. It is temporary, pending the outcome of further investigations. If found not guilty, the suspension will be lifted and the certificate immediately re-instated.
7. If the client is found guilty of the allegations, the certificate will be withdrawn for a commensurate period. After that period, the client can seek re-assessment for a new certificate. Note the timescales in Component 1 will apply. If the transgression is an offence under statutory legislation, SEG will have the responsibility to report it to the relevant enforcement authority.

NB. the procedures in other professions are being researched pending final publication of the revised standard. These will also be expanded in the developing SEG Standard Assurance Code.

13. Measures

The following measures and targets will be applied to identify the impact this standard is having on its objective to restore eel populations. It identifies targets (the benefits sought) for each component of the standard, and also for the standard overall, the measures by which those targets will be tested. Once agreed, the mechanisms for monitoring will be developed, using existing mechanisms wherever possible. It collates the Targets and Measures listed in the standard's criteria above.

These will form the basis of the Impacts Code, being developed under the ISEAL membership application process.

Component	Targets & Measures
1. Commitment to Legality & Sustainability	<ul style="list-style-type: none"> • The illegal trade (measured as the unaccountable reported catch in Europe) reduces by 10% per year over the next 10 years. • In 10 years (2028) the level of illegal trade has reduced from 40% of the total catch to less than 5%
2. Trading in certified responsibly sourced eel	<ul style="list-style-type: none"> • The number of businesses achieving the standard increases by 15% per year, over the next 10 years, from 14 now, to 60 in 2028 • The proportion (by weight) of the market that is from certified responsible sources increases by 10% per year, from 5% now to 75% in 2028
3. Traceability	<ul style="list-style-type: none"> • Auditors report a high confidence (90%+) in the quality of records of a high proportion (90%+) of those assessed • All those handling certified eel are using the standard logo to label the product and do so correctly • Reports of transgressions are handled promptly and fairly
4. Biosecurity & Welfare	<ul style="list-style-type: none"> • All suppliers provide and seek evidence of bio-security • All suppliers have high quality, effective, bio-security plan • There are no, or very rare, examples of diseases or alien species associated with a batch of certified eel
5. Glass eel fishing	<ul style="list-style-type: none"> • The amount (weight) and proportion (%) of glass eels caught from each certified and non-certified fisheries will be monitored. The proportion from certified fisheries increases from 5% to 90% over the next 10 years • Survival rates will be monitored and targets set to seek a continuous improvement in survival • Fishery authorities will develop increasing confidence in fishery data • The unaccountable & probable sale to uncertified & illegal exports to be measured through mass-balance analysis of catch-declaration systems, to support the target in Component 1, i.e. In 10 years (2028) the level of illegal trade to reduce from 40% of the total catch to less than 5%
6. Yellow & silver eel fishing	<ul style="list-style-type: none"> • The amount (weight) and proportion (%) of adult eels caught from each certified and non-certified fisheries will be monitored. The proportion from certified fisheries increases from 0% to 50% over the next 10 years • Fishery authorities will develop increasing confidence in fishery data to make fisheries management decisions

7. Eel buying and trading	<ul style="list-style-type: none"> • The amount (weight) and proportion (%) of eels traded by each certified and non-certified traders will be monitored. The proportion from certified traders increases from 5% to 90% over the next 10 years • Survival rates will be monitored and targets set to seek a continuous improvement in survival
8. Eel Farming	<ul style="list-style-type: none"> • An increasing number and proportion of farms, from 2 and 5% to 35 and 90% in 10 years are certified. In 10 years, the total proportion of certified eel that passes through eel farms is 90%. • 60% by number of eels from fish farms is provided for restocking
9. Restocking	<ul style="list-style-type: none"> • Silver Eel escapement in the recipient catchment is measured with reasonably confident calculation • Restocking is measured, with reasonably confident calculation, to have made a measurable increase in silver eel escapement. • Silver eel escapement is at Bbest and increasing towards or at the 40% target
10. Wholesale & retail	<ul style="list-style-type: none"> • An increasing number and proportion of 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
11. Contribution to Healthy Aquatic Ecosystems	<ul style="list-style-type: none"> • Annual increase in the number of companies seeking the SEG Standard, from 0 now to 20 in 10 years • 10% pa increase in the value of eel conservation and restoration projects, doubling from £20M per year now to £40M in 10 years • 10% pa increase in the number of eel conservation projects, each with environmental target measures, to include projected and actual impacts on spawning escapement
The Standard Overall	<ul style="list-style-type: none"> • The number of businesses achieving the standard increases by 20% per year, over the next 10 years, from 14 now, to 60 in 2028 • In 10 years (2028) the level of illegal trade has reduced from 40% of the total catch to less than 5% • By 2018, there is a supply chain of certified sustainable eels from fisheries to retailers providing choice to customers. The choice and proportion increases by 10% per year over the next 10 years • An increasing proportion of total retail sales is of certified eel, from 5% now to 75% in 10 years • Sustainable eel products are labelled with the standard logo; suppliers and consumers have confidence that the label is credible and they understand what it means • 60% of eels by number from buyers and farms are provided for restocking • Silver eel escapement achieves the 40% target in an increasing number of river catchments • SEG certified suppliers have high standards of biosecurity, and the risk and incidence of transferring diseases and alien species is very low • 10% pa increase in the value of eel conservation and restoration projects • The standard is accredited by ISEAL, helping SEG to achieve ISEAL Associate Membership in 2018 and Full ISEAL membership in 2019

14. Glossary

Terms not defined in the text

Term	Definition
Ranching	Fishing in natural waters in which natural recruitment is significantly supplemented by stocking with juvenile eels. An example is Lough Neagh, Northern Ireland.
Sustainable Recovery	The stock size of European eel at which the ICES Working Group on Eel consider the eel has recovered, is biologically safe and sustainable yields can be set. The current indicator of that stock size is 40% of B0.

To comment on this document, download [this form](#)

(<http://www.sustainableeelgroup.org/wp-content/uploads/2017/01/SEG-Standard-FeedbackV1.2.docx>)

and send it to standard@sustainableeelgroup.org by midnight on 31 December 2017.

Copyright:



Version 6.0, draft 2
30 November 2017

For further information please see:

www.sustainableeelgroup.org

Or contact us at:

standard@sustainableeelgroup.org

Registered address:

Fishmongers Hall, London Bridge, London. EC4R 9EL

The Sustainable *Eel* Group Standard

To be known as

The SEG Standard

A Code of Conduct for a Responsible Eel Sector

Version 6.0, Draft 2. For consultation 1 – 31 December 2017