Sustainable *Eel* Group

# The SEG Standard

## Rationale

**For Consultation. 16 June – 15 July 2026**



www.sustainableeelgroup.org

Working Version V1d3

June 2026

# The SEG Standard Rationale

**Versions Issued**

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Version 1, draft 3

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# Contents

## 1. Purpose of this document

**The primary purpose of this document is for the public consultation of this version (Version 8, draft 3) of the SEG Standard during the period 16 June – 15 July 2026.**

In previous versions of the SEG Standard, the rationale and the standard were combined into one long document. For Version 8 we are trialling having them separate as the rationale changes little whilst the Standard is regularly improved.

This document, '103b SEG Standard Rationale', focuses on the background and reasoning behind the SEG Standard. 103 SEG Standard is the Standard only with compliance indicators and 202 Assurance System is how the assurance and certification processes are applied.

These, and other documents that support the SEG System are published on our website at:

https://www.sustainableeelgroup.org/the-seg-standard-system/

## 2. Applicability and responsibility

The Sustainable Eel Group (SEG) is responsible for the content and publication of the SEG standard.

The latest version, and translations, are available at: https://www.sustainableeelgroup.org/download/.

Users of the standard (clients and conformity assessment bodies) are responsible for ensuring they are using the latest version at the time of assessment.

The SEG Standard crosses national boundaries and is intended to apply to the capture and trade in the European eel across its natural range (see section 4. below). However, SEG is a Belgium registered organisation and therefore EU Law has primacy.

SEG has worked hard since 2010 to build its reputation, demonstrate its credibility, and has influenced major changes in the eel sector across Europe and beyond. The SEG Board is proud of its achievements and will continue vigorously to pursue its aim of accelerating the recovery and sustainability for the European eel whilst seeking to maintain livelihoods and traditions. SEG will take all reasonable measures to protect its reputation, and this standard.

## 3. The Sustainable Eel Group – our purpose

The Sustainable Eel Group (SEG) is the leading international collaboration of scientists, conservation groups, the commercial sector and advisors, solely dedicated to the protection and recovery of the European eel (*Anguilla anguilla L.*) We are a not-for-profit, non-governmental organisation, with a registered office in Brussels and with collaborators from across Europe and beyond. Our influence must be Europe-wide to help the European eel, which is a single, mixed, genetically homogeneous, panmictic stock. We are a group of dedicated professionals, committed to the long-term recovery and sustainability of the European eel. This is reflected in our name.

## Our vision

**We wish to see:**

> ***Biologically safe wild eel populations, distributed throughout their natural range, fulfilling their role in the aquatic environment, recovering in line with the protection targeted by the Eel Regulation.***

**Given the depleted state of the stock, this requires major protection and recovery.**

This is defined in more detail, with the strategies designed to achieve these, in our 009 Theory of Change.

# 4. The legal framework

The European eel suffers from cuts from a thousand knives: fishing on all life stages in continental waters, habitat loss, barriers to migration, pollution, and many more.

To address all of these requires measures related to fishing, to water management, to waste water treatment, to hydro-power generation, and more.

In EU terms, this implies that the Common Fisheries Policy is involved in coastal waters, national fishing laws in inland waters, the Water Framework Directive and the Marine Strategy Policy for water quantity and quality, the Green Energy Policy for the hydro-power, Natura 2000 for nature, and more.

The solution has been to adopt yet another Regulation - 1100/2007; the Eel Regulation - as an overarching orchestration for all those others. The Eel Regulation itself is a remarkably "empty" policy: it hardly defines specific actions but specifies what all those other policies – and some eel-specific measures on top – should jointly bring about for the eel: a minimal protection, just enough to make the stock recover.

A legal basis for such a wide-reaching Regulation was found in Article 37 of the Rome-Treaty, the treaty in which the EU (then: EEC) was established in 1957. Article 37 dealt with the organisation of a common market for agricultural products, where "agriculture" is supposed to include fisheries too.

The Rome Treaty has been replaced by the Lisbon Treaty in 2007, to which the Eel Regulation has been adapted to.

Within this framework, the SEG Standard supports and is guided by two key pieces of legislation:

- **The EU Eel Regulation** (Council Regulation (EC) No 1100/2007), which is a *framework for the protection and sustainable use* of the European eel.
- **CITES**: The Convention on International Trade in Endangered Species which lists the Eel on Appendix II, regulating the international trade in Eel (across EU-outer-borders).

Noting that the Eel Regulation and the CITES listing aim for protection and recovery, as we do, and that both have a binding legal status, our actions are largely aligned with these, and we set ourselves the aim to accelerate their implementation, or, where possible, go beyond them.

# 5. The purpose of this standard

This standard has been developed as part of our solution for the recovery of the European eel. The objectives of the standard are defined in the 114 Terms of Reference for its revision. They are summarised as follows:

**The aim of the SEG standard is to:**

- **Define criteria by which each step in the chain of custody in the commercial eel sector can be assessed for its responsible minimisation of negative impacts and contribution to the protection and recovery of the eel population.**

**with the objectives to:**

a) define how implementation at the level of each individual certificate holder is responsible, in relation to SEG's sustainability objectives,
b) support the collection and availability of the data necessary to monitor the efficacy of the standard in achieving those objectives,
c) provide the possibility for operators to demonstrate high and responsible standards,
d) drive high and responsible standards throughout the supply chain, from fishery to consumer,
e) provide confidence to retailers and consumers who wish to buy responsibly,
f) define and certify higher standards of practice than just following the law,
g) be compatible with other relevant standards,
h) reduce and discourage illegal eel fishing and trade,
i) support the implementation of the Eel Regulation, the CITES listing and other relevant laws.

## 6. Scope

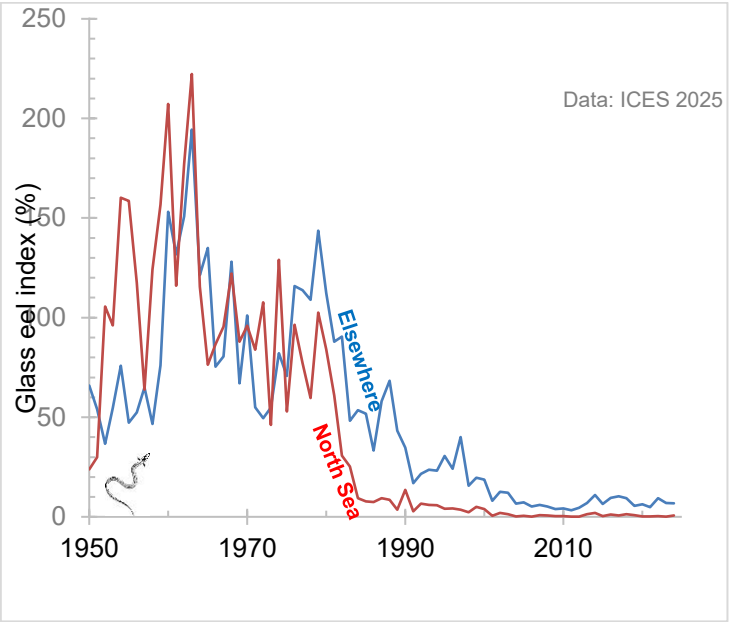
The SEG standard applies to the fishing, aquaculture, trade, processing and transportation of the European eel *Anguilla anguilla* (Linnaeus, 1758) and its products within coastal, estuarine and freshwater systems throughout its natural range.

## 7. Responsible Use and the European eel

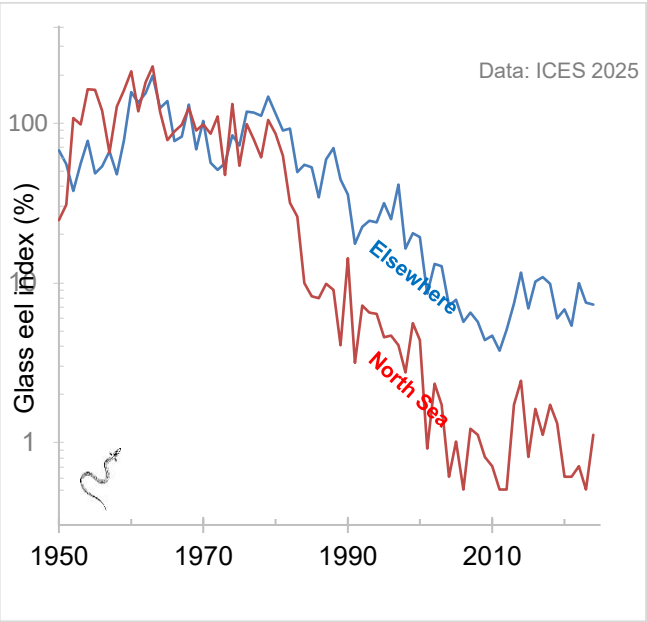
### 7.1 The decline of the European eel

The eel stock is currently at a historical low, after a decline of many decades (if not centuries). Stock abundance and fishing yield have declined gradually since at least the mid-1900s, and the recruitment of young eels from the ocean declined rapidly from 1980 until 2010. If nothing had changed, then extinction might have loomed eventually. In 2007 however, the EU adopted the 'Eel Regulation', setting a framework for protection across Europe, to protect the eel stock so that it might recover to its historic level of abundance.

Long-term time trends in a) recruitment, b) fishing yield and aquaculture. Data: a) ICES 2025, b) Dekker & Beaulaton 2016.

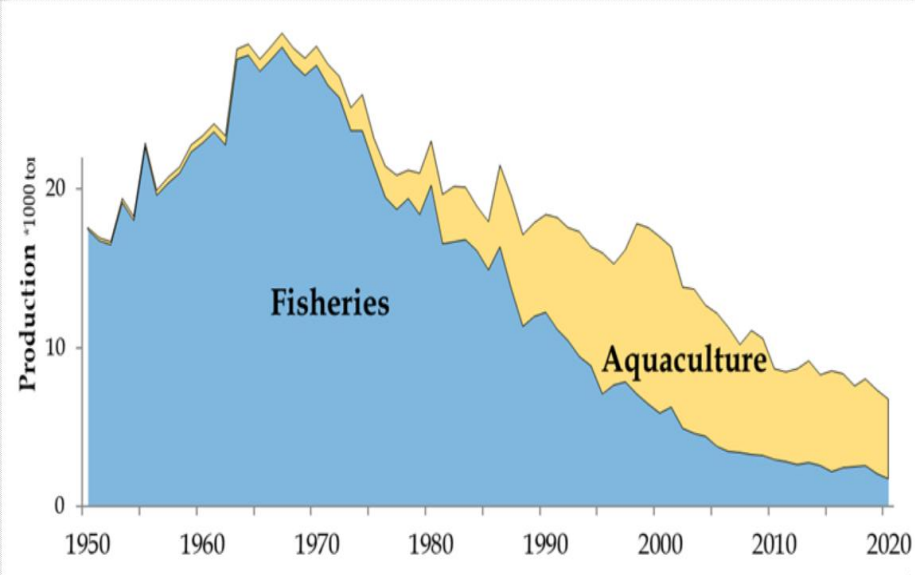



(i) Linear scale




(ii) Logarithmic scale

a) Recruitment as Glass Eel Index (ICES data, 2025)




b) Landings and aquaculture

In 2011, the 30-year decline in recruitment since 1980 came to a halt, and current recruitment is at 1-10% of the 1960 - 70's level. Both the North Sea index and the Elsewhere index now vary on a low level, with little trend. That is: the recruitment has stabilised after 2011 at a low level; but it has not recovered.

The timing of the breakpoint in 2011 suggests that the change in trend might be related to the implementation of protective measures under the Eel Regulation since 2009 (add two years for the migration across the Atlantic Ocean), but a causal link cannot yet be proven or disproven.

### 7.2 Impacts on the eel in a multi-actor system

The decline of the eel stock over the last century (or longer) likely relates to habitat loss (land reclamation), blocked migration routes (water management), overfishing (on all life stages), pollution of many kinds (chemical, sewage, agricultural), and possibly many other man-made factors. There are thousands of professional fishers, millions of recreational fishers, many millions of people living in reclaimed habitats, and even more of us depending on good water management – and each and every one of them makes some sort of an impact on the eel stock. That is a multi-actor system.

Millions of people with an impact, and that impact varies from direct and deliberate fishing, to very indirect impacts (run-off from inhabited areas); from permanent impacts that can be reduced or reversed, to largely irreversible impacts such as loss of habitats and water management. A multi-factored decline, necessarily addressed in a multi-actor environment, over a vast geographical range. The essential "trick" of the Eel Regulation is to split this immense problem up along geographical lines (countries, drainage areas), in order to reduce the number of actors and to adapt to the national circumstances. But the complex interaction between so many different human impacts remains.

It is in this overly complex setting, that the Sustainable Eel Group took the initiative, in 2010, to develop a standard as a code of conduct for the eel fishing and trading sector. The standard sets minimum conditions for responsible exploitation, complementing the implementation of the national Eel Management Plans and the Eel Regulation. However, given that the SEG standard addresses only the commercial fishing sector, it does not address all factors and all actors involved in eel management. Issues related to water management, pollution, wildlife management, and loss of (accessibility to) habitats are not primarily aimed at. Because of that, the standard does not influence all factors affecting the stock, and therefore, the standard does not formulate its goals in terms of the net outcome, influenced by the sum of all those factors, but in the effort made, and how that relates to the options available.

Application of the SEG standard by itself, therefore, does not guarantee to provide adequate protection to achieve a sustainable fishery or recovery: on its own the commercial sector is not able to achieve these shared objectives. Whilst contributing to the shared, national objectives as a responsible actor, the certified commercial sector cannot be held responsible for the net outcome as also influenced by all other parties. It is only in the national Eel Management Plans (EMPs) and the Eel Regulation, that all factors and all actors can be addressed, and therefore, it is only at this level that the net outcome can be evaluated.

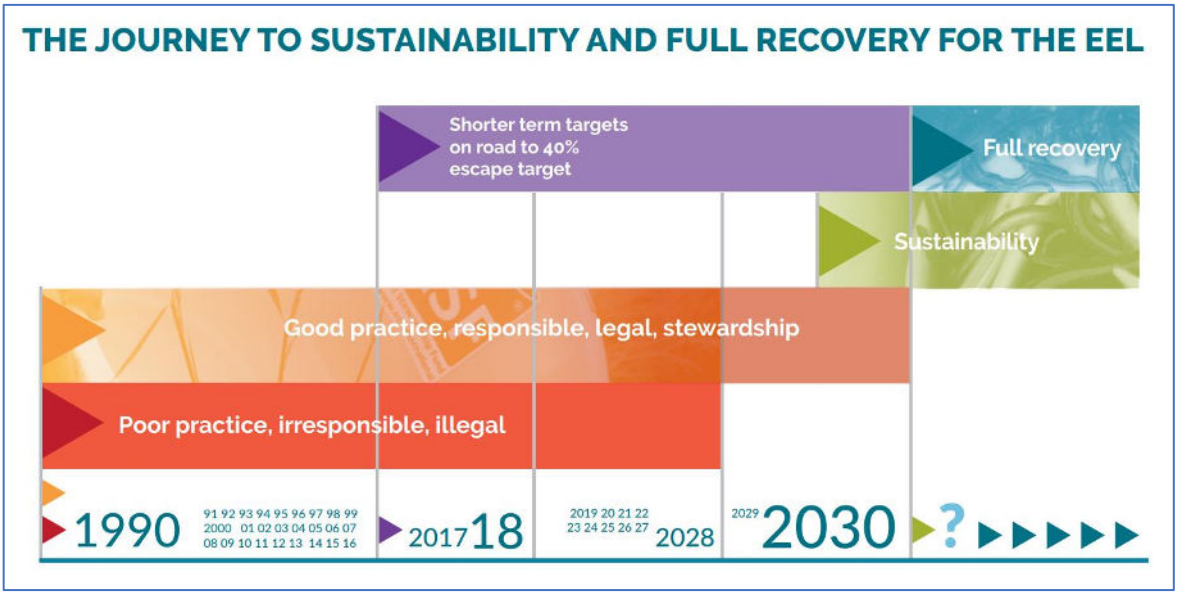
Whilst the Eel Regulation and many EMPs permit the continuation of eel fishing this standard is designed to require the most responsible practices across the eel fishing and supply sector such that, where fishing and trade are permitted, standards are raised and avoidable impacts are minimised. For our position on the ICES advice on human impacts see: https://www.sustainableeelgroup.org/wp-content/uploads/2021/11/SEG-considers-Zero-Catch-advice.pdf.

Aiming for a responsible commercial sector and subscribing to the governmental policies to protect and restore the stock, we expect the commercial sector to contribute fully to the national management plans and live up to the consequences for their practices.

### 7.3 The journey towards sustainability and recovery

If sustainability and recovery for the eel is in the future, then we consider that we are currently on a gradual and step-wise journey which is likely to take several decades. See the diagram below.

So, this standard describes 'best practice' and 'responsibility', for the eel fishing and trade sector only, as their contribution, and part of the journey, towards the ultimate goal of recovery and sustainability.




This standard is therefore positioned to be a **best practice code of conduct for a responsible eel sector**, as part of the sector's contribution to providing the adequate protection to help reverse the decline of the eel, on the journey towards sustainability and recovery.

In this phase, it is important to apply an exploitation level that allows the stock to recover. To this end, the European Commission received advice from ICES (in 2002), which recommended to aim for a reduction in human impacts, that allows the spawning stock to recover to 30% of the notional pristine level (i.e. 30% of the spawner production, that would have existed under high recruitment and no anthropogenic mortality). For precautionary reasons (due to the many uncertainties around eel) a more vigilant level of 50% was suggested. The EU Council subsequently decided to aim for 40%, in between the advised 30% and the more vigilant 50%.

According to ICES (2002), for the stock to recover to this abundance, it is necessary to reduce anthropogenic mortalities (to a maximum of 60% mortality, i.e. a survival of 40%, or better). Accordingly, the Eel Regulation has set an action target on achieving that minimal survival of 40%, but it failed to set a time limit for achieving this (i.e. achieving 40% survival). SEG considers this lack of deadline to be a weakness in the Eel Regulation, and advocates to reduce mortalities to the required limit, by 2030 at the latest. For our position on eel protection and recovery see: https://www.sustainableeelgroup.org/wp-content/uploads/2021/11/SEG-position-on-protection-and-recovery-Fall-2021.pdf. Note that for biological reasons, once the minimal protection has been achieved (i.e. 40% survival), it will still take many generations and many decades for the stock to recover to the full, historical abundance. Additionally, loss of habitats might have gone that far, that a full recovery will not be achievable anymore. Even if so (i.e. habitat loss is limiting), it remains appropriate to reduce man-made impacts so that at least 40% of current survives. Once that minimal protection is achieved, the subsequent recovery – many decades from now – just will not go as far as expected, since the abundance cannot go above the level sustained by the remaining habitats. That means: we do protect the stock adequately (40% survival), and yet the stock will not recover to the full. Despite this, the minimal protection remains 40% survival. Without that minimal protection, the stock is doomed to decline further, possibly to demise.

The SEG Standard is designed within this legally binding framework, and we therefore align our aims with the adopted management target of 40% survival (ultimately enabling a recovery to 40% of pristine

abundance). Although we advocate to fulfil the required reduction in anthropogenic mortalities by 2030, that time-limit is not part of our standard, because setting this additional requirement would disturb the level playing field between the fisheries and other human impacts. As described in 5.2 above, fishing mortality is one of many impacts of anthropogenic impacts on the eel population. Fishing effort and mortality for glass, yellow and silver eels has reduced by approx. 50% since the introduction of the Eel Regulation (Poseidon report, 2019).

### 7.4 Responsibility – minimising the negative impacts on eel protection

We use the following to give some examples of how some of the criteria in the standard minimise negative impact towards meeting the level of eel protection required by the eel regulation.

#### 7.4.1 Reducing illegal fishing and trafficking

- The SEG standard discourages illegal fishing and trafficking by excluding those who have been prosecuted from certification (courts often don't ban fishing or trade at sentencing).

#### 7.4.2 Traceability

- Certification is only achieved where audits of the operations shows good records of traceability and proper use of quotas (operators don't normally have to demonstrate this outside of a certification system).

#### 7.4.3 Fishing handling survival

- The SEG standard sets limits for fish handling mortality at 4% and requires fishers to handle their catches more carefully to reduce mortality.
- A 2021 study (Simon et al 2021) has shown that since the introduction of the SEG standard in France, handling mortality has reduced from as much as 42% in 2007 to less than 7.4% on average in 2020 across all fishers (certified and non certified). It was even lower in SEG certified fishers (mean 2.1% compared to 17.4%). This means that to catch an annual quota of 60 tonnes of viable glass eels, now 65 tonnes needs to be caught, whilst before it was 103 tonnes – that is a saving, or reduced negative impact, of 38 tonnes, or 114 million glass eels per year.

#### 7.4.4 Restocking

- Restocking of young eels from areas of high to areas of low abundance is an option in the Eel Regulation for members states to deploy in their eel management plans for recovery of the stock. However, its effectiveness in creating more successful spawners has been questioned and its use is controversial. Restocking, and SEG's position, is described in some more detail in section 7.5 below.

#### 7.4.5 Contribution to Eel Conservation Projects

- Certified organisations are required to make financial or in-kind contributions to eel conservation projects or Eel Stewardship Funds (ESFs) to progress projects that improve habitats and migration pathways for eels, as well as research, restocking and other programmes to benefit the eel.

### 7.5 Restocking

- Whilst restocking (the transport of young eels from areas of highest abundance to supplement lower populations elsewhere) is neither a cure-all, nor a wolf in sheep's clothing, SEG advocates the pragmatic use of restocking in accordance with the conditions set by the Precautionary Approach (i.e. use it as an addition, not as a replacement for protection).

- For the source area (where the glass eel is fished), a (national) Eel Management Plan applies, aiming to reduce anthropogenic mortalities to a level that enables recovery. That overall mortality includes fishing, as well as non-fishing human impacts (barriers, habitat loss, pollution and more).
- For the receiving area (where the glass eel is released), restocking may give a major boost to the local stock and potentially contribute to the spawner production. The increased local stock contributes to the local biodiversity, plays its part in the food chain, and may contribute to the local fishery (provided that that fishery itself is responsible and properly managed). Without restocking, many natural habitats would currently be completely devoid of eels.
- Though the positive contribution of restocking to the spawning process is not proven, we consider it of utmost importance to maintain the claim on those areas as being eel habitat, even though we advocate more permanent solutions (eel passes, habitat improvement, better protection from entrainment etc.) in the long run. In this case, we consider restocking to be an important tool for maintaining the local stock, with a potential but uncertain contribution to the overall stock recovery. Our position paper on restocking is published at: https://www.sustainableeelgroup.org/wp-content/uploads/2020/06/SEG-position-on-restocking-June-2020.pdf

For the purposes of this standard, we make the following points:

- We recognise that the net benefit to the eel stock, in terms of successful silver eel spawners is uncertain.
- Whilst restocking is an accepted measure in the Eel Regulation, and this standard seeks to support the regulation, it is assumed to be an acceptable technique, until scientific studies refute or support this.
- The Eel Management Plans of several EU members states are highly dependent on restocking, for example the Netherlands, Germany, Denmark, Sweden and France. Each of those countries report that those are successful and that resident eel populations have increased since the Eel Regulation was introduced (ICES 2022).
- Where restocking is to take place:
  - It should be done according to the guidelines for the implementation of the Precautionary Approach.
  - It should be regarded as a short-term measure, until the easement of migration barriers demonstrates that natural recruitment is successful.
  - Glass eels should be taken from only those rivers where the local scientific or fisheries authority has evidence that there is a likely abundance of glass eels and that well regulated fishing is acceptable.
  - Those glass eels should be caught according to the quota or the regulations specified by the fisheries authority.
  - They must be caught, handled and transported carefully, according to best practice, to maximise their survival and vitality.
  - Those glass eels earmarked for restocking must be used for that purpose (this is a legal obligation).
  - Locations for restocking should be assessed as high quality, productive eel habitat, with minimal or screened pumps and hydropower, and with good connectivity for migration of silver eels to the sea.
  - The Eel Regulation target of 60% of glass eels caught to be offered for stocking should be observed.
  - Governments should support the markets, to assist the achievement of that 60% target.
  - This standard sets criteria for conducting restocking responsibly, according to best practice, to maximise the positive effects of restocking, and to minimise the negative effects of fishing handling, transport and holding mortality.

# 8. What the standard means – claims and labelling

## 8.1 Claims

The basic meaning of activities that pass this standard is:

> '***Certified Responsibly sourced***'
>
> It means that those involved with the supply of eel, through the supply chain from the fishery, have complied with this standard, which is a *Best Practice Code of Good Conduct for a Responsible Eel Sector*.
>
> Further, it refers to:
>
> ***Complies with the best practices for the protection of the European eel, from fishery to customer through a traceable supply chain.***
>
> and:
>
> ***Making a contribution to the protection and recovery of the European eel*.**

## 8.2 Labelling

To coincide with the publication of this new SEG standard, a new logo has been developed to denote and label supplies of assured SEG certified eel, each business to business and business to consumer:


A full description is available in 205 SEG Standard Claims and Labelling Guide.

## 8.3 Achieving 'responsibility'

Organisations seeking certification will have their operations assessed by an independent and qualified Conformity Assessment Body (CAB). Those that meet the criteria for Responsibility will be certified 'Responsible', as meeting the SEG standard. The procedures and criteria for this are described in full in our 202 Assurance System.

# 9. Other Standards

In developing the standard, we have referred to other respected fisheries standards, for example the Marine Stewardship Council (MSC), the Aquaculture Stewardship Council (ASC) and the Marin Trust and adopted good practice or translocated criteria 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 the SEG standard's Traceability component.

We are also in contact with the International Hydropower Association regarding their Hydropower Sustainability Standard, and the Alliance for Water Stewardship Standard to influence improvements to those standards to create better protection for eels.

## 10. Standard development and revision process

The development and review of the standard is governed by 102 SEG Standard Development and Revision Procedure published on our website at: https://www.sustainableeelgroup.org/the-seg-standard-system/

## 11. Continuous improvement

The standard itself is open to continuous improvement. This is the 8th substantive version since it was first introduced in November 2010. It has been improved each time to take account of latest best practice, available scientific knowledge, changes in legislation and comments from stakeholders. The standard is substantively reviewed at a minimum of every five years with minor improvements in between. The next substantive revision is due in 2031.

In addition, the standard is designed to require those certified to demonstrate improvements in their practices between successive assessments.

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

## 12. How the standard works

### 12.1 Structure

The standard is structured as follows:

| Heading | Description | Where these are found |
|---|---|---|
| **Component** | The broad topics of the standard; the different parts of the eel sector | 103 Standard<br>103b Rationale |
| **Issues** | The challenges in each component that the standard aims to improve or address | 103b Rationale |
| **Notes** | Guidance, explanation, clarification or definitions on how to interpret and use the indicators | 103b Rationale |
| **Benefits** | The contributions or benefit that this part of the standard is designed to make | 103b Rationale |
| **Rationale** | The reasoning behind the impact /benefit – how that benefit will work | 103b Rationale |
| **Criteria** | The tests against which the organisation will be assessed | 103 Standard |
| **Targets & Measures** | These are performance or 'impact' measures for each component – to help monitor the effect of the standard in its contribution to eel protection | 103b Rationale |
| **Guidance** | Additional guidance to interpret the criterion and indicators | 103a Guidance |

| | | |
|---|---|---|
| **Indicators** | These are measures that complement the criteria to help indicate if, and to what level, the criteria are being met | 103 Standard |
| **Exceptions** | Description of when criteria might not apply | 103 Standard |

### 12.2 Components

The eel sector is composed of many parts, starting with fishing, through transport, holding, trading and farming to restocking or processing, 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 to minimise negative impacts for the eel.

The standard is divided into the following components:

- Component 1: - Core requirements:
  - Commitment to legality
  - Contribution to eel conservation projects
  - Traceability
  - Mitigating reputational risk
  - Ultimate Beneficial Owner
- 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: Processing, wholesale and retail supplies

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 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.

### 12.3 The organisation being certified – Ultimate Beneficial Owner

The organisation seeking certification shall be considered according to its Ultimate Beneficial Owner (UBO).

The organisation or business seeking SEG certification must be audited in full – it is not sufficient to have selected parts of the organisation certified. This is to ensure transparency and traceability and to show that the whole organisation is committed to it – not just selected parts.

Similarly, an Ultimate beneficial Owner (UBO), or an affiliated or subsidiary organisation, cannot be certified for one company when another under their ownership has been prosecuted or is under investigation for illegal activity related to eel fishing or trade.

An ‘organisation’ in this context is a company or group of companies that have a common ownership, leadership, management or control by a person, company or organisation. The UBO may also bear responsibility or a group of companies.

Whilst a whole organisation beneath a UBO must be audited and certified, if or when any entity within it were to fail a subsequent audit or inspection, the corrective action or suspension or withdrawal of the certificate shall only apply to those entities that have not achieved the standard. Where there is a major breach, legal investigation or prosecution, it applies to the whole organisation, according to the usual procedures in our Assurance System. Assessment of the UBO is at Criterion 1.5 of the standard.

### 12.4 Fisheries – group certification

Where a fishery is assessed for certification, the fishers there are considered for ‘group certification’. In this situation, because it is impractical and prohibitively expensive to audit every fisher in the fishery:

- An audit sampling methodology is applied, according to procedures in our Assurance system and
- All fishers are required to sign an agreement to attest that they will comply with the terms of certification, agreeing that if they don’t, they could be ejected from the fishery and/or jeopardise the certification of the whole fishery.

### 12.5 Methodology

The process for assessment to the standard and certification is described in summary in 103 SEG Standard, and in detail in 202 SEG Assurance System.

These, and all other SEG System documents on the SEG website at:

www.sustainableeelgroup.org/the-seg-standard-system/.

## 13. The Standard – rationale and guidance

Each component of the standard is described in more detail in this section. In this document we describe the rationale and background for each. The indicators of compliance are in 103 SEG Standard.

| Component 1 – Core requirements | |
|---|---|
| **Criterion 1.1: Commitment to legality** | |
| **Issues** | Illegal trade (trafficking) has developed since trade of the European eel across the boundaries of the EU was banned by CITES in 2009. Demand from Asia, which was previously legal, has encouraged an illegal market of up to 100 tonnes in 2017-18 - equal to nearly double that of the reported total European legal glass eel catch in recent years (see reference).<br>SEG is clear that the road map for recovery of the European eel population, as set out in the Eel Regulation, cannot be followed unless commercial activity is carried out in full compliance with the law and in full transparency. |
| **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.<br>The assessor / CAB shall seek verification from local enforcement agencies, and intelligence from enforcement authorities and SEG whether the client has any known convictions or current legal investigations for eel fishing or trade.<br>Several authorities monitor the illegal trade so we are able to get an estimate of the extent of trafficking. We publish reports on the SEG website. |
| **Benefits** | • Discourages and reduces illegal practices and trading<br>• Increased commitment to recovery of the European eel |
| **Rationale** | By encouraging a responsible market via the SEG standard, illegal practices will be discouraged and phased out. |
| **Targets & Measures** | • The illegal trade (measured as the unaccountable reported catch in Europe) reduces by 10% per year (baseline: 100 tonnes in 2016/17).<br>• By 2030 the level of illegal trade reduces by 75% |
| **Guidance** | • Separate guidance in the 103 Standard is provided for the definitions of major and minor offences for eel fishing and trading.<br>**1 Jan 2021 line in the sand rule:**<br>• The SEG standard has played a key role in supporting the reinvention of the commercial sector and this has matured to the point where a line in the sand can be drawn on full traceability and illegal trade. To align with the rule for no convictions for three years in Criterion 1.1, SEG also creates a matching statement for inaccuracy and illegality prior to 1 January 2021. Investigations into irregularities that occurred prior to 1 January 2021 will be exempt from consideration in the SEG certification process. |
| **Criterion 1.2: Contribution to Eel Conservation Projects** | |
| **Issues** | The destruction of eel habitat and the implementation of thousands of weirs, sluices, barriers, abstractions, pumps and hydropower schemes have progressively reduced the |

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| **Notes** | eel's range in fresh waters since the start of the industrial revolution. To undo that will cost € Billions, take decades and require enormous political will.<br>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.<br>Eel conservation projects are those such as habitat restoration, eel passes, removal of barriers and screening of pumps to mitigate for the degradation caused, restocking and research.<br>Participants are required to make in-kind or financial contributions to eel conservation projects as a contribution to aid the eel's recovery, particularly if or where it is challenging to demonstrate a contribution elsewhere (e.g. eel farms for consumption and wholesalers / retailers).<br>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. The sector is aiming to increase the number of ESFs across Europe. SEG supports that and recognises in this standard where participants are a member of the appropriate Eel Stewardship Association. |
| **Benefits** | • Increased investment on eel and environmental improvement projects to increase eel survival and silver eel escapement. |
| **Rationale** | By increasing financial or in-kind contributions, more work targeted at eel conservation, protection and improvement can be undertaken to speed up the journey to the eel's recovery. |
| **Targets & Measures** | • The number of businesses and the total financial contributions will be measured. Existing ESFs raise approximately €700,000 per year. An aspirational target is to double that in 10 years, by 2033.<br>• The outcomes of those contributions will be monitored and measured so that a tangible impact on eel populations can be identified and best value from contributions achieved. |
| **Guidance** | • See separate Guidance in the Standard to define what type and amount of contributions can be considered as eligible. |

| **Criterion 1.3: Traceability - Record keeping and documentation** | |
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| **Issues** | Good record keeping that can be audited is essential to be able to provide the evidence that the claims an organisation 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, vigilance and reporting by suppliers and customers is required to maintain the credibility and security of the standard and those certified. |
| **Notes** | **If the client has demonstrated Traceability / Chain of Custody via another standard, that evidence can be used here.**<br>***Incoming Product***<br>The client will need to have full traceability and provide access to the certificates of all suppliers with whom they deal, to prove to the auditor that the sources are certified. |

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| | These will need to be backed up by incoming invoices from these suppliers showing the purchase of product.<br>***Separation and Segregation***<br>Separation can be achieved through physical or temporal separation. However it is done, it must ensure that mixing will not occur. Certified products must not contain any non-certified eel.<br>***Outgoing Product***<br>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 batch-coding (see in 205 SEG Claims and Labelling guide) 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).<br>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 quantities sold to end consumers.<br>***Record Keeping and Documentation***<br>The key to traceability is good record-keeping. Organisations will need to be able to provide records that allow for the tracking of product throughout their ownership. They will also be required to show 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.<br>Note that 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.<br>***Tele-declaration systems***<br>Information technology has been implemented in parts of France 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. Responsible operators will use these systems. |
| **Benefits** | • Assurance to customers that they are purchasing genuine certified product<br>• Credibility of the standard<br>• Increased market share of certified responsibly sourced eel<br>• Increasing traceability through the supply chain leading to a reduction in illegal trade |
| **Rationale** | Traceability, auditable good record keeping, trust and honesty are core to the standard working. A minority are likely to abuse the system, but, through audits and reporting, they will be excluded. |
| **Targets & Measures** | • Auditors report a high confidence (90%+) in the quality of records of a high proportion (90%+) of those assessed |

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| | • All those handling certified eel are using batch-coding to label the product and do so correctly<br>• Reports of transgressions are handled promptly and fairly<br>• Increasing proportion of fishermen and buyers use a tele-declaration system |

| **Criterion 1.4: The risks of reputational damage to SEG are identified and prevented or mitigated** | |
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| **Issues** | Fishing and trading in the European eel carry many risks, principally (1) because the trade in eels is very valuable, particularly on the illegal market and there has been a high level of illegal trafficking since the CITES listing in 2009 and (2) trade in a species that is classified as critically endangered needs careful consideration and control.<br>Clients and operators who operate outside of the law and also the SEG standard, or who do not apply adequate Corporate Sustainability Due Diligence, present the possibility of bringing significant reputational damage to SEG.<br>SEG applies its own procedures to manage risk, some of which are transposed to the SEG standard to ensure that SEG Members and clients apply full due diligence actions to minimise reputational risk. |
| **Guidance** | Refer to specific Guidance in the Standard |

| **Criterion 1.5: All organisations under the Ultimate Beneficial Owner are SEG certified** | |
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| **Issues** | There is no universally accepted definition for 'Ultimate Beneficial Owner' (UBO). SEG has taken the following as a reasonable and proportionate guide. |
| **Guidance** | Identifying the Ultimate Beneficial Owner involves determining the individual or entity that ultimately owns or controls a company, even if their ownership or control is indirect or through intermediaries. This process is crucial to ensure that SEG registered clients are legal and credible and not affiliated with illicit, untraceable or uncertified eel trade.<br>Identifying UBOs is vital to ensure transparency and protect the SEG system's integrity.<br>SEG has taken inspiration from anti-money laundering, know-your-client and anti-fraud regulations across the EU when updating its certification mechanism and guidelines, and concluded that a robust certification process would benefit from identifying the UBOs of the applicant.<br><br>The steps involved in identifying a UBO typically include:<br>1. Collecting Information: Gathering data about the company's legal structure and ownership.<br>2. Analysing Ownership Structure: Examining the layers of ownership, such as shareholders, partners, and entities, to trace back to the ultimate owner.<br>3. Determining Control: Identifying who has significant control over the company, such as voting rights, financial interests, or the ability to influence decisions.<br>4. Verification: Confirming the identity of the UBO through documentation, such as identification cards, passports, and other legal documents.<br>5. Compliance and Reporting: Ensuring compliance with regulations that often require companies to report the identity of their UBOs to regulatory authorities.<br>**Refer to further guidance in the Standard on how to assess the UBO.** |

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| | Where an organisation seeks to be SEG certified, all relevant (eel trade) related businesses (organisations) under common ownership or control i.e. with a similar UBO must also be SEG certified, or there must be clear and convincing separation between them (greater than the 50% balance of probability), according to the threshold limit of ownership in the law of that country.<br>Certificate(s) cannot be awarded until all organisations under the UBO have achieved the Standard and are ready for certification. |

## 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 (180 million glass eels) per year in recent years. 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 describe best practice in those that are fished.

**Notes**

***Responsible fisheries***

'Sustainable' fisheries cannot yet be defined. Responsible fisheries are where fishers are operating in a place and in such a way according to the relevant Eel Management Plan, in support of the Eel Regulation.

***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. To aid traceability and increase assurance of a traceable supply chain, it is preferable (but not mandatory) that certified fisheries 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.

Fisheries in France have quotas for each consumption and restocking. Fisheries must demonstrate that they are not exceeding those quotas and that eels are being purchase for the correct reasons.

***Fishery data***

Good fishery data are important to enable effective fisheries management by local, national and European fishing authorities.

***Survival & eating glass eels***

It is obviously important to maximise welfare and survival for glass eels to then maximise their contribution to recovery. 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 to eat 'Angulas' in parts of Spain. However, the reduction in glass eel catches has led to substitutes being developed for these traditions. Whilst SEG feels that direct consumption of glass eels is poor use of the stock, we do recognise that (1) it is a traditional (social & economic) activity and (2) as long as these come from the

‘consumption quota’, this form of consumption has no more negative impact than similar numbers going into aquaculture. Good records must be kept for inspection at audit to ensure that the mortality records are within the boundaries of this standard, and that they are not used as cover for illegal trade.

***Consumption and restocking quotas***

In France, the most significant glass eel fishery, comprising 80% of the European market, the authorities set a quota for catch and sale for each restocking and consumption each year. There is a legal requirement to observe those quotas (and, for example, it is unlawful to sell fish for consumption that were due for restocking) and auditors have an important role to play, through analysis or records, that quotas are being properly used.

***Unit of fishery***

Fisheries can be assessed at a range of size of ‘units’, from individual fishermen, through groups, co-operatives, to a whole estuary to the Eel Management Unit (or District) on which Eel Management Plans are based. The default unit will be the Eel Management Unit unless there are good data or information available at a smaller catchment level.

Smaller units, e.g. a single fisher, brings individual responsibility but greater cost (of assessment) per fisher. Larger units bring economies of scale, and the whole group of fishers must trust each other to operate according to the required standards and regulations. Contract agreements / conditions of use are provided so that individuals and collectives understand their responsibilities.

Where assessment for individuals is prohibitively expensive, collaboration to bring groups together is encouraged to conduct multiple single assessments. Our Assurance system describes how this ‘group certification’ is managed.

***Progress with Eel Management Plans***

In assessing progress of an eel management plan (EMP), the assessor will seek evidence from the relevant agencies to identify whether the fishery or applicant fishers have made credible progress with the majority of their 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%.

Note also that for countries where the Eel Regulation does not apply, a similar standard that is at least the equivalent of that set out in the Eel Regulation and is based on the implementation of an eel management plan approved by an international scientific committee.

***Eel Management District***

The Eel Management Districts described in Criteria 2.2 and 3.2 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.

***Mortality rates during fishing for glass eels***

Survival of glass eels is very important and is dependent on how carefully they are caught, handled and stored. Fishers must use best practice methods to maximise survival. Records of mortality must be maintained (to include if kept temporarily at locations away from the weigh-in site. The experience of auditors in recent years is that apart from checking that fishing gear is in line with best practice, other techniques such as fishing speed are less easy to measure. The most important measure is the outcome – the

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| | survival of glass eels after fishing. So, in this revised standard we have applied fewer and clearer criteria to help the fisher and the auditor to know what is required and being measured.<br>***Mortality rates in glass eel fishery and in storage***<br>The quality and survival of glass eels caught depends on the combination of the following parameters:<br>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:<br>2. The speed of the vessel<br>3. The duration of the trawl<br>4. The design and configuration of the net, including mesh size of the cod-end<br>5. The handling and storage of the fish, e.g. the use of vivier tanks<br>***Carmin indigo test***<br>Carmin indigo dye can be used to identify damage to glass eels. There is a protocol developed in France to use this dye to sample batches of glass eels to assess the damage after fishing and the likely mortality. This is a method to objectively assess fishing handling damage and mortality.<br>***Vivier tank***<br>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.<br>***By-catch in glass eel fisheries***<br>In order to evaluate impacts of the fishery on by-catch over a fishing season, the assessor will require information on:<br>- Species represented in the by-catch<br>- An indication of the quantity of each species caught over a given period (e.g. per tow or dip, per night)<br>- Protocols or methods for dealing with by-catch<br>- How the by-catch is handled<br>Some species are of course an acceptable by-catch, assuming fished according to regulations.<br>Infrequent but large catches of gelatinous zooplankton in glass eel nets during bloom periods may be excluded from these criteria.<br>***Good data***<br>Good data are defined as those that can be used for statistical analysis within accepted scientific limits.<br>***Quotas***<br>Given the size, range and diversity of the fisheries of the European eel, it is not possible to assign marine fisheries management terms, e.g. Total Allowable Catch or Sustainable Yield. Fisheries scientists have applied quotas to regulate fishing catches in France. |
| **Benefits** | • Glass eels are fished from a place where impact on local and total eel populations are minimised<br>• Survival is maximised<br>• Impact on the environment / other species is minimal |

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| | • Good fishery data enable effective fisheries management<br>• Glass eels are sold to SEG certified buyers to meet the demand for certified fish |
| **Targets & Measures** | • 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% between 2018 and 2028.<br>• Survival rates will be monitored and the standard raised set to seek a continuous improvement in survival. Survival rates averaged 92.6% across all (certified and uncertified) French fishers in 2020/21 (Simon et al 2021), and was measured as an average of 58% in 2007 (Briand et al 2012).<br>• Fishery authorities will develop increasing confidence in fishery data, including catch per unit of effort, to make reliable fisheries management decisions.<br>• The unaccountable & possible sale to illegal exports to be measured through mass-balance analysis of catch-declaration systems, to support the target for illegal trade in Component 1. Target: in 10 years (2018 - 2028), the level of illegal trade will have reduced by 75%. |

## Component 3 - Yellow and silver eel fishing

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| **Issues** | Yellow and silver eel fisheries have greatly reduced since 2009 – 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 encourage them to become certified.<br>***Eating wild yellow and silver eels***<br>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. Like glass eels, the standard is designed to only support fishing where the River or District is meeting the escapement target and/or other criteria.<br>***Certification***<br>So far, there have been no applications for SEG certification for yellow or silver eel fisheries. This is for a number of reasons, but mostly because the sector is fragmented – there is little or no co-ordination re representation of these fisheries. SEG will make greater efforts to engage these fisheries in the next five years – for the period of this version of the standard. |
| **Notes** | Many notes, e.g. Unit of Fishery, good data, are the same as for glass eel fishing, above, and for brevity, are not repeated here. |
| **Benefits** | • Impact on the environment / other species is minimal<br>• Good fishery data enable effective fisheries management |
| **Rationale** | Where yellow and silver eel fishing exists, we wish it to become and show itself to be responsible via the SEG standard |
| **Targets & Measures** | • 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 25% over the next 10 years (2023 to 2033)<br>• Fishery authorities will develop increasing confidence in fishery data to make more reliable fisheries management decisions |

| Component 4 - Eel buying and trading | |
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| **Issues** | Glass eel buyers hold an integral, important but also challenging position in the supply chain. They are 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 responsible fishing practices as buyers have become more aware of market pressures.<br>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) 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.<br>On top of this there is the constant risk of the illegal trade to Asia. The higher prices are a temptation to some and this can significantly affect market demand and prices.<br>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. |
| **Notes** | ***Careful handling***<br>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.<br>***Design of glass eel holding facilities***<br>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.<br>***Transport***<br>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. Animals that are injured or that present physiological weaknesses or pathological processes shall not be considered fit for transport.<br>There is no 'aspiring' score criterion for transport – anything less than the optimum standard is considered not acceptable.<br>***Restocking requirements under the Eel Regulation***<br>The Eel Regulation requires that 60% of glass eels from fisheries should be made available for restocking (although the EU can make temporary changes to the % in response to a significant decline of average market prices for eels used for restocking).<br>To help support this important part of the Regulation, it is built into the SEG standard.<br>In France there are quotas for restocking and consumption and those earmarked for restocking must, by law, be used for that purpose. That is transcribed to this standard. In other countries, the 60% target is adopted in the standard. The ability for the sector as a whole to achieve 60% is dependent on governments and grant funding organisations making funds available to purchase sufficient glass eels at a reasonable price to make restocking worthwhile for fishers and traders.<br>***Segregation***<br>• Certified and non-certified batches of eels of any life stage are kept in separate and clearly labelled tanks |

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| | • Eels from the glass eel consumption and restocking quotas are kept in separate and clearly labelled tanks<br>• Such segregation is maintained from point of collection through holding to sale and onward transport |
| **Benefits** | • Increased supply, demand and proportion of certified eels in the market<br>• Improved welfare and survival of eels during handling<br>• Reduction in demand and supply of eels for illegal export and a reduction in trafficking |
| **Rationale** | The rationale in the issues and notes are described above. |
| **Measures** | • The amount (weight) and proportion (%) of eels traded by each certified and non-certified traders. The proportion from certified traders increases from 75% to 90% over the next 5 years, 2023 – 2028.<br>• Survival rates of transported fish show a continuous improvement |

## Component 5 – Eel farming

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| **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 sustainable or responsible sources. The farm should be contributing to restocking to play its part in supporting eel conservation projects. |
| **Notes** | **If the eel farm has achieved another fish farming standard, e.g. Aquaculture Stewardship Council (ASC), evidence presented for that can be used in assessment here.**<br>***Mortality rate during culture***<br>Unlike for the fishery, traceability at the farm level should ensure that mortality can be measured directly and evaluated reliably by the assessor. The following methodology should therefore be used:-<br>• Measure the mortality in pieces of kg / day / system<br>• Add up and calculate total pieces/ kg for the Year<br>• Mortality calculation is:<br>  ○ no. pieces (mortality) / mean no. pieces on site in the Year as a %, or<br>  ○ kg mortality per year / mean kg stock in that year<br>• This should be calculated for each year class (new intake) in each year and those figures made available over 3 years. There are usually 3 year classes in most eel farms, and the average lifetime of eel in a farm is 1.5 years.<br>***Feed***<br>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 from responsible or sustainable sources. Feed companies should be prepared to provide the sources and breakdown of feed ingredients, which should be from certified sources.<br>The MarinTrust is a third-party certification programme that certifies the production of marine ingredients (the MarinTrust standard) and the Chain of Custody of those marine ingredients (MarinTrust CoC standard). The MSC and ASC standards may also be applied to |

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| | certify the ingredients of feed. 'FMFO' refers to fish sourced in the feed according to the 'first manufactured and first out principle'.<br>***Feed conversion ratios***<br>A good Feed Conversion Ratio (FCR) is key to ensuring that the farm is operating efficiently and using its feed in an effective manner.<br>***Slaughter methods***<br>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.<br>***Restocking of cultured eels***<br>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 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). 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 local eel populations.<br>Restocking percentages should be calculated by piece, although an average weight may be used to calculate this. The calculation to be used would be:<br>**(Year restocking Total (by piece )/Year intake (by piece) = % Restocked per year**<br>***Slow growers***<br>Slow growers are not to be selectively used for restocking as that could alter the freshwater population in a way that is unnatural and could affect genetics.<br>***Restocking and consumption quotas***<br>Glass eels purchased for eel farming for consumption must only have come from the glass eel consumption quota.<br>***Segregation***<br>• Glass eels purchased for eel farming for consumption must only have come from the glass eel consumption quota.<br>• Certified and non-certified batches of eels of any life stage are kept in separate and clearly labelled tanks<br>• Such segregation is maintained from point of collection through holding to sale and onward transport |
| **Benefits** | • Survival is maximised<br>• Eel farms play their part in eel conservation and enhancement projects<br>• Food for human consumption is provided with minimal impact on the environment |
| **Targets & Measures** | • An increasing number and proportion of eel farms are SEG certified.<br>• By 2028, the total proportion of certified eel that passes through eel farms in Europe is 90%. |

| Component 6 – Restocking | |
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| **Issues** | A discussion about in restocking is provided in Section 5.5.<br>Whilst restocking is an accepted measure in the Eel Regulation, and this standard seeks to support the regulation, the standard sets criteria for doing it responsibly, and according to best practice. |
| **Benefits** | • Escapement of silver eels in the target catchment is increased towards or beyond the 40% of B0 target<br>• Local eel populations are enhanced, benefiting wildlife and biodiversity<br>• Local fisheries are supported |
| **Rationale** | This depends on the unproven 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; or, at the least, that it boosts eel populations and biodiversity in the restocked waters. |
| **Targets & Measures** | • Silver Eel escapement in the recipient catchment is measured with increasingly confident calculation by the local fisheries authority<br>• Restocking and the impact on eel escapement is measured<br>• Silver eel escapement is increasing towards or at the 40% target |

| Component 7 – Processing, wholesale and retail supplies | |
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| **Issues**<br><br>**Notes** | This component describes the sometimes short, sometimes long chain from the eel leaving the fishery or fish farm, processed for human consumption (e.g. filleted, smoked, jellied), distributed to retailers and then sold to the consumer (e.g. the public, restaurants).<br>In some cases, a number of processes might be carried out by the same business, e.g. some family businesses in the Netherlands have their own eel farm, their own smoker and sell direct to the public.<br>There are few additional criteria for processors, wholesalers and retailers. These are in addition to those in Component 1.<br>Where the facility undertakes other processes in this standard, e.g. perhaps eel farming, the business and assessor shall decide the relevant components to audit. Where a processor receives live eels, the criterion for welfare shall be applied.<br>Processors are producing food for human consumption so the organisation must meet the relevant food production standards. |
| **Benefits** | • Customers and consumers have the opportunity to purchase responsibly sourced eel |
| **Targets & Measures** | • An increasing number and proportion of processors, wholesalers and retailers provide certified eel, from 5% in 2018 to 75% in 2028<br>• An increasing proportion of retail sales is of certified eel, from 5% in 2018 to 75% in 2028 |

## 14. Assurance

The rules, procedures and guidance for the governance and assurance of the standard are separated from the standard itself and described in the 202 SEG Assurance System, which is published on the SEG website.

## 15. Measuring impact

The following measures are applied to identify the impact this standard is having on its objective to improve practices within the eel sector and contribute to the recovery of the eel population.

These form a significant part of our 301 Monitoring, Evaluation and Learning (MEL) System and 302 MEL Plan published on the SEG website.

| Component | Measures |
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| **Output measures** | |
| **1. Commitment to legality** | • The level of illegal trade in glass eels (number of tonnes) measured as the unaccountable reported catch in Europe<br>• The indicative level of illegal trade (in tonnes) as reported by Europol |
| **2. Trading in certified eel** | • The number and % of businesses in each part of the sector achieving the standard |
| **3. Traceability** | • Amount (tonnes) and proportion (%) of sales that are certified traceable from a responsible source |
| **5. Glass eel fishing** | • The amount (tonnes) and proportion (%) of glass eels caught from each certified and non-certified fisheries<br>• % survival rates from fishing handling |
| **6. Yellow & silver eel fishing** | • The amount (tonnes) and proportion (%) of yellow and silver eel fisheries caught from each certified and non-certified fisheries |
| **7. Eel buying and trading** | • The amount (tonnes) and proportion (%) of eels from each certified and non-certified fisheries |
| **8. Eel Farming** | • Amount (tonnes) and proportion of certified eels passing through eel farms |
| **9. Restocking** | • The % (number) of all glass eels caught provided for restocking |
| **10. Wholesale & retail** | • Number and proportion of businesses, and proportion of sales using the relevant logo to denote product is traceable, responsibly sourced<br>• Suppliers and consumers have confidence that the label is credible and they understand what it means |
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| **Impact measures** | |
| **Environmental** | • Glass eel returns as reported by the ICES WGEEL recruitment index<br>• Silver eel escapement in Eel Management Districts, as reported by ICES WGEEL<br>• Protection for the European eel achieves the target of 40% survival<br>• Barriers to migration are removed or adequately mitigated, initially to meet the 25,000km river target in the Swimways Network by 2030<br>• Wetland habitats are restored to increase the quantity, quality and connectivity of the aquatic environment for eels. |
| **Social** | • Number of people employed (certified and whole sector)<br>• Greater engagement of all stakeholders interested in the European eel<br>• Illegal eel trade is minimised (ultimate goal is 0%) |

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| | • An increasing proportion (ultimate goal 100%), of eel fishing, trade and consumption demonstrates its commitment to protection and responsible use by meeting the SEG standard<br>• The Sustainable Eel Group is a successful advocate of eel protection, sustainable use and recovery with governments and stakeholders. |
| **Economic** | • Total value of sales of eel (certified, uncertified, consumption and restocking) €<br>• The damaging effects of water operations to eel populations are minimised,<br>• The livelihoods of those that fish and trade responsibly in eel are maintained. |

## 16. Review and improvement

We are always keen to receive any comments from any stakeholders at any time that aim to improve the SEG Standard and its application. To provide feedback please contact: standard@sustainableeelgroup.org.



Sustainable *Eel* Group

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For further information please see: www.sustainableeelgroup.org

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