



# **The Impact of the Sustainable Eel Group on Reducing Illegal, Unregulated and Unreported Fishing and Trafficking of the European Eel**

## **FINAL REPORT**

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## **ACKNOWLEDGMENTS**

The author would like to thank all those who made themselves available to discuss their views on SEG, SEG's activities, the Standard and their impact on responsible eel management and on countering IUU fishing and trafficking of European eels.

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## **PREFACE**

This report was commissioned by the Sustainable Eel Group (SEG) in June 2023 to be an independent external evaluation of the impacts of their strategies on reducing Illegal, Unregulated and Unreported Fishing and Trafficking of the European Eel. The project aims and objectives are listed in Section 1 of this report. The author conducted research and interviews in 2023 to gain feedback and form an impartial view from a wide range of people and organisations with an interest in this subject.

Dr Richard Noble is a Senior Research Associate at the University of Hull International Fisheries Institute (HIFI), a specialist research, consultancy and training unit in the School of Natural Sciences at the University of Hull. Prior to commissioning of this report neither the author nor HIFI had any interaction or connection to SEG or its activities. The author is a Chartered Environmentalist and Fellow of the Institute of Fisheries Management and in this role has had a professional interaction with David Bunt as a member of both the IFM Council and Executive, and since January 2024 as a member of the IFM Board of Trustees.

## EXECUTIVE SUMMARY

The Sustainable Eel Group (SEG) was formed in 2009 and aims to be the leading international organisation seeking to accelerate the recovery of European eel (*Anguilla anguilla* L.) through conservation and management. One of the main actions and roles for SEG has been the development of a voluntary standard for a responsible commercial eel sector with traceability from source to market. SEG's wider actions in relation to alerting and negotiating aim to influence the eel protection policies and their implementation to achieve SEGs goals for a healthy natural environment and a responsible and sustainable eel sector.

Since 2016 SEG has made stopping the illegal trafficking of European eel a priority in its activities. In 2007, the decision was taken to place European eel on Appendix II of species under CITES legislation, which led to the prevention of exporting glass eels from the European Union. Despite this, evidence from international trade records and wildlife crime enforcement datasets has revealed a vast level of continued international trade of European eel (including glass eels, live eels and eel meat) and a significant level of "Illegal, Unreported and Unregulated" (IUU) fishing and trafficking of glass eels, the majority of which appear to be supporting eel farming and consumption of eel in east Asia (including specifically China). Estimates by Europol and SEG indicated illegal trafficking and IUU in the region of 100 tons / 300 + million glass eels a year in 2018. After significant enforcement action between 2016 and 2020, SEG reported estimates of the level of glass eel trafficking to have reduced from 300+ million eels to around 50 million glass eels (estimated range of 15 to 25 tonnes): an approximately 80% reduction. There are many players involved in anti-trafficking and therefore many contributions to achieving that reduction in illegal exploitation and trafficking. SEG believes it has played a major part in this, particularly through raising awareness, campaigning, information sharing and the implementation of the SEG Standard.

This report presents an independent evaluation of the nature and status of eel IUU fishing and trafficking and presents key findings and conclusions concerning the role of SEG activities and the SEG Standard on reducing IUU fishing and trafficking of the European eel. This evaluation is underpinned by a review of SEG activities and the implementation of the SEG Standard, a review of the trade and management of European eel, a review of the evidence in relation to trafficking and counter-trafficking measures and success and a collation of stakeholder and sector views on the role and importance of SEG within the counter-trafficking sphere.

Fundamentally, SEG is an NGO which is not directly involved in enforcement of counter-trafficking of European eel. However, they have developed a role in alerting, negotiating and publicising in the enforcement sphere. Since 2015 SEG has undertaken a lead on highlighting and reporting on IUU fishing and trafficking of glass eels and in 2016 made counter trafficking a priority as stated in their 2016 declaration. As counter-trafficking is a multi-actor international network and SEG are not an enforcement agency it is difficult to directly attribute the changes in the trafficking sector and the successes of enforcement actions to the role played by SEG. Most of the reported reduction in trafficking is clearly due to the extent and international nature of the concerted enforcement actions.

However, SEG is now positioned as a focal voice in the debate and drive for a responsible sector. Their direct liaison with enforcement agencies and their representations to those acting in the EU policy sector have undoubtedly influenced the movement to prioritising wildlife crime involving the trafficking of eels. Much of the impact of SEG through actions relating to the Standard and their role in monitoring, alerting and negotiating is clearly substantiated. The species-specific focus of SEG has elevated illegal trafficking of eels in the policy agenda and

has complemented the activities of other organisations working in wildlife crime more generally. Furthermore, the progress towards a certified responsible sector and the development of a network within it has likely contributed to the reduction in illegal fishing and exports, an increased awareness of where and how illegal activity is taking place and through the implementation of the SEG Standard a reduction in the grey area between legal and illegal eel trade.

As part of this review and evaluation several recommendations have been made to SEG which may support and strengthen their work in counter-trafficking. These include:

- SEG maintaining focus on traceability of glass eels and quality and consistency of reporting on the volume of glass eels that are fully certified at each stage of the eel trade within Europe.
- A focus on uptake of the SEG Standard within the (currently uncertified) restocking activities in Europe (which should account for 60% of all glass eels caught) and may underpin certified yellow and silver eel fisheries in the future.
- SEG taking the lead on developing consistency and reproducibility of the trade/trafficking metrics reported by enforcement agencies, other NGOs and CITES to enable consistent monitoring and evaluation of the status of trafficking. Currently the estimations for trafficking presented in CITES documents and Europol press releases are inconsistent over time and/or assessed using incomplete data.
- SEG developing succession planning to ensure that the current professional relationships with enforcement agencies and other key stakeholders in the sector, currently underpinned by established individual relationships, are secured for the future.

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# 1 BACKGROUND & OBJECTIVES

## 1.1 The Sustainable Eel Group (SEG)

The Sustainable Eel Group (SEG) was formed in 2010 and aims to be the leading international organisation seeking to accelerate the conservation, management and recovery of the European eel (*Anguilla anguilla* L.). SEG aims for healthy eel populations, distributed throughout their natural range, fulfilling their role in the aquatic environment and supporting sustainable use for the benefit of local economies. In this aspect SEG has adopted and works to the United Nations Brundtland definition of sustainability (WCED, 1987) balancing the three pillars of sustainability in their sustainability targets. Key to SEG's approach is the collaboration and equal representation of the scientific, conservation and commercial sectors. As such SEG initiates and supports scientific research, conservation projects and organises stakeholders' commitment to a sustainable and responsible eel sector committed to good governance.

One of the main actions and roles for SEG has been the development of a voluntary standard "The SEG Standard" (hereafter referred to as "the Standard") – a certification scheme for a responsible commercial eel sector with traceability from source to market. SEG's wider actions in relation to alerting and negotiating aim to influence the eel protection policies and their implementation to achieve SEG's goals for a health natural environment and a responsible and sustainable eel sector.

## 1.2 Eel trade and trafficking

The European eel is currently classified as Critically Endangered (CR) by the International Union for Conservation of Nature (IUCN) and listed in Appendix II of Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). In 2007, the decision was taken to place European eel on Appendix II of species under CITES legislation, aiming for the prevention of exporting glass eels from the European Union. Therefore, upon implementation in 2009/2010 legal commercial exploitation of European eel is restricted to fisheries, farming and processing within the Europe Union, alongside utilisation of a proportion of glass eel catches for conservation and restocking (target of 60% within the EU Eel Regulation).

Following the listing on CITES, trade of European eel is now only allowed under highly specific circumstances. Specifically, trade outside of the EU is only permitted where member states can demonstrate non-detriment findings (NDF); which as yet no EU-member state has been able to do (except for the UK following leaving the EU). Despite this, evidence from international trade records and wildlife crime enforcement datasets has revealed a vast level of continued international trade of European eel (including glass eels, live eels and eel meat) and a significant level of "Illegal, Unreported and Unregulated" (IUU) fishing and trafficking of glass eels, the majority of which appear to be supporting eel farming and consumption of eel in east Asia (including specifically China). Estimates by Europol and SEG indicated illegal trafficking and IUU in the region of 100 tons / 300 + million glass eels a year in 2018. In 2018 the estimated 100 tonnes trafficked was comprised of 30 tonnes from the legal catch and a further estimated 70 tonnes from IUU fishing and the misuse of the restocking component of legal catches. Trafficking of European eel at this scale threatened the legal commercial trade (around 50 to 60 tonnes annually), the credibility of the Standard and the overall health of the



European eel stock. All of which jeopardised the future of the European legal commercial sector, the efficacy of the CITES listing and the effective recovery of eel populations through the regional Eel Management Plans and the EC Eel Regulation.

Following extensive enforcement actions in the years between 2016 and 2020, SEG reported estimates from unconfirmed market intelligence that the level to be reaching China to be between 15 and 25 tonnes, equivalent to around 50 million glass eels: an 80% reduction<sup>1</sup>. There are many players involved in anti-trafficking and therefore many contributions to achieving that reduction in illegal exploitation and trafficking. SEG believes it has played a major part in this, particularly through raising awareness, campaigning, information sharing and the implementation of the Standard.

### **1.3 ISEAL membership**

The Sustainable Eel Group is a Community Member of the ISEAL Alliance and applies the ISEAL Codes of Good Practice. As an ISEAL Community Member SEG is committed to improving its systems, building trust and demonstrating transparency in the development, implementation and assessment of the Standard. ISEAL Code Compliant organisations demonstrate a rigorous approach to improvement by implementing ISEAL's Standard-Setting, Impacts and Assurance Codes of Good Practice.

ISEAL Community Members can claim to be ISEAL Code Compliant only when they have demonstrated adherence to the baseline and improvement criteria of each of ISEAL's Codes of Good Practice in accordance with the ISEAL processes and definitions.

### **1.4 Report aims and objectives**

The aim of this report is to evaluate the role of SEG, its activities and the Standard, on reducing IUU fishing and trafficking of the European eel. To achieve this the evaluation and report covers:

- An overview of the eel sector and stakeholders.
- Identification of the players involved in trafficking and anti-trafficking.
- Estimates and indicators of the level of export (tonnes per year; number of eels) from the EU.
- Overview of the relevant enforcement actions including analysis of the number of arrests, seizures, prosecutions and punishments per year.
- Review and evaluation of the implementation and uptake of the Standard, the code of conduct for a responsible eel sector.
- Review and evaluation of the activities of SEG and their role in anti-trafficking.

This report presents an independent evaluation of the nature and status of eel IUU fishing and trafficking and presents key findings and conclusions concerning the role of SEG activities and the Standard on reducing IUU fishing and trafficking of the European eel. The report will not name specific individuals or organisations linked to trafficking and IUU but will highlight current understanding of the networks/routes involved, notable enforcement results, the implementation of the Standard .

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<sup>1</sup> [https://www.europarl.europa.eu/cmsdata/272683/Item%2011\\_5\\_PECH%20hearing%20-%20A%20Kerr.pdf](https://www.europarl.europa.eu/cmsdata/272683/Item%2011_5_PECH%20hearing%20-%20A%20Kerr.pdf)

## **1.5 Methodology and content**

The approach used in this report comprises three strands of analysis and information collation to assess the role of SEG in anti-trafficking of European eel. These strands comprise: reviewing SEG strategy and actions since formation; reviewing and analysing IUU fishing, trafficking and trade data for European eel; evaluating the role of SEG and its position relative to other stakeholders within the eel conservation and management sectors.

### **1.5.1 Review of SEG strategy & actions**

The first component of this review collates published documentation and evidence to substantiate SEG activities and actions in pursuit of implementation of the Standard and their wider activities aimed at reducing illegal exploitation and trafficking. The analysis of materials presented here included:

- Interviews with Andrew Kerr (SEG), David Bunt (SEG) and Lawrie McLaren (BCW Global)
- Analysis of SEG certification records, traceability data and market survey data
- Review of SEG presentations given by Andrew Kerr since 2009 on the history and activities of SEG
- Review of SEG documentation related to Terms of Reference and Theory of Change
- Review of SEG Documentation related to the Standard
- Review of SEG position statements and publicity

The review focuses on summarising key activities, actions, landmarks and identification of evidence to substantiate key claims and indicators of progress in anti-trafficking.

### **1.5.2 Review of IUU fishing and trafficking intelligence and data**

The second section of this report focuses on summarising the key facts about the legal and illegal trade in European eel. Datasets, publications and press-releases were collated, analysed and reviewed to summarise trends in exploitation and trade in European eel, the key knowledge and intelligence on eel IUU fishing and trafficking, key enforcement events and the potential impact of trafficking on eel stocks and legal trade. The datasets collated and reviewed included:

- Review of SEG Presentations given by Andrew Kerr since 2009 on eel trafficking
- Review of enforcement records for Operation LAKE as collated by SEG from Europol Press Releases
- Analysis of enforcement incident data as recorded on TRAFFIC Wildlife Trade Portal (TRAFFIC International 2023 Wildlife Trade Portal<sup>2</sup>)
- Review of published literature and reports (CITES, TRAFFIC, ICES, Independent) of eel trafficking and trade.

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<sup>2</sup> While wildlife incident data is a vital source of information, it should not be inferred that there is a direct correlation between incidents and the overall illegal wildlife trade, or that information across locations, species or time is consistent. TRAFFIC cannot be held responsible for any errors or inaccuracies in data held on the Portal, nor for any damage, loss or other negative impact caused by interpretation of the data held within it. TRAFFIC International 2023 Wildlife Trade Portal. Available at [www.wildlifetradeportal.org](http://www.wildlifetradeportal.org).

### **1.5.3 Stakeholder and sector views**

In addition to reviewing documented evidence for SEG activities and actions and the implementation of the Standard the report author also contacted and if possible, conducted unstructured interviews with representatives of SEG, law enforcement agencies and other experts and stakeholders within the eel management and conservation sector. The interviews with SEG employees and related experts focussed on SEG activities whilst interviews with other stakeholders focussed on their interactions with SEG and their view on the role that SEG has played in countering IUU fishing and trafficking. Individuals and institutions contacted and interviewed are summarised in Table 1. This report presents collated summaries of these interviews and the comments and quotes provided in them in an anonymous format.

**Table 1.** Summary of institutions and individuals contacted to discuss interactions with SEG and for views on the impacts of SEG in counter-trafficking of European eels.

Institution/Individual	Role	Contact / Communication	Notes
OLAF	European Anti-Fraud Office	Email Teams meeting	Direct role in the investigation of infringement of CITES legislation (customs fraud) Directly involved in Operation LAKE with Europol since 2020
British National Wildlife Crime Unit	Support Unit to British Police	Email Teams meeting	
Kathy Hughes	Asia-Pacific Freshwater Biodiversity Lead / Global Freshwater Habitats and Species Leader at WWF	Email Teams meeting	Interviewed as an individual and not as a representative of WWF
Matt Gollock	Zoological Society of London (ZSL) (links to CITES, IUCN, WGEEL and previously active with SEG)	Email	Email contact only
TRAFFIC	TRAFFIC is a leading non-governmental organisation working to ensure that trade in wild species is legal and sustainable for the benefit of the planet and people – UK based Charity	LinkedIn Direct Messages /Email	Numerous contacts with habitats/taxa leads but unable to obtain direct contact or interview with staff working on eel trafficking
Florian Stein	Researcher Previously employed by SEG	Email	Previous SEG researcher and provided materials related to trafficking evidence and trade analysis
David Bunt	SEG Board Member	Email Teams meetings	Director of Conservation Operations - founder member of SEG responsible for developing and managing the SEG Standard
Andrew Kerr	SEG Chairman	Email Phone calls Teams meetings	Founder and Chairman of SEG
Lawrie McLaren	BCW-Global – consultant to SEG	Email Teams meeting	Consultant to SEG in relation to development of the SEG communication and influencing plan at EU level.
Willem Dekker	SEG Director of Science	Email Teams meeting	Research scientist specialising on eel and chair of the ICES/EIFAAC joint eel working group (WGEEL) from 1996 to 2006

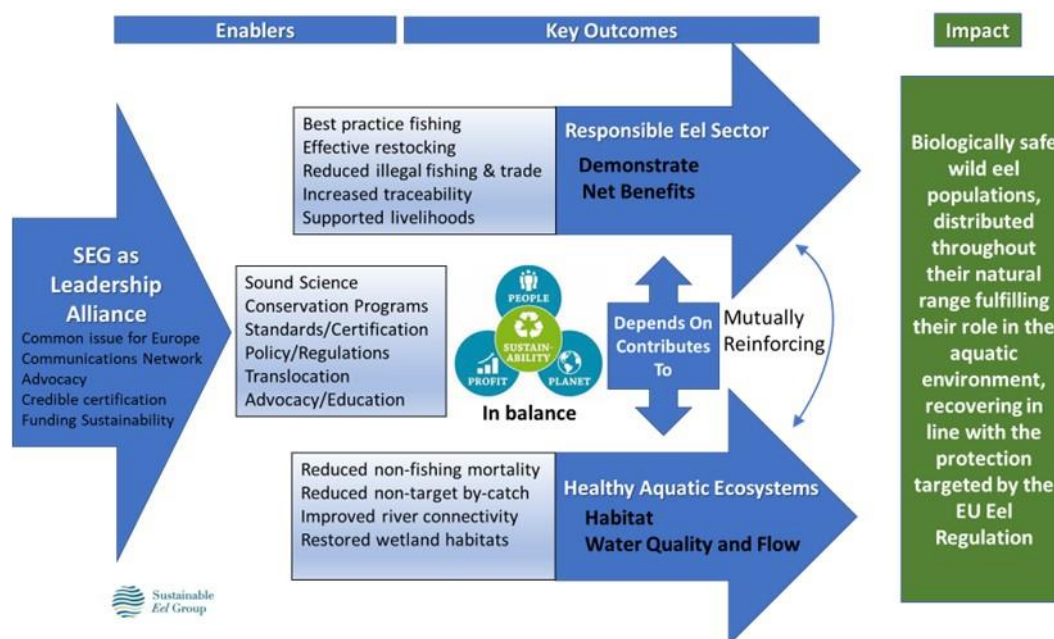
## 2 SUSTAINABLE EEL GROUP (SEG)

### 2.1 Aims and objectives

The Sustainable Eel Group (SEG) aims to be the leading international collaboration of scientists, conservation groups, the commercial sector and advisors, solely dedicated to the protection and recovery of the European eel. SEG is an international not-for-profit, non-government organisation, with registered offices in Brussels and the United Kingdom. SEG includes members and collaborators from across Europe and is part of a wider global network in the eel sector. SEG comprises a small number of employees and a wider group of associates, committed to the long-term recovery and sustainability of the European eel with the underpinning strategy to support the holistic approach to eel recovery through the complete implementation of the European Commission’s Eel Regulation. SEG’s key aim is to achieve:

*“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 EC Eel Regulation.”*

To underpin their strategy to achieve this they have developed a theory of change (Figure 1) which positions SEG as the leadership alliance working towards a sustainable eel sector and healthy aquatic ecosystems through, amongst other things, sound science, best practices standards, appropriate policy and regulations, increased traceability in exploitation and reduced illegal fishing and trade.



**Figure 1.** The SEG Theory of Change schematic indicating the three key areas of healthy aquatic ecosystems, a responsible eel sector and SEG as the leadership alliance, working together towards the vision of a healthy eel population.

## **2.2 History & timeline**

SEG was conceived following the First UK Eel Conference facilitated by the Institute of Fisheries Management and the Environment Agency in 2009 and officially formed in 2010. The group was formed from leaders of the Scientific, Conservation, Policy, and Commercial sectors, after a meeting in London in 2009, who made a commitment to take action to support the recovery of the European eel, working together around a shared vision. SEG has grown from a primarily UK centred association to a European-based international network of members working together for responsible eel fisheries and the recovery of the eel. In 2016 SEG made counter trafficking of eels a priority and formally made a declaration aiming to stop illegal trafficking of European eel following a meeting at Fishmongers Hall in London. The declaration was signed by >60 delegates representing a range of commercial organisations, environmental NGO's, scientists, government agencies and the UK National Wildlife Crime Unit.

2024 marks the 15<sup>th</sup> year of SEG (Table 2) and in those years notable actions and activities include the development and adoption of the Standard, hosting a series of international conferences, development of a strategic communication and influencing plan and establishing itself as a leading voice in the management and conservation sectors for the European eel.

## **2.3 SEG activities and progress**

### **2.3.1 Overview of activities**

SEG aims to deliver its fundamental aims of the restoration of healthy aquatic ecosystems and the development of a sustainable eel sector through actions delivering in three key strategic areas in support of SEG's vision:

1. Providing leadership and building alliances – a commitment to strong multi-stakeholder good governance with SEG as the convening platform for diverse stakeholders and competing interests.
2. Influencing actions – SEG acting to unify different interest groups for collective impact, in particular uniting the eel sector in encouraging solutions to environmental and water management issues affecting eels and promoting the implementation of the Eel Regulation, and to counter illegal fishing and trafficking.
3. Defining and promoting the uptake of best practices for commercial eel fishing and trade through the Standard and promoting market/ regulatory demand as a driver of change.

SEG, through its activities and the implementation of the Standard, aims to play a significant role in counter trafficking. SEG activities fall into five themes which include:

- Alerting
- Negotiating
- Implementation (and further development) of the SEG Standard
- Monitoring and Evaluation
- Enforcement and Assurance

Each of these themes is summarised here in terms key activities and landmarks since SEG was conceived in 2009.

**Table 2.** The timeline from 2009 to 2024 highlighting key events for SEG and in the eel sector (information collated by Andrew Kerr).

<b>2009</b>	First UK Eel Conference at Bridgewater, Somerset Eel leaders invited to lunch at Fishmongers Hall, London
<b>2010</b>	SEG Formed as a "not for profit" and Vision agreed. First international SEG meeting in Hamburg, Germany
<b>2011</b>	First SEG Standard developed and launched at Fishmongers Hall SEG Valencia Conference SEG relationship with DUPAN cements
<b>2012</b>	SEG Venice Conference First Brussels engagement with Close fishery agenda Orbatello Conference (Italy) – Regional Eel Conference attended by SEG Meet National Committee de Pech in Paris
<b>2013</b>	SEG Conference at Fishmongers Hall, London, UK
<b>2014</b>	Eel release in front of Parliament (UK) Growing awareness of Trafficking issue SEG's relationship with Wetlands International Europe cements
<b>2015</b>	SEG Contracts with Burston Marceller as Political Advisers in Brussels SEG 5 <sup>th</sup> Year Anniversary Conference, UK. Fisheries Minister attends SEG makes counter trafficking a priority
<b>2016</b>	SEG Conference at Potsdam (Germany) "Theory of Change" developed as part of adoption of ISEAL Codes Signing of the SEG Fishmongers Hall Declaration "Stop Illegal Trafficking of European Eel"
<b>2017</b>	SEG calls first meeting of Eel in Brussels attended by all desk officers involved from DG Mare and DG Environment to include highlighting the high level of trafficking
<b>2018</b>	SEG first European Parliament Event and first play of film documentary "Eel across all Boundaries", which also draws attention to the high level of trafficking
<b>2019</b>	SEG 10 Year Event at Natural History Museum, London. Fisheries Minister Attends – Panel discussion of all parties on future of eel. Morocco visited and Ministers engaged. SEG becomes an ISEAL Associate Member
<b>2020</b>	2 <sup>nd</sup> Potsdam Conference – the limitation of IUCN examined. SEG's message of "bending the curve towards recovery". Poseidon Report Published "Eel Regulation fit for Purpose"
<b>2021</b>	SEG Leadership Strategy reviewed. Agreement to apply for ISEAL Code Compliant achieved
<b>2022</b>	SEG Holds a European Parliament Event to launch Eel Deal 2030 ICES Advice calls for ZERO Mortality December Council of Fisheries Meeting fails to agree 6-month closure for all fishing
<b>2023</b>	EU-COM letter to MS Ambassadors proposing Full Implementation of Eel Regulation by all Member States PECH Committee Recommends Full Implementation of Eel Regulation
<b>2024</b>	SEG's cements relationship with SHOAL ( <a href="https://shoalconservation.org/">https://shoalconservation.org/</a> ) SEG enables the Somerset Eel Recovery Project (UK) 2 <sup>nd</sup> Eel Science Symposium, Liverpool, UK

### **2.3.2 Alerting & negotiating**

One of SEG's primary activities is alerting and informing the sector and the public about the plight of the European eel in terms of general conservation and of European eel as a significant wildlife crime issue. Key roles which SEG have set for themselves here include:

- Evidencing and publicising the realisation that trafficking was larger than the legal trade.
- Challenging any complacencies they perceive in the activities and policies of other organisations in the eel management and conservation sector.

Since formation in 2010 SEG has hosted or co-convened at least 10 regional and international conferences around the European eel (Table 2). Alerting and reporting of European eel trafficking as a significant wildlife crime following CITES listing was initially mainly led by TRAFFIC and CITES. However, since 2015 SEG has progressively become more active in collating and republicizing trafficking and enforcement evidence and keeping the subject on the policy agenda. This has included the key involvement of a member of SEG staff as a thematic expert in the drafting and publication on the chapter on eel trafficking in the 2020 World Wildlife Crime Report (UNODC, 2020). SEG are now viewed by many in the sector as one of the leading voices for eel conservation and management in Europe (see Section 4.2 and 4.5.2).

SEG has clearly stated high-level aims which include being highly influential with the European Commission and in national government policies that affect the aquatic environment and the eel. SEG recognises that it is a small NGO and must work in partnership with others to be most effective and as such SEG has built credibility through international networking, the collaboration of scientists, conservationists and the commercial sector, and presentation of its views in an evidence-based manner. SEG has been strategic in its approach to influencing and negotiating in the European policy sphere and has employed a professional political advisor in Brussels since 2015 to develop their communication and influencing plan. Key negotiation activities have included:

- Relationship building amongst key influencers and the SEG Network
- Joining World Wildlife Crime Conferences.
- Challenging complacency of other NGO's and stakeholders in relation to trafficking and implementation of wider protection measures
- Strategic interaction with the PECH Committee and EC DG Mare and DG Environment – in relation to eel exploitation and the refocussing on the full implementation of the Eel Regulation (Table 3).



**Table 3.** Key events relating to the SEG aim for influencing European policy in the eel sector.

Year	Event	Audience/Themes
2012	Brussels engagement with Close fishery agenda Meet National Committee de Pech in Paris	Meeting / debate in the Brussels office of the Skane Region of Sweden on the future of the eel. The debate took place in the context of the review of the eel regulation and the move by some people to list the eel at CITES Annex A. Barry Bendall spoke for SEG and Didier Moreau for WWF France (SEG 2012) <sup>3</sup> .
2015	SEG Contracts with Burston Marceller as Political Advisers Brussels	Aim to develop a communication and influencing plan especially to deliver SEG messages to MEPs, The European Parliament, European Commission and the PECH committee, and to develop wider orchestration of Communication across Europe on eel
2017	SEG calls first meeting of Eel in Brussels attended by all desk officers involved from DG Mare and Environment	Highlighting the plight of the European eel and the significance of the estimated level of trafficking for the sector and the species.
2018	SEG first European Parliament Event and first play of film documentary “Eel across all Boundaries”	Debate around a new and improved Eel Regulation. SEG is seeking to influence the thinking and the discussions that surround the Commission’s Road Map consultation process that may lead to a new and revised Regulation. <sup>4</sup>
2022	SEG Holds a European Parliament Event to launch Eel Deal 2030	MEP’s from across Europe, DG Mare, Europol, Wetlands International Europe, the German Angling Association, Good Fish, Via Aqua, Fieldfisher and more. <sup>5</sup>  Eel Deal 2030 to sit alongside the EU Green Deal

<sup>3</sup> <https://www.sustainableeelgroup.org/wp-content/uploads/2020/03/Meeting-19th-June-2012.pdf>

<sup>4</sup> <https://www.sustainableeelgroup.org/wp-content/uploads/2020/10/SEG-AGM-Report-4-Oct-2018.pdf>

<sup>5</sup> <https://www.sustainableeelgroup.org/eeldeal2030-european-parliament-event/>

### **2.3.3 The SEG Standard (& assurance)**

#### **Background**

In 2011 the Sustainable Eel Group moved to develop a voluntary Code of Conduct (The SEG Standard) applicable to the commercial eel sector and supply chain (fishers, traders, farmers and processors). The Standard defines minimal best-practices and conditions for responsible use. The Standard is designed to be a significant contribution to the implementation of the national Eel Management Plans, the EC Eel Regulation and the protection and recovery of the European eel stock. The Standard requires applicants to adhere to best practices (avoiding unnecessary mortality or quality loss), to abide by the law, exhibit responsible practices and to ensure traceability of eel products through the supply chain. As stated in the documentation, The aim of Version 7 of the Standard is to:

*“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.”*

The Standard is a voluntary code of practice for a responsible eel sector and currently focusses on uptake within the glass eel fishery and supply chain. The Standard has had limited uptake in the, albeit much smaller yellow/silver eel fishery, and restocking sectors. The Standard incorporates following nine specific objectives:

- a) define how implementation at the level of each individual certificate holder is responsible, in the 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.

Notable aspects of the Standard include:

- An alignment of the Standard within the legally binding frameworks of National Eel Management Plans, CITES legislation and EU law and the adoption of the relevant management targets for recovery of the eel population.
- Positioning of the Standard 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.
- A clear focus on traceability as a mechanism to reduce illegal trade and reduce the grey areas in the legal/illegal trading of eels.
- A requirement for participants to make in-kind or financial contributions to eel conservation projects as a contribution to aid the eel’s recovery – e.g. through the Eel Stewardship Fund (ESF).

- A focus on welfare to minimise fish handling mortality and reduce losses through the supply chain for SEG certified glass eels.
- A detailed evaluation of the issues related to restocking within the Eel Regulation and clear guidance of the circumstances under which restocking is considered acceptable within the Standard.

### ***Implementation and uptake (operators)***

SEG currently (as of October 2023) list 66 certified individuals/organisations on the online register of certificate holders<sup>6</sup>. This list includes 50 certified organisations, 10 organisations with conditional passes and 6 organisations where their certificates have lapsed. Five of the lapsed certificate holders are based in the UK and this reflects the issues associated with the UK leaving the EU and the legal status of trade in CITES species to/from the EU.

The SEG now reports the certified component of the sector includes (estimated % of sector in brackets):

- 24 certified fisheries (90% of the known sector in 2023)
- 4 certified traders (70%)
- 11 certified farms (46%)
- 19 certified processors (63%)

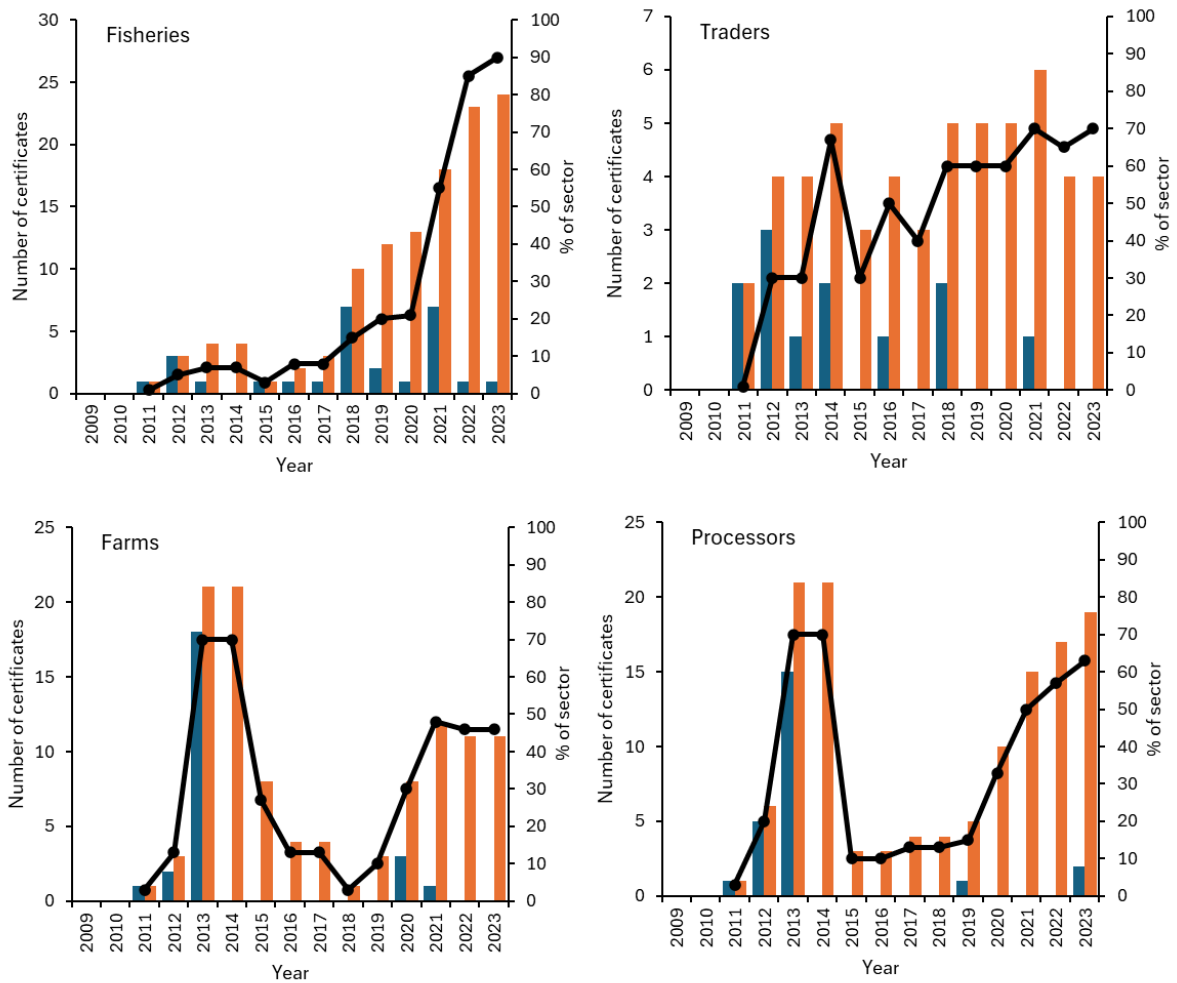
SEG has a clear register of certified individuals and organisations and utilise evidence collected through market surveys to estimate the proportion of the sector is certified (with around an 80% confidence, D Bunt pers. comm.) (Figure 2). Trends in certification since the implementation of the Standard have shown a steady increase in the number of certified fishermen and glass eel traders (with a small amount of the increased level of certification a function of fishermen/traders leaving the business in recent years). By 2021/22 88% of the legal fisheries in France were certified (the largest component of the total fishery, contributing 93.5% of the ICES quota in 2021/22) and in 2023/2024 80% of the French catch (52 tonnes) was utilised in fully SEG certified aquaculture and restocking. Conversely both farms and processors underwent a large reduction in certification in 2015 which occurred when a large component of the Dutch sector failed to renew their certificates for financial reasons (DUPAN had originally paid for all of the Dutch sector in 2013 but individual operations were requested to pay their renewal fees for the 2-year surveillance audits). Since that date certification of these sectors has recovered and now includes 43% of farms (including all the large farms) and 63% of processors (Figure 2).

The Standard is currently limited in its uptake and application in Spain, (although there were two certifications at the end of 2023) this is a function of the exacting requirements of traceability and responsibility of the Standard and SEG protecting the Standard from the known issues in relation to trafficking and IUU of glass eels in/through Spain. In the last 13 years of the Standard SEG and the CAB has withdrawn certificates for 4 organisations including one for fishers trading illegally, two traders arrested for illegal trading and one trader who merged with an uncertified trader (hence forfeiting the certification). Following Brexit two UK-based fisheries, two UK-based traders and one UK-based processor chose to let their certification lapse (D Bunt, pers. comm.). Additionally, several applicants have not progressed

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<sup>6</sup> <https://www.sustainableeelgroup.org/seg-certificate-register/>

their applications due to the perceived demands of the Standard (the perceived rigour in the systematic approach to traceability) (A. Kerr and W. Dekker pers. comm.).



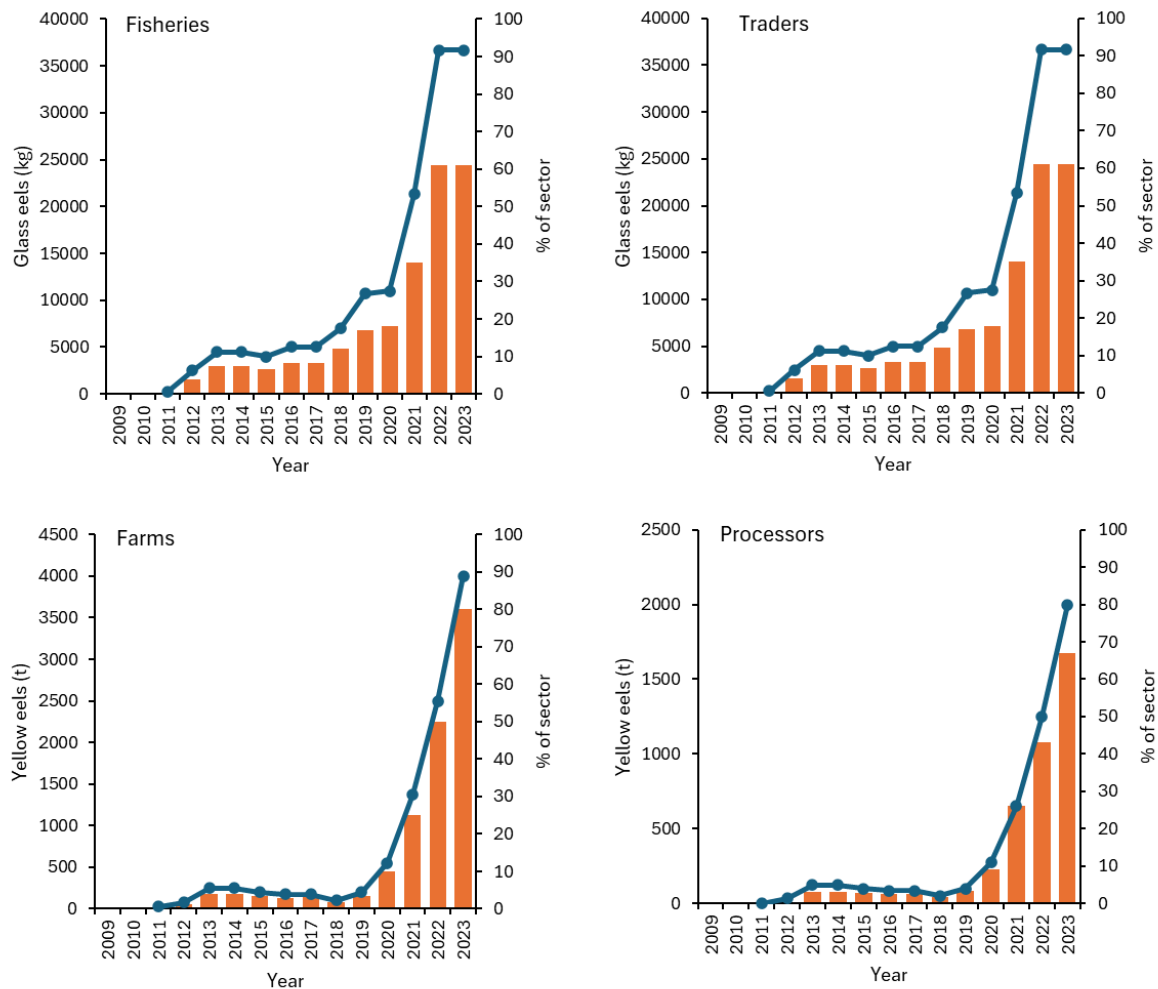
**Figure 2.** SEG records of the number of new certificate holders (blue bars), total certificate holders (orange bars) and their estimate of those numbers as a % (black line) of the key sectors: fisheries (top left), traders (top right), farms (bottom left) and processors (bottom right).

### ***Certified trade by volume***

In addition to the SEG certified register of certified organisations within the commercial eel supply chain, SEG has undertaken annual market surveys to determine the extent of trade and to determine the market requirements within the EU. As part of this review SEG was requested to assess the extent of the trade of certified and traceable eels since implementation of the Standard in 2011. SEG were able to provide these data although they were not readily to hand, and they could only provide % of sector data based on a series of assumption with a limited level of confidence (95% accuracy for the most recent years but only 50% accuracy for the eel farming and processing sector in the first years of the Standard – D. Bunt pers. comm.).

The SEG network now certifies the destinations of approximately 80% of the French glass eel quota is traded exclusively with SEG certified aquaculture and restocking programmes (although as yet no restocking programme itself has sought SEG certification), a significant increase on the situation in 2016/2017 when 50% of the entire declared EU quota had untraceable destinations. In 2021/2022 around half of the legal French catch (total legal catch of 59.48 tonnes, ICES) was fully SEG certified and used in aquaculture and restocking in the EU. A further 48% of the catch was traded through Spain, a region with no SEG certifications, and through which it is thought a significant proportion of trafficking of glass eels originates (UNODC, 2020).

Overall SEG estimates that 61% of the European glass eel fishery and consequently 61% of traded glass eels are fully SEG certified at this stage in the supply chain (Figure 3), a figure that has increased rapidly since 2017 when only 8.3% of the trade at that stage in supply was certified. SEG also estimates using data from their market surveys that now 80% of farmed yellow eel and 67% of eels handled by processors in the sector are fully SEG certified (Figure 3). Again this level of certification of trade (and not just organisations/individuals) has risen markedly in the last four years.



**Figure 3.** SEG records of the annual quantities of SEG certified eels (orange bars) (glass eels, top row in kg; yellow eels bottom row in tonnes) and their estimate of those values as a % (blue line) of the key sectors: fisheries (top left), traders (top right), farms (bottom left) and processors (bottom right).

### ***Fish welfare & glass eel mortality***

The SEG Standard includes best practice guidelines in relation to fishing practices and fish handling, with maximum levels of post-capture mortality for compliance for certification. Independent published research has shown that certified fishers have on average significant lower lesions and post-fishing mortality rates than uncertified fishers. Simon et al. (2021) reported that mean direct mortality and mean post fishing mortality were significantly lower by certified fishers (0.04% and 23%, respectively) than for uncertified fishers (0.85% and 35%, respectively) and that mean total mortality was significantly lower (2.1%) for certified fishers than for non-certified fishers (17.4%).

Simon et al. (2021) also showed that since the introduction of the Standard in France, handling mortality reduced from around 42% in 2007 to less than 7.4% on average in 2020 across all fishers (certified and non-certified). Version 7 of the Standard now states “*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).*” SEG asserts

that this increase in survival production of an annual quota of 60 tonnes of viable glass eels for trade requires only capture of 65 tonnes rather than the 103 tonnes required in 2007. This represents a potential reduction in catch of 38 tonnes, or 114 million glass eels per year for the legal and visible trade.

### ***Rigour & Assurance***

SEG has exhibited strong leadership to incrementally revise and improve the Standard. This has included measures which are aimed at improving traceability and rigour and ensuring that the Standard is fit for purpose and robust. This leadership has been implemented through:

- Continued and committed promotion of responsibility and stewardship within the glass eel sector.
- Progressive revisions and enhancements of the Standard since 2011 - the current 7<sup>th</sup> version of the Standard was recently launched after an extensive consultation process with the sector and wider stakeholders (nearly 1000 people from a range of backgrounds in each of the three rounds of consultation, Andrew Kerr pers. comm.).
- Community membership of ISEAL and application of their codes of good practice to continually improve the Standard and its supporting systems.
- Rigorous implementation and defence of the Standard across the supply chain – to include suspensions and rejected applications.
- Countering challenges from law breakers - including suspensions/withdrawals of certificates.
- Implementing a focus on the supply chain in 2021 – In version 7 of the Standard, the responsible indicator is that the organisation trades in 95 - 100% of SEG certified responsibly sourced eel from the glass eel supply chain and has the documentation to demonstrate that.
- Close communication with national and international enforcement organisations directly involved in intelligence gathering and undertaking enforcement and prosecution – to share information and intelligence and to keep up to date with developments within the illegal fishing and trafficking sector.

On 13 November 2023 the Sustainable Eel Group announced the appointment of Control Union Certifications (CUC) as a Conformity Assessment Body (CAB) to provide third party, independent certification services to the SEG Standard scheme. This enables SEG to focus on defining the Standard and best practice and be entirely independent of the conformity assessment and certification of applicants. This reduces the risk for SEG of reputational damage and any perceived favouritism or bias in implementation and awarding of the Standard.

The current situation in relation to the recent non-detriment finding for UK glass eel fisheries on the Rivers Severn & Parrett and the Lough Neagh yellow eel fishery (Northern Ireland) (JNCC, 2017) and the permitted trade of glass eels caught in the UK for restocking in Kaliningrad Bay presented a significant difficulty for SEG and the certified sector since the CAB for the SEG Standard is unable to operate within Russia and is therefore unable to verify the traceability of any glass eels traded into Russia.

### **2.3.4 Monitoring, evaluation and learning**

Further to SEG developing their theory of change for delivering their aims and goals for responsible fisheries and sustainability impacts for the recovery of eel across its range, SEG has developed and is implementing a monitoring, evaluation and learning plan (MELP) which identifies targets and measures as indicators against their sustainability impact goals. For each of these targets and measures the plan identifies how they will be measured and evaluated. The extensive revision of the MELP in 2023-24 details the key monitoring areas and assumptions, the measures and indicators for these areas and the information sources. In many areas the monitoring lies outside the scope of SEG and in these instance SEG identifies those undertaking the monitoring and undertakes to evaluate the monitoring and report the results. The plan included indicators and measures for (amongst other things):

- Biologically safe wild eel populations (as assessed and reported by ICES).
- A responsible eel sector through implementation of a credible standard and assurance system which can demonstrate responsible trade.
- Healthy aquatic habitats (as defined under international management plans e.g. WFD good ecological status), improvement of wetland habitats and reductions in barriers to migration.
- Minimising of illegal trade (utilising evidence from international enforcement agencies and eel market surveys) and better enforcement of trafficking
- Evaluation of the performance of SEG as a successful advocate
- The effective implementation of the Eel Regulation and wider protection measures.

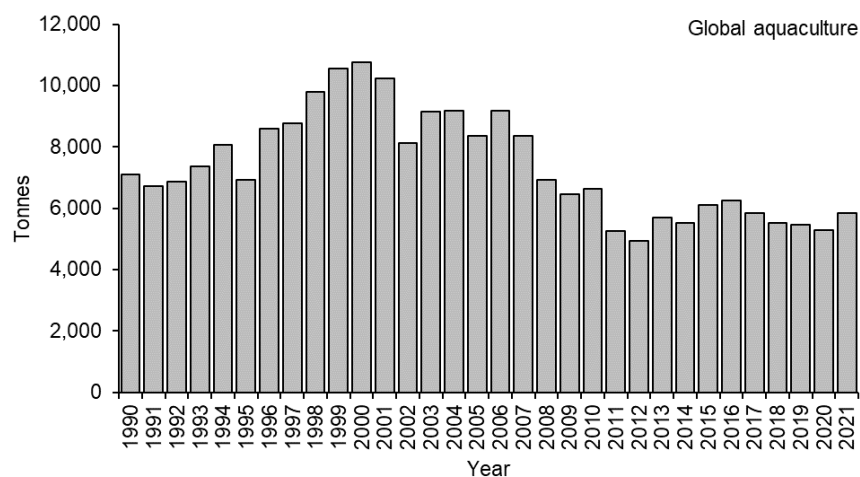
The aim of the plan is to enable SEG to assess and evaluate progress against their sustainability goals. The plan also includes monitoring of enforcement actions and the levels of trafficking, commissioning of independent reports into trade and trafficking (of which this report is one element) and investigating and information gathering on eel conservation and trade globally. SEG undertakes frequent market surveys across the trade sector and publishes reports and position statements which are published via their website.



### 3 EUROPEAN EEL TRADE, IUU FISHING &TRAFFICKING

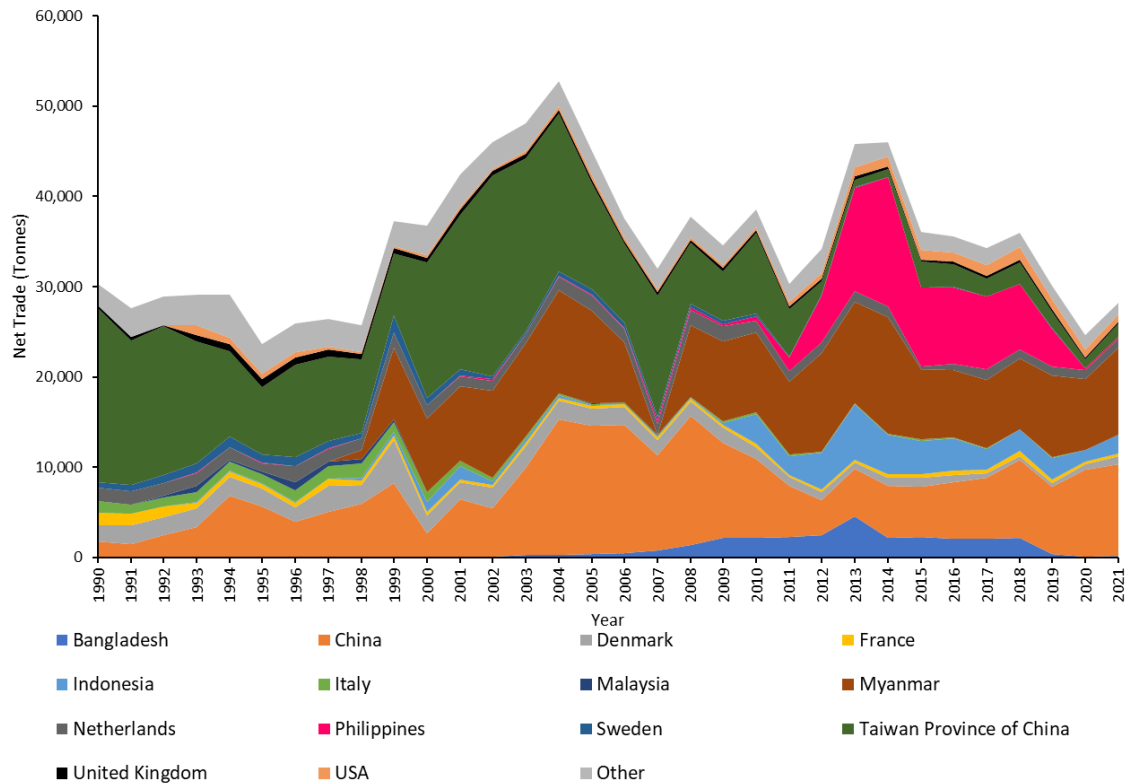
#### 3.1 European eel production and trade

Exploitation and trade of European eel is focussed on regional demand for consumption of glass eels as a delicacy and supply of seed material for aquaculture production of grown-on eels for eel meat. Reported production from aquaculture of European eel totalled 5847 tonnes (live weight) in 2021 a drop of about 50% from a recent highpoint of 10,761 tonnes in 2000 (Figure 1, FAO statistics). However, it needs to be noted that the FAO data for *Anguilla anguilla* only covers aquaculture production in Europe. Aquaculture production in Europe in 2021 was dominated by production in Denmark (1157 tonnes), Germany (1160 tonnes), Netherlands (1950 tonnes) with Greece, Morocco and Spain reporting around 300-400 tonnes each (one farm in Denmark producing over 1000 tonnes annually has since closed, Andrew Kerr pers. comm.).



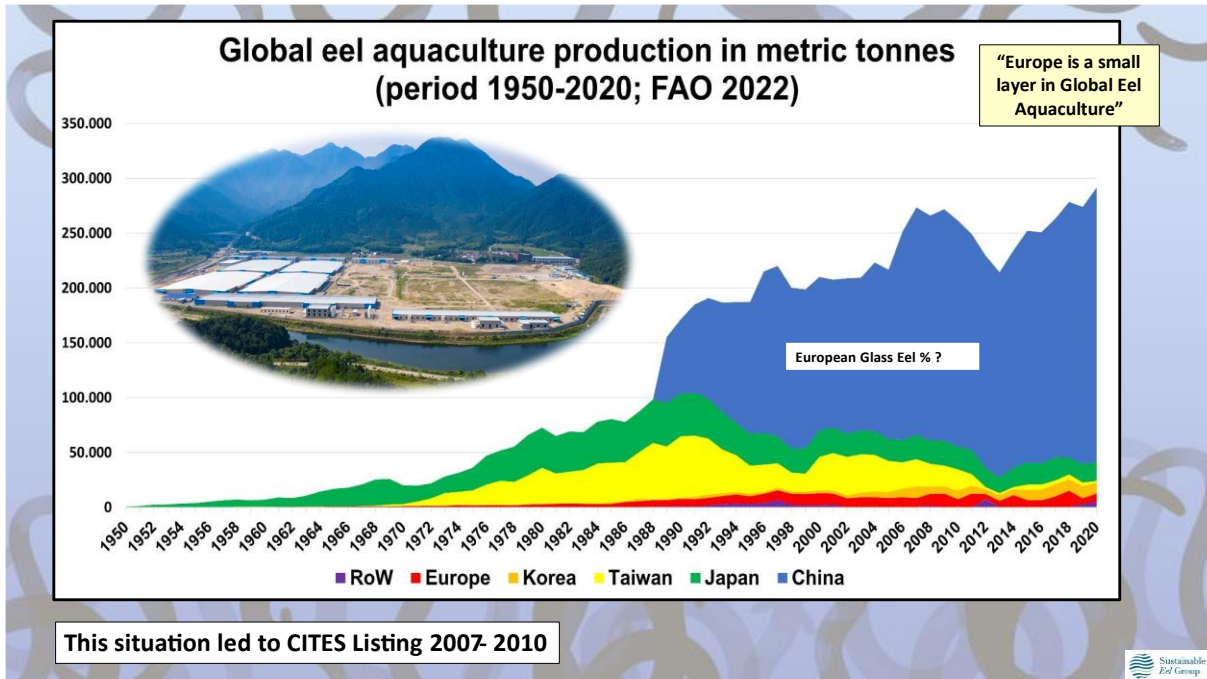
**Figure 4.** FAO Aquaculture production data for European eel in Europe (1990 to 2021) in tonnes (<https://www.fao.org/fishery/statistics-query/en/aquaculture> Accessed on 13/10/2023).

Since around 1990 global demand for eel has been driven by consumption in East Asia, particularly Japan. The global trade in live eels and elvers (*Anguilla* spp.) was reported to be around 28,712 tonnes in 2021 (Figure 2, FAO statistics). The trade in live eels and elvers is dominated by trade in China (10,107 tonnes), Myanmar (9,583 tonnes), Indonesia (2,071 tonnes), Taiwan (1,442 tonnes), Netherlands (1044 tonnes) and Denmark (968 tonnes).



**Figure 5.** FAO Trade Records (1990 to 2021) for Eels & Elvers (live) by nation (Net Trade in Tonnes) ([https://www.fao.org/fishery/statistics-query/en/trade/trade\\_quantity](https://www.fao.org/fishery/statistics-query/en/trade/trade_quantity) accessed on 13/10/2023).

Farming and trade of live eels and elvers in East Asia (e.g. China, Taiwan) historically involved the Japanese eel (*Anguilla japonica*), and consequently all *Anguilla* aquaculture production reported to FAO by this region is listed as *Anguilla japonica*. Aquaculture production in this region, mostly in China, expanded rapidly in around 1990 (Figure 6). According to FAO aquaculture data the extent of eel farming in China totalled around 245,000 tonnes in 2016 and China was by far the dominant producer of eel in the East Asia region (Stein, 2019) (Figure 6). However, other *Anguilla* species are also known to be farmed in this region since from the 1990s European eel glass eels were also imported: due to a significant decline in the stock of *A. japonica*. Consequently, total aquaculture production reported to FAO in this region is assumed to contain production of an unknown proportion of production of *A. anguilla* (Shiraishi & Crook 2015). Since the production of European eel in this region is all based on illegal import this production of European eel in China does not show up in official fishery or trade statistics.



**Figure 6.** Global eel aquaculture production in metric tonnes between 1950 and 2020 as reported by FAO datasets in 2022 and presented by Andrew Kerr.

Whilst earlier import of European glass eels to Asian fish farms were through legal trade the listing of the species on CITES Appendix II meant glass eels could no longer be traded legally across EU borders. Irrespective, European and Asian authorities have evidenced that that trade in multiple *Anguilla* species continues including using illegally sourced and trafficked European glass eels. Therefore, concerns over *A. anguilla* eel production in mainland China farms continue, especially as they continued to be re-exported many years after glass eels could be legally sourced from the EU. Shiraishi and Crook (2015) reported discrepancies in trade data, with numerous records of live eel fry imports into East Asia having no corresponding records in exporter data. The illegal trade in European glass eel to supply fish farms in Asia has also been evidenced by seizures of European glass eels being smuggled to destinations in Asia and genetic testing of Asian produced eel products which have identified European eel either mislabelled as other eel species or unambiguously identified as *A. Anguilla*. In one study in Hong Kong, 9 of 13 eel product brands on sale contained *A. anguilla*, and 45% of all retailed eel products (n = 49) were clearly identified as *A. anguilla* (Richards et al. 2020). Nijman & Stein (2022) reported a further twelve studies which identified *A. anguilla* in sea food products in nine different countries, only four of which had previously reported importing European eel.

In a European context the trade in European glass eel follows a supply chain from glass eel fisheries based in France, Spain, Portugal and Great Britain which supported consumption, aquaculture production, eel processing (e.g. smoked eel), ranching (e.g. Lough Neagh in Northern Ireland) and also conservation restocking (as directed under the EC Eel Regulation). In addition to this there are smaller yellow and silver eel capture fisheries. SEG maintains a stakeholder trade database, has undertaken stakeholder analyses and has commissioned reviews of the trade and sector. Within the analysis SEG has identified the supply chain to include around 90 commercial eel fishers (there are approx. 500 glass eel fishers in France and UK, and an unknown number: 500 – 1000 yellow & silver eel fishers) and collectors (collectors can be classified with traders), ranchers and aqua-culturalists, 8 traders in live eels,

and their customers, and around 40 processors and traders of eel products. SEG determined that there are 25 eel farms operating Europe, down from 30 in 2011.

### **3.2 European glass eel fishery**

Historically, glass eel fisheries were focussed on rivers and estuaries in the Bay of Biscay, Mediterranean coasts of Spain and Italy, southwest England and Morocco (ICES, 2019, 2020). The current trade in glass eels is focussed on the legal fisheries of France, Spain and the UK (where the largest component of the total fishery is from France, 93.5% of the total reported European catches in 2021/22). The glass eels caught in these fisheries are used for restocking, aquaculture or consumption (ICES, 2013b). Glass eel landings have declined since 1980, from 1500 t to approximately 50 to 60 t from 2009 onwards. The commercial glass eel fishery in 2022 was 60.1 t and preliminarily reported 53.6 t in 2023 (Great Britain = 0.9 tonnes, France = 48.6 tonnes, Portugal = 0.5 tonnes, Spain = 3.6 tonnes) (WGEEL 2023). The average annual glass eel commercial fisheries landings between 2017 and 2021 was 59.1 tonnes (WGEEL 2023). It should be noted that since the overall European season spans November to May the figures for 2023 in WGEEL 2023 were preliminary. In the 2023/2024 season the landings from France totalled 52 tonnes with Spain reporting around 4 tonnes and Portugal 1 tonne.

Outside Europe the landings of European eel in Morocco total around 2 tonnes annually. Prior to the CITES listing trade in European eel from North Africa was predominantly to European countries (93–98%), whereas after the ban East Asia became the main importer of live eel exported from this region (91–93%) (Nijman, 2017).

ICES reports catch from “recreational fisheries” for glass eel in Spain. Spain is currently the only country that allows a recreational catch of glass eel since recreational fisheries were banned in France in 2010. These “recreational” fisheries are actually artisanal fisheries purportedly supplying regional demand for glass eel consumption. Reported landings for this component of the fishery were estimated at 0.72 tonnes in 2022 and 1.32 tonnes in 2023. (WGEEL, 2023).

### **3.3 Glass eel fishery management**

The International Union for the Conservation of Nature (IUCN) listed the European eel as Critically Endangered in 2008 (IUCN, 2022) and concerns over the decline in eel stocks led the European eel to be listed in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 2007 (CITES, 2022a). Consequently, any international trade of European eels needs to be accompanied by an export permit supported by a Non-Detriment Finding (NDF). Effectively, legal export and import of European eel (both live and as products) too/from the EU has been stopped since 2010 (after a short period where trade in pre-convention material was permitted).

The European eel was added to Appendix II of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) in 2014 and included on the OSPAR List of threatened and/or declining species and habitats in 2008. The OSPAR Convention recommended in 2014 that the protection of the European eel at all life stages should be strengthened to enable population recovery and to ensure effective conservation (OSPAR, 2014).

The ICES eel working group (WGEEL 2023a, b) has determined that the status of European eel remains critical with indicators of recruitment still very low following decline from 1980 to 2011. Index values correspond to the recruitment as a percentage of the 1960–1979 geometric mean. Provisional estimates of the Glass eel recruitment in the “North Sea” index area in 2023 was 0.4% of the 1960 to 1979 mean value and 0.7% in 2022. The “Elsewhere Europe” index series it was provisionally 8.8% in 2023 and 11.3% in 2022. This indicates that recruitment is still at a very low level and as such stocks are still under significant threat from a multitude of pressures (WGEEL, 2023).

Within EU Member State waters, the stock and fisheries are managed in accordance with Council Regulation (EC) No 1100/2007, “establishing measures for the recovery of the stock of European eel” (the EC ‘Eel Regulation’). The Eel Regulation sets a framework for the protection and sustainable use of European eel through regional eel management plans (EMP). The continued legal trade, now restricted to trade within EU borders, is subject to a quota system in France implemented through EMPs. Whilst, in Spain and UK the fishery is regionally managed with no national quota and effort regulated in various ways including restricted methods and season duration (UNODC 2020). Since leaving the EU the UK has retained the national implantation of the EU Eel Regulation as a self-contained policy within UK legislation (although technically independent of the Eel Regulation). As part of The Eel Regulation (Article 7.1) there is a target that 60% of the eels less than 12 cm in length caught annually should be reserved for restocking and the EMP plans in many regions are reliant on restocking as one of their main measures.

The total catches of the glass eel fishery are reported annual by ICES, which provides annual scientific advice on the state of the eel stock, the management of the fisheries and other anthropogenic factors that impact it. On Nov-04 2021, ICES published its annual advice for the fishing opportunities in 2022 on European eel. The new advice now called on implementing zero mortality (for all fishery and non-fishery human impacts) using the precautionary principle. This effectively called for a stop on all fishing on eel, and to end restocking. This was a major shift in the advice which for the previous 20 years had recommended minimising fishing and restocking only under strict conditions. In its November 2023 annual advice on fishing opportunities, ICES reiterated that there should be zero catches in all habitats in 2024 and, in addition, that all non-fisheries-related anthropogenic mortalities should be zero. Despite the change in advice the Commission and many European countries decided to continue to permit regulated exploitation of glass eels and to strive for more effective implementation of the existing eel regulation and its protection and recovery measures.

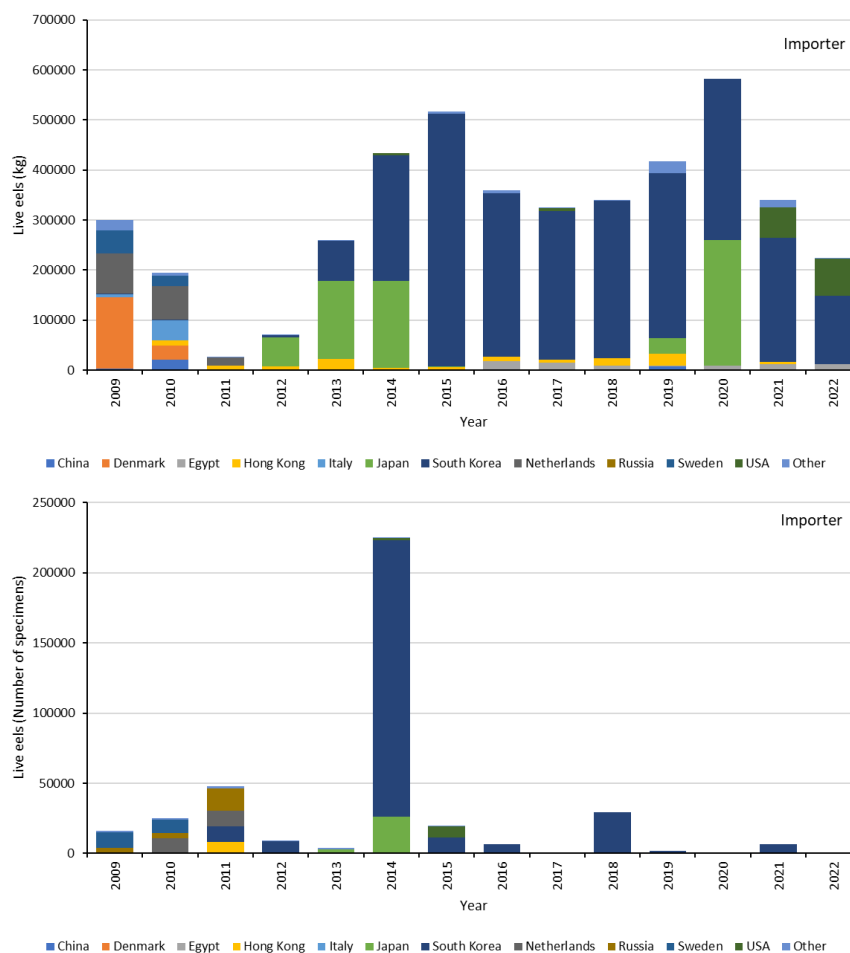
The UK’s decision to leave the European Union caused the legal trade of elvers from England and Wales to the EU and Northern Ireland to be much reduced from 1 January 2021. CITES legislation meant that glass eels in UK (outside of the EU) could not be imported into the EU. It did however permit supplying glass eels to the Lough Neagh fishery in Northern Ireland. As such this has led to many UK-based operators to lose their principal markets (Stein & Bunt, 2021) requiring SEG certification and therefore choosing to let their SEG certification lapse. However, a recent non-detriment finding (NDF) for the UK glass eel fisheries of the Rivers Severn and Parrett and the Lough Neagh yellow eel fishery (JNCC, 2023) has enabled the potential for CITES permitted trade from these fisheries. This has included permitted trade of UK caught glass eels to Kaliningrad (Russia) reportedly for restocking purposes in Kaliningrad

Bay<sup>7</sup> (0.5 tonne in 2022/23 and 1.0 tonne in 2023/24). The situation regarding trade from the UK following their departure from the European Union has led to significant concerns for the future of the legal trade and the potential for an increased risk of illegal trafficking (Stein & Bunt 2021, Stein & Nijman 2021).

### 3.4 Illegal trade

#### 3.4.1 CITES trade records

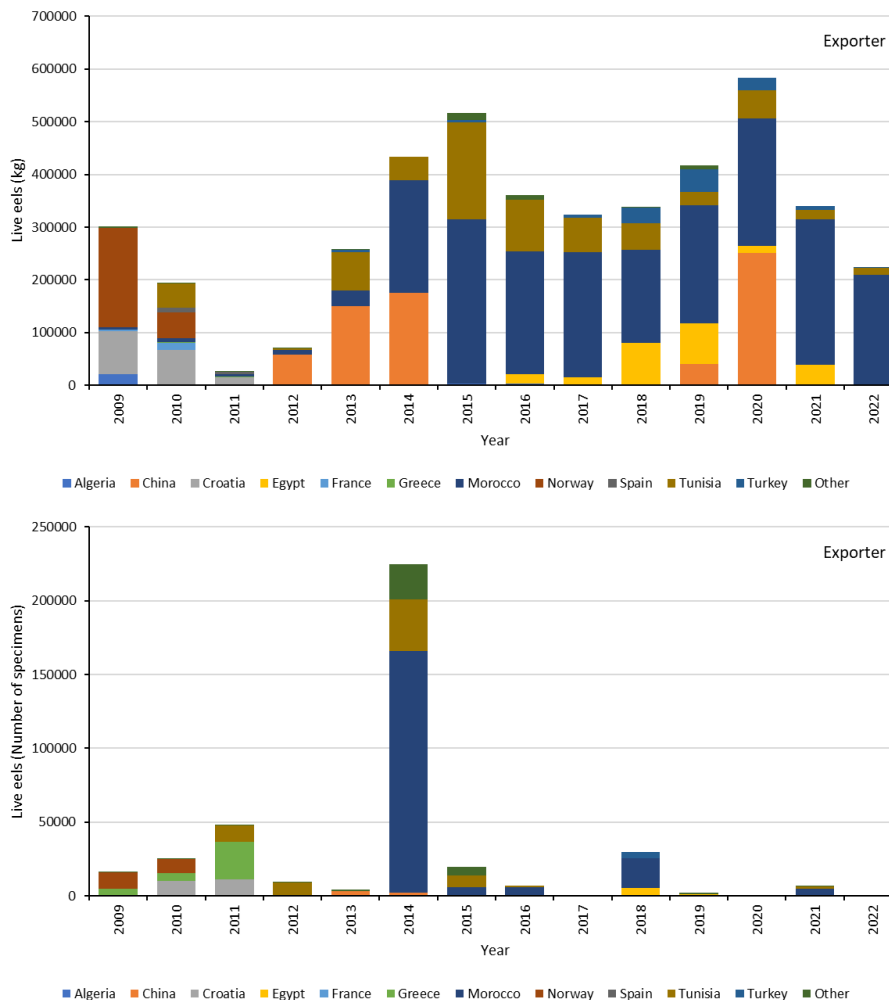
Despite the ban on trading of European eel following CITES listing in 2007 there is continued evidence of trading recorded in the CITES Trade Database where official trade records as reported by Parties in their annual reports to CITES are collated. In the years since the ban, recorded imports of live or fingerling range between 200 tonnes and 600 tonnes annually (a combination of glass and grown on yellow eel from aquaculture). The major import records come primarily from South Korea, Japan, USA and Hong Kong (Figure 2), with both Japan and the USA significant consumers of yellow eel products.



**Figure 7.** Records of trade in *Anguilla anguilla* (“live” or “fingerlings”) by Importing nation (top 11 nations by weight indicated) recorded as weight (kg, top) or number of specimen (bottom) between 2009 and 2022 (CITES Trade Database).

<sup>7</sup> <https://kqd.ru/news/society/item/103884-mestnyj-losos-deshjovyi-sudak-i-zamorskij-ugor-intervyu-s-glavoj-agentstva-porybolovstvu-kaliningradskoj-oblasti>

The major exporters of European eel are recorded as Tunisia, Morocco, Egypt and China (Figure 3) although records for China appear sporadic despite China being the major producer of eels in aquaculture globally. It should be noted that none of these data include trade of European eel within EU boundaries.



**Figure 8.** Records of trade in *Anguilla anguilla* (“live” or “fingerlings”) by Exporting nation (top 11 nations by weight indicated) recorded as weight (kg, top) or number of specimen (bottom) between 2009 and 2022 (CITES Trade Database).

### 3.4.2 IUU fishing & trafficking routes.

The illegal trade in European eel has been systematically studied and reviewed in several recent reports (Stein *et al.* 2024, Alonso & van Uhm 2023, UNODC 2020, TRAFFIC 2019, OLAF 2019, Kaifu *et al.* 2019). In the most recent reports by Alonso & van Uhm (2023) and UNODC (2020) it is reported that the illegal smuggling of glass eels includes eels from both from legal catches and from IUU fishing, with both licensed fishermen and poachers involved. The ICES WGEEL report (WGEEL 2023) summarised that the organised illegal glass eel trade is considered high priority by Europol among environmental crimes, due to its economic significance, the poor status of the eel stock, and the large number of organisms affected. Assessing the contribution of IUU fishing to the illegal trade is difficult as most countries do not report the levels of any IUU fishing to ICES. Illegal fishing and trade and issues with traceability of legal landings have prevented a complete understanding of the ultimate destination of some legal landings. (WGEEL, 2023b).

Analyses have suggested a significant blurring of illegal and legal activities along the supply chain from fishermen/poachers to collectors, traders through to smugglers. Alonso & van Uhm (2023) and UNODC (2020) identified two main groups of middlemen actors in the illegal supply chain. These included traditional legal glass eel traders using their legitimate business activities to transport and export glass eels to East Asia illegally, but also to launder or mis-declare glass eels. Other middlemen have been identified that also use legitimate business to conceal glass eels among other fresh products for illegal. Both of trade through contact with Asian criminal networks and link to smugglers organised by Asian nationals.

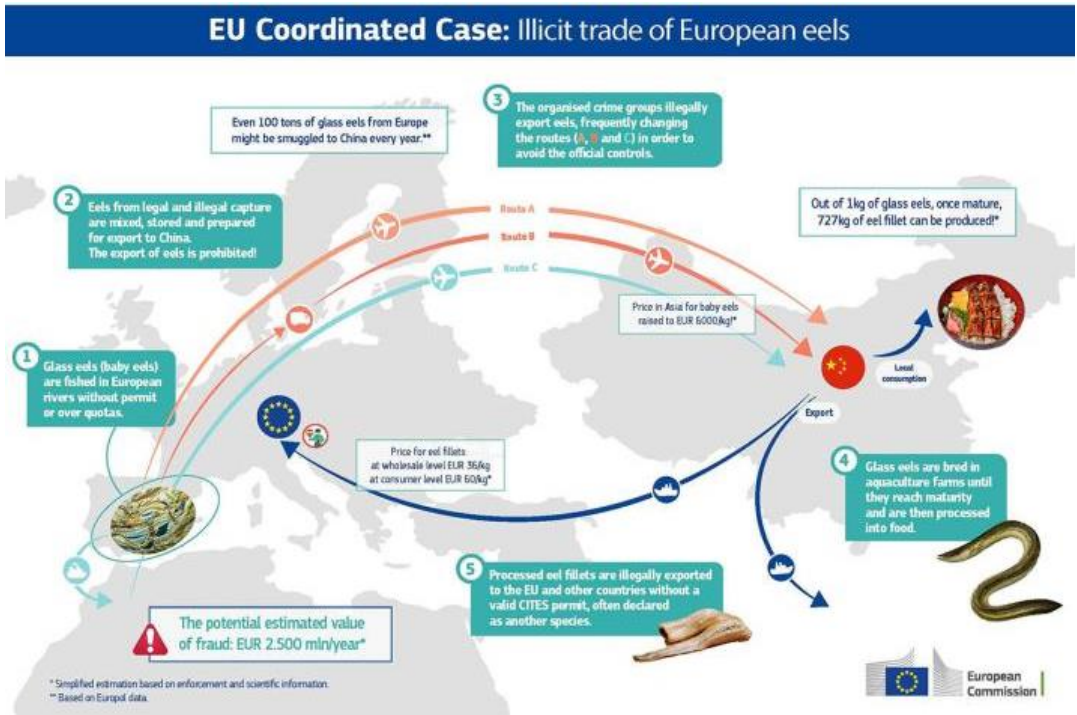
World WISE data (UNODC, 2020) suggest that Spain, France and Portugal appear to be the source of most of glass eels seized during trafficking and smuggling of glass eels is generally via a number of different routes including:

- In air refrigerated air freight hidden amongst, or mis declared as, other sea food products.
- In individual luggage transported by trafficking “mules”.

Transport from the source regions may be via road eastward across Europe from these regions before flying to Asia from a transit country (Figure 4). Where the destination of eels seized was known between 2011-2018, more than half were destined for China (particularly via Hong Kong) and 19 per cent for Thailand (UNODC, 2020). In 2019 TRAFFIC highlighted a number of seizures of European glass eels from that year that were indicative of this trade route from France/Spain through transit countries (including Bulgaria, Croatia and Czech Republic) with an ultimate destination in Asia (in the examples Vietnam and Malaysia) (TRAFFIC 2019).

Most of this intelligence has come from law enforcement agencies and the records of the enforcement actions they have undertaken (as recorded in press releases, data recorded on the CITES Wildlife Trade Database and through interviews/questionnaires to law enforcement agencies utilised in the UNODC 2020 report). The most recent intelligence for the nature of the illegal trade in Europe comes from the Europol and OLAF press releases associated with regional enforcement actions coordinated through Operation LAKE (Stein *et al.* 2024). Whilst these do not identify individuals involved and are by no means the complete picture due to the ongoing investigation and prosecution of many of the people/groups involved they do give a good overview of trafficking routes and methods (Table 3). These press releases also corroborate and evidence the overviews of trafficking described in recent publications and have been analysed in detail by Stein *et al.* (2024).





**Figure 9.** Infographic describing trafficking of European eels published by the European Commission <sup>8</sup>

<sup>8</sup>[https://food.ec.europa.eu/document/download/bb5ea845-2699-485f-a871-182c7cf75ce5\\_en?filename=ff\\_coord-act\\_2019\\_eels\\_infoq.pdf](https://food.ec.europa.eu/document/download/bb5ea845-2699-485f-a871-182c7cf75ce5_en?filename=ff_coord-act_2019_eels_infoq.pdf)

**Table 4.** Summary of enforcement actions, seizures and arrests together with key information/intelligence about European eel trafficking presented in press releases from law enforcement agencies involved in Operation LAKE and associated anti-trafficking operations and investigations.

Year/Season	Press Release Source	Key Information/Evidence
2022/2023	Europol Operation LAKE <sup>9</sup>	<p><b>Enforcement</b></p> <p>256 arrests - trafficking of 25 tonnes of live glass eels worth around EUR 13 million 8 tonnes already on their way out of the EU towards Asia Increase of over 50 percent in arrests and seizures on previous year</p> <p><b>Intelligence</b></p> <p>Arrests of nationals from China, Malaysia, France, Spain and Portugal Two high-value targets and fifty of their closest associates arrested. Incidents involving the trafficking of eels have fallen by 50 % since 2016. Several criminal networks are responsible for trafficking eels from Europe to Asia EU nationals mainly responsible for illegally fishing. Nationals from the destination countries in Asia arrange logistics and transportation. Glass eels are bought from poachers and legally fished glass eels are deviated to illegal markets. Criminal gangs rely on and misuse of legally operating EU companies as cover. Live glass eels transported in passengers' suitcases or cargo shipments. The modus operandi ranges from camouflaged packages labelled as commodities using commercial flights, eels hidden in passengers' luggage, or transported in vehicles. It is suspected that around 100 tonnes of glass eels may be smuggled annually from Europe.</p>
2022/2023	OLAF <sup>10</sup>	<p><b>Enforcement</b></p> <p>Seizure of 1.5 tonnes of live eels, 27 individuals were arrested, and financial assets valued at €2 million were seized.</p> <p><b>Intelligence</b></p> <p>Clandestine incubators in France and Spain</p>

<sup>9</sup> <https://www.europol.europa.eu/media-press/newsroom/news/law-enforcement-casts-net-over-256-eel-smugglers>

<sup>10</sup> [https://anti-fraud.ec.europa.eu/media-corner/news/olaf-operation-against-illegal-trafficking-eels-2023-05-19\\_en](https://anti-fraud.ec.europa.eu/media-corner/news/olaf-operation-against-illegal-trafficking-eels-2023-05-19_en)

Year/Season	Press Release Source	Key Information/Evidence
2022/2023	Guardia Civil (Spain) <sup>11</sup>	<p><b>Enforcement</b> 30 searches in Spain and France, 1.5 tonnes of live specimens seized.</p> <p><b>Intelligence</b> Homes, company headquarters and clandestine nurseries in Spain and France, and extended to Belgium and Poland Investigations began in 2021 after a series of irregularities were detected in (legal) trade. Criminal organization with transnational implementation, located between the north of Spain and the south of France, whose leaders controlled the entire supply and distribution chain of elver outside the controls of the administration. The organisation was made up of both fishermen and commercial managers and wholesalers, responsible for removing live elvers from the legal trade to supply them to citizens of Chinese origin. Clandestine nurseries in Paris, France and Antwerp, Belgium. Eels carried in luggage by mules through nearby airports. 14 tonnes of fingerling eel and 31 tonnes of adult eel were stolen from the legal circuit (value of &gt;€6.7 million on the legal market).</p>
2022/2023	General Directorate of Customs and Indirect Duties (DOUANE, France) <sup>12</sup>	<p><b>Intelligence</b> Inspectors noted infractions relating to the traceability of the glass eel stocks during a check prior to a restocking operation in France. Network linked to organized crime gang using the Franco-Spanish border to try to conceal criminal activities with Asia. Illegal export channels to Asia also include the operation of this network in other European countries. Nearly 4 tonnes of glass eels fraudulently exported between 2021 and 2023 - profit estimated at nearly €1,186,000. Asian intermediaries, based in the Paris region and Belgium, organized smuggled exports through European airports. Investigations into a company supposedly in Poland receiving glass eels for restocking - suspected of being a front company before contraband exports to Asia.</p>

<sup>11</sup> <https://www.guardiacivil.es/es/prensa/noticias/8565.html>

<sup>12</sup> <https://www.douane.gouv.fr/actualites/trafic-de-civelles-coup-de-filet-international-des-gendarmes-douaniers-inspecteurs-de>

Year/Season	Press Release Source	Key Information/Evidence
2021/2022	National Wildlife Crime Unit, UK <sup>13</sup> OLAF <sup>14</sup>	<p><b>Enforcement</b> 27,701 inspections across Europe, 49 arrests and the seizure of 1,255 kilograms of glass eels worth about €1.9 million</p> <p><b>Intelligence</b> Several organised crime groups/networks are involved in global glass eel trafficking Smuggling glass eels out of EU borders in passengers' (mules) baggage (main approach before and after Covid pandemic restrictions). Shifted to concealing glass eels in shipments with other commodities during pandemic. Several criminal networks are responsible for trafficking these fish from Europe to Asia Glass eels are bought from poachers and also legally fished glass eels are deviated to illegal markets. It is suspected that around 100 tonnes of glass eels may be smuggled annually from the countries of the European Union</p>
2021/2022	Europol Operation LAKE <sup>15</sup>	<p><b>Enforcement</b> 58 000+ inspections across Europe, 52 arrests Seizures including: 387 kg of glass eels and 25 kg of adult eels valued at about EUR 1.241 million Spanish law enforcement authorities seized cargo containing more than 100 kg of glass eels (about 300 000 specimens) in Barajas-Madrid airport.</p> <p><b>Intelligence</b> Criminal network using oysters to conceal glass eels in cargo. Estimates show that the trafficking of eels is now 50 % lower than in 2016.</p>
2017/2018	Europol Operation LAKE <sup>16</sup>	<p><b>Enforcement</b> 10 arrests Several seizures at Portuguese airports and also a van carrying 129kg of eels heading to Morocco. six searches were carried out in Spain, where police found 364 travel bags that were being prepared to be sent to China with more than five tons of eels inside.</p>

<sup>13</sup> <https://www.nwcu.police.uk/news/wildlife-crime-press-coverage/49-individuals-across-europe-arrested-in-major-blow-to-eels-trafficking/>

<sup>14</sup> [https://anti-fraud.ec.europa.eu/media-corner/news/olaf-operation-against-trafficking-endangered-species-2022-06-24\\_en](https://anti-fraud.ec.europa.eu/media-corner/news/olaf-operation-against-trafficking-endangered-species-2022-06-24_en)

<sup>15</sup> <https://www.europol.europa.eu/media-press/newsroom/news/eels-shipped-air-found-in-operation-lake-v>

<sup>16</sup> <https://www.europol.europa.eu/media-press/newsroom/news/glass-eel-traffickers-earned-more-eur-37-million-illegal-exports-to-asia>

Year/Season	Press Release Source	Key Information/Evidence
		<p><b>Intelligence</b>  Ring was based in Spain, but also operated out of Portugal and Morocco  It is believed that, for the current season, 100 tonnes of eels have been smuggled from EU to China</p>
2016/2017	Europol Operation LAKE <sup>17</sup>	<p><b>Enforcement</b>  7 individuals being arrested. Also, two tonnes of eels worth EUR 2 million were seized.</p> <p><b>Intelligence</b>  International criminal network suspected of having smuggled over 10 tonnes of eels from the EU to China  Investigators in Spain discovered a company that had been suspiciously purchasing eels from four different countries. Once the fish were introduced into the legal market, the company would deliver them to Greece using false documentation. The eel was finally exported illegally to Asia as “fresh fish”.  It is believed that, for the current season, 10 tonnes of eels have been smuggled from EU to China, with a profit estimated at EUR 10 million</p>

<sup>17</sup> <https://www.europol.europa.eu/media-press/newsroom/news/17-arrested-for-smuggling-glass-eels-worth-eur-10-million>

### 3.4.3 Scale of IUU fishing and trafficking

Estimates by Europol (between 2017 and 2021) and SEG indicated illegal trafficking and IUU in the region of 100 tonnes / 300 + million glass eels a year in 2018. This estimate was evidenced by:

- Trafficking seizures and joint intelligence (Europol press releases and CITES datasets).
- The potential difference between declared imports and known production of farmed eel in Asia (FAO & regional fishery management statistics) (Kaifu et al. 2019) which suggested that between 2008 and 2018 at least two thirds of Chinese eel production was dependent on imports of glass eels from elsewhere (UNODC, 2020).

The 2018 estimate of 100 tonnes trafficked (as stated by Europol) was estimated by SEG (SEG, 2018) to potentially have comprised around 30 tonnes of the legal catch which was (according to SEG market surveys) in excess of the EU market demand and similar to the estimates made by WGEEL of the proportion of glass eel landings which became untraceable following capture (23% to 43% between 2012 and 2016). This included the potential misuse of the restocking element of the glass eel quota in France. The difference between untraceable legal landings and the estimated level of trafficking of 100 tonnes provided an estimated 70 tonnes which may come from IUU fishing. It is suggested in press releases by international enforcement agencies that this level of trafficking may have been occurring over several years leading up to this point. Between 2020 and 2023, 268 criminal cases related to eel trafficking have been reported to Europol (Stein *et al.* 2024).

In the 2022/23 season Europol reported disrupting an organised eel trafficking gang that was responsible for smuggling around 25 tonnes of glass eels<sup>18</sup>. It is not clear from the press release and publicly available intelligence whether this figure relates solely to the single trafficking gang or the whole trafficking network during this period. Previously, in the 2021/22 season, Europol reported the level to be reaching China to be approximately 15 to 25 tonnes and estimated the overall level of trafficking to be 50% lower than in 2016<sup>19</sup>. Overall, these estimates would suggest a reduction in trafficking of around 80% reduction on the 2018 peak levels. However, the metrics cited in the different press releases do not always appear consistent between years (e.g. the 2016/17 season press release cites 10 tonnes reaching China whereas later releases estimate a total trafficking of 100 tonnes in this period). It should be noted that the 2021/22 press release cited a 50% reduction in trafficking since 2016 whereas the 2022/23 press release cited a 50% reduction in *incidents involving the trafficking* of eels. Further enforcement actions for 2022/23 season included seizures in the region of 25 tonnes of small eels (including pigmented, part grown eels and around 8 tonnes of glass eels) of which 8 tonnes were already on the way out of the EU heading to Asia.

Following extensive enforcement action between 2016 and 2020 SEG reported estimates from unconfirmed market intelligence that the volume of trafficking had reduced from 300+ million glass eels per season down to an estimated 50 million glass eels<sup>20</sup>, an 80% reduction (an estimated range of 15 to 25 tonnes per season, A. Kerr pers. comm.). This was supported by an observed reduction in the volume of imported European glass eels reported in Chinese trade records from 35 tonnes in 2017/18 to only 5 tonnes in 2019/20<sup>21</sup>. However, there have

<sup>18</sup> <https://www.europol.europa.eu/media-press/newsroom/news/law-enforcement-casts-net-over-256-eel-smugglers>

<sup>19</sup> <https://www.europol.europa.eu/media-press/newsroom/news/eels-shipped-air-found-in-operation-lake-v>

<sup>20</sup> [https://www.europarl.europa.eu/cmsdata/272683/Item%2011\\_5\\_PECH%20hearing%20-%20A%20Kerr.pdf](https://www.europarl.europa.eu/cmsdata/272683/Item%2011_5_PECH%20hearing%20-%20A%20Kerr.pdf)

<sup>21</sup> <https://www.sustainableeelgroup.org/wp-content/uploads/2020/09/2020-09-PRESS-BRIEF-Crash-EU-glass-eel-supply.pdf>

been no further public updates on the potential total level of glass eel trafficking from enforcement agencies or CITES and Europol were still citing the potential for 100 tonnes of trafficking in their press release in 2023. Whilst evidence and indicators suggest that following the 100 tonnes peak estimate around 2016 to 2018 the volume trafficked is thought to be reducing, intelligence indicates this is still a highly lucrative, planned and organised criminal sector which adapts to enforcement. Irrespective of the apparent success in combating trafficking, the estimated levels of recent trafficking are still comparable to the legal quota (noting the grey area between legal/illegal fishing and export) and combined are potentially comparable to the levels of trade immediately prior to the listing of eel on the Appendix II of species under CITES legislation (as reported in Briand et al. 2007).

#### **3.4.4 Enforcement actions**

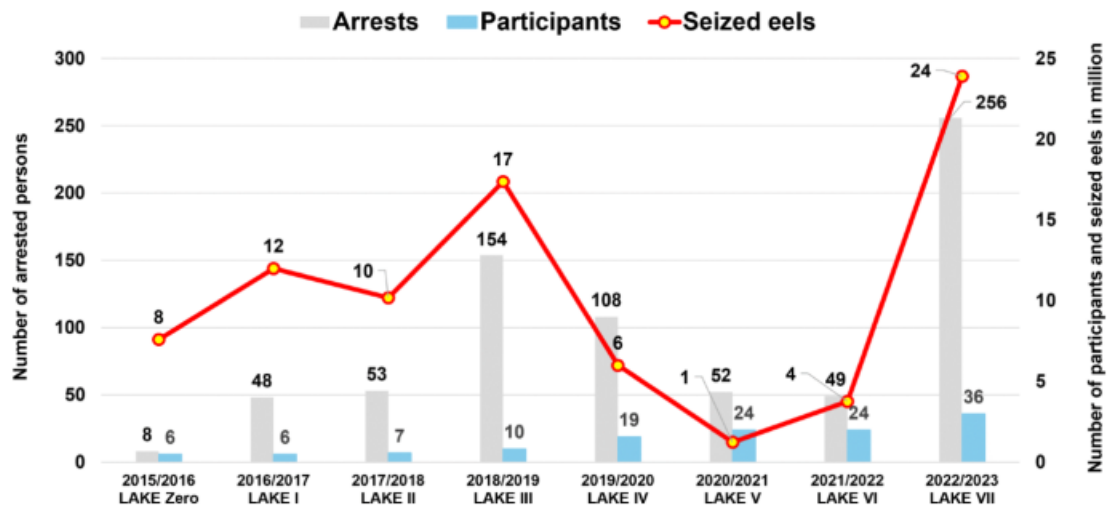
In addition to several regional enforcement operations and incidental identification of eel trafficking activities within other criminal activities, Operation LAKE, a joint operation coordinated by Europol, targets the trafficking of endangered species in the European Union and aims to dismantle violent organised crime groups involved in associated illegal activities, such as environmental crime, smuggling, money laundering, tax evasion and document counterfeiting. Operation LAKE was initiated following policy decisions taken by the EU member states implementing the EU Action Plan against Wildlife Trafficking (European Union 2016, European Parliament 2016) since when Europol has been mandated to lead the European fight against eel trafficking. This internationally coordinated operation has operated since 2016 and is the largest enforcement investigation targeting international glass eel trafficking (Kaifu *et al.* 2019, Stein *et al.* 2024).

The results of Operation LAKE activities have been reported annually in press releases by Europol. Operation LAKE VII ran from October 2022 to June 2023 and led to confiscation of around 24 million glass eels (8 tonnes) and the arrest of 256 persons responsible for the trafficking of 25 tonnes of live eels (including glass and pigmented elvers/small yellow eels) worth around EUR €13 million. Estimates indicate that incidents involving the trafficking of eels have fallen by 50 % since Operation LAKE was launched and more than 750 individuals have been arrested and 26 tonnes of glass eels have been prevented from being smuggled.

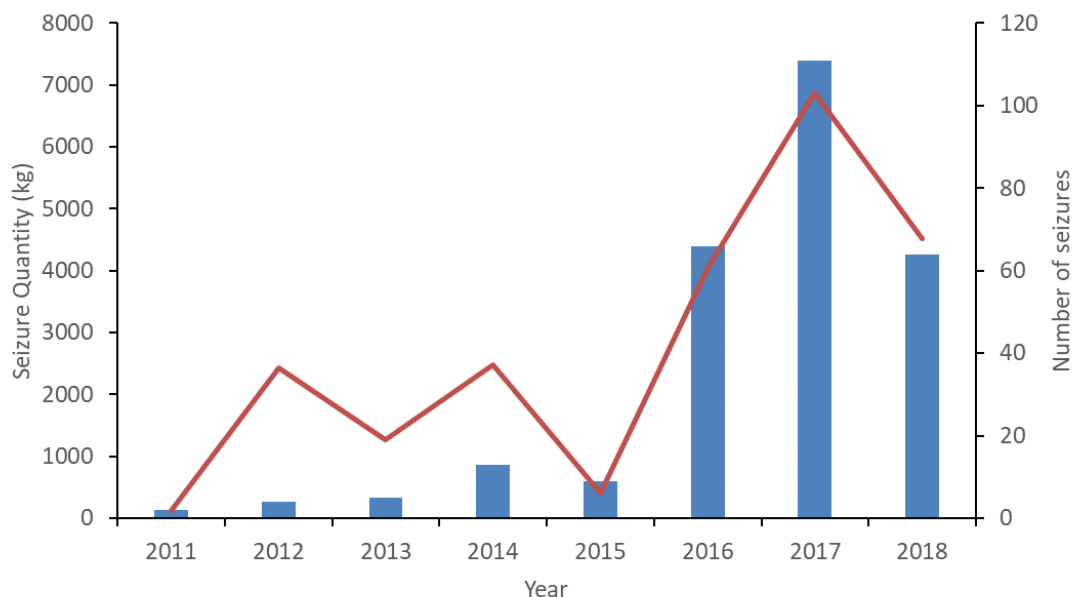
The trends in key performance indicators of participants, arrests and seizures for Operation LAKE, as reported in press releases by Europol since 2015 (Figure 10) have recently been analysed and published in Stein *et al.* (2024) (Figure 10) which compliments the databases collated by CITES for seizures of all eel commodities (databases for wildlife crime seizures of CITES listed species and reported trade data, Table 5) and UNODC (data up to 2018, Figure 11, combining seizures of live eels of any size/age). The UNODC dataset peaked at seizures of around 7.5 tonnes of live eels in 2017 whilst, in their analyses, CITES reported a combined total of 101 tonnes of eel commodities (a total figure combining the seizure of live eels, fingerlings and eel meat) seized in 2020 (CITES Secretariat 2023 SC77 Doc. 66). The decline in seizures observed in all datasets since 2018/2019 is considered to be a function of the impact of the Covid pandemic restrictions on travel affecting both the activities of the traffickers and the enforcement activities (Stein *et al.* 2024).

In an analysis of the enforcement reports in the CITES illegal trade database the CITES Secretariat reported that in 2018, most of the seizures were made in Spain, Portugal and France with most specimens having originated in Portugal, France or Spain. Although the

destination of many seizures was unknown the key destinations of trafficked eels were determined to be Vietnam and China. In 2020 A total of 817 kg of juvenile eel or glass eel, was seized by in France, Greece, Morocco and Portugal. The Secretariat considered that the number and volume of seizures appear to have decreased considerably in 2021. However, they highlighted data reporting issues and that more recent data may be incomplete as not all Parties had submitted their annual illegal trade reports for 2021 the most recent year in the database. Furthermore, they highlighted that not all reports consistently reported weight or numbers seized and as such the numbers analysed (Table 5) may be underestimates of the total volume of eels seized between 2016 and 2021 (CITES Secretariat 2023 SC77 Doc. 66).



**Figure 10.** Eel trafficking: Temporal evolution of three Operation LAKE key performance indicators: Participants, Arrests and Seizures (2015–2023) (Europol 2023, as cited and visualised in Stein *et al.* (2024)).



**Figure 11.** UNODC figures for the global number of seizures of trafficked European eels (blue bars) and the quantity of European eels seized (red line in kg) between 2011 and 2018 (<https://dataunodc.un.org/dp-wildlife-seizures>). These data are a combination of live eels and fingerlings.



**Table 5.** CITES Secretariat conducted analysis of data on European eel seizures from 2016 to 2022, as reported by Parties and recorded in the CITES Illegal Trade Database (SC77 Doc. 66).

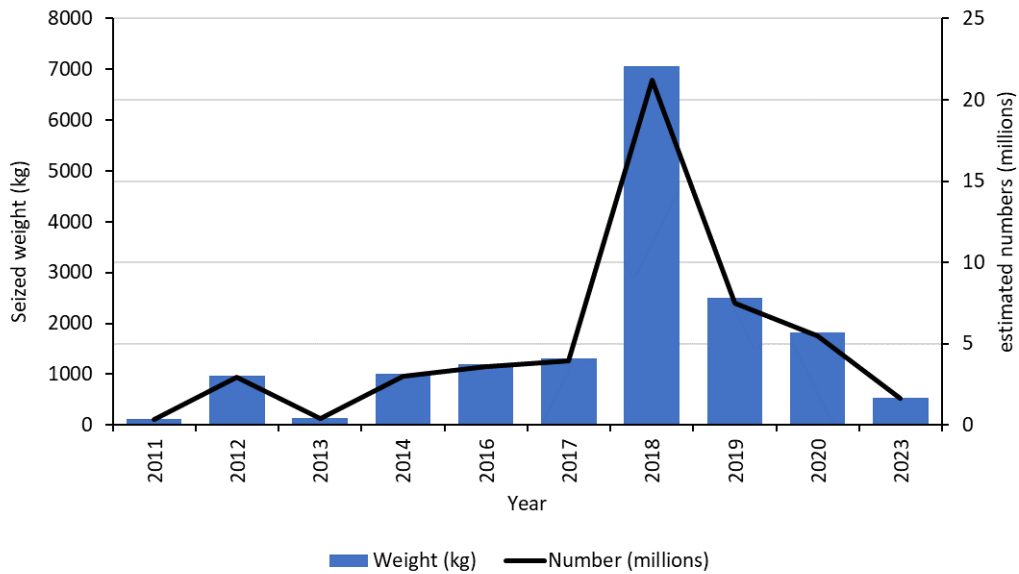
Year	Number of parties reporting	of	Total number of reported seizures	Quantity Seized (kg)	Quantity Seized (numbers)	Quantity of Fingerlings reported (kg)
2016	4		13	585.87	-	-
2017	10		87	3,081.37	387	-
2018	13		140	28,955.71	165	2,340.47
2019	14		65	57,542.68	386,170	2,303.68
2020	10		53	101,106.87	11	817.72
2021	8		22	122.03	148	63.61

\* Note these data include seizures of live eels, fingerlings and eel meat.

The TRAFFIC Wildlife Trade Portal enables the most comprehensive open-source access to the TRAFFIC wildlife trade incident database, including reports on seizures, poaching events and court cases globally. All information available on the Portal is obtained from publicly accessible or "open" sources and is checked and curated by TRAFFIC. The portal contains collated records of trade incidents for European eel since its CITES listing and presents evidence around the scale of seizures, location of seizures and known origin, destination and transit locations together with records of prosecutions and punishments (fines and jail terms) associated with eel trafficking crimes. These data are the most comprehensive data available for the species although they are by no means complete and the seizure and incident records vary from those published previously by UNODC and also the seizures reported under Operation LAKE since 2016.

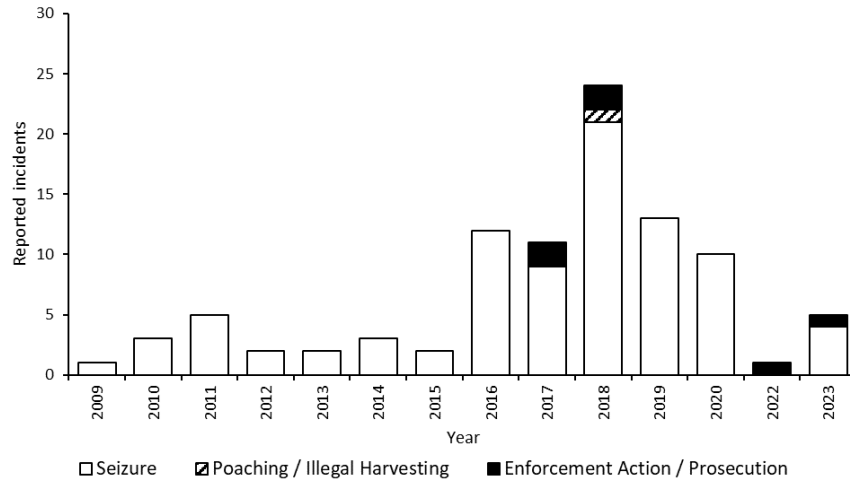
Following early reported seizures of European eels in 2009 and 2010 (e.g. >25 tonnes of live grown-on eels seized at a port in Poland imported from China via Hamburg – a seizure of a container labelled as *A. japonica* but shown by DNA to be *A. anguilla*)<sup>22</sup>, the first years following the CITES trade ban, the volume of seized fingerlings/fry of *A. anguilla* was around 1 tonne up to 2018 and 2019 when 7 tonnes and 2.5 tonnes were seized in each year respectively (Figure 12). This equated to an estimated 21 million eels in 2018 and 7.5 million eels in 2019. The majority of enforcement actions in the database relate to seizures, with 10 to 20 seizures reported annually between 2016 and 2020 (Figure 13). The number of reported incidents was lower in 2021 and 2022 in relation to the Covid pandemic. In recent years a number of separate prosecutions have also been reported.

<sup>22</sup> [https://robinderbois.org/wp-content/uploads/2015/11/ON\\_THE\\_TRAIL\\_4.pdf](https://robinderbois.org/wp-content/uploads/2015/11/ON_THE_TRAIL_4.pdf)

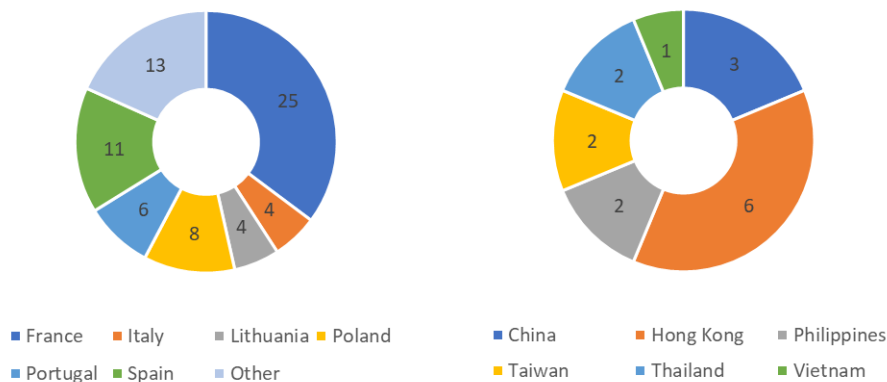
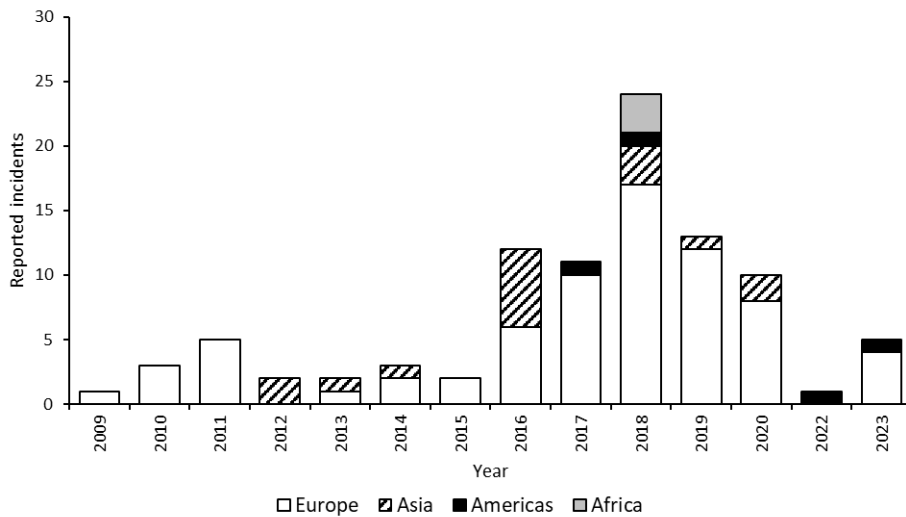


**Figure 12.** Wildlife Trade Portal (<https://www.wildlifetradeportal.org>) figures from reports for the estimated number (in millions) and weight (kg) of European eels fingerlings/fry seized annually around the globe between 2011 and 2023 (note 2023 based on incomplete records).

Whilst most enforcement actions and seizures have been reported from European countries several incidents have been reported from Asia (particularly in 2016 and 2018 and a smaller number of incidents are recorded for America (and Canada) and North Africa (Figure 14). The majority of enforcement actions in Europe have occurred in France (25), Spain (11), Poland (8) and Portugal (6). Enforcement actions in Asia have focussed on Hong Kong (6), China (3) and also Taiwan, Philippines, Vietnam and Thailand (Figure 14).

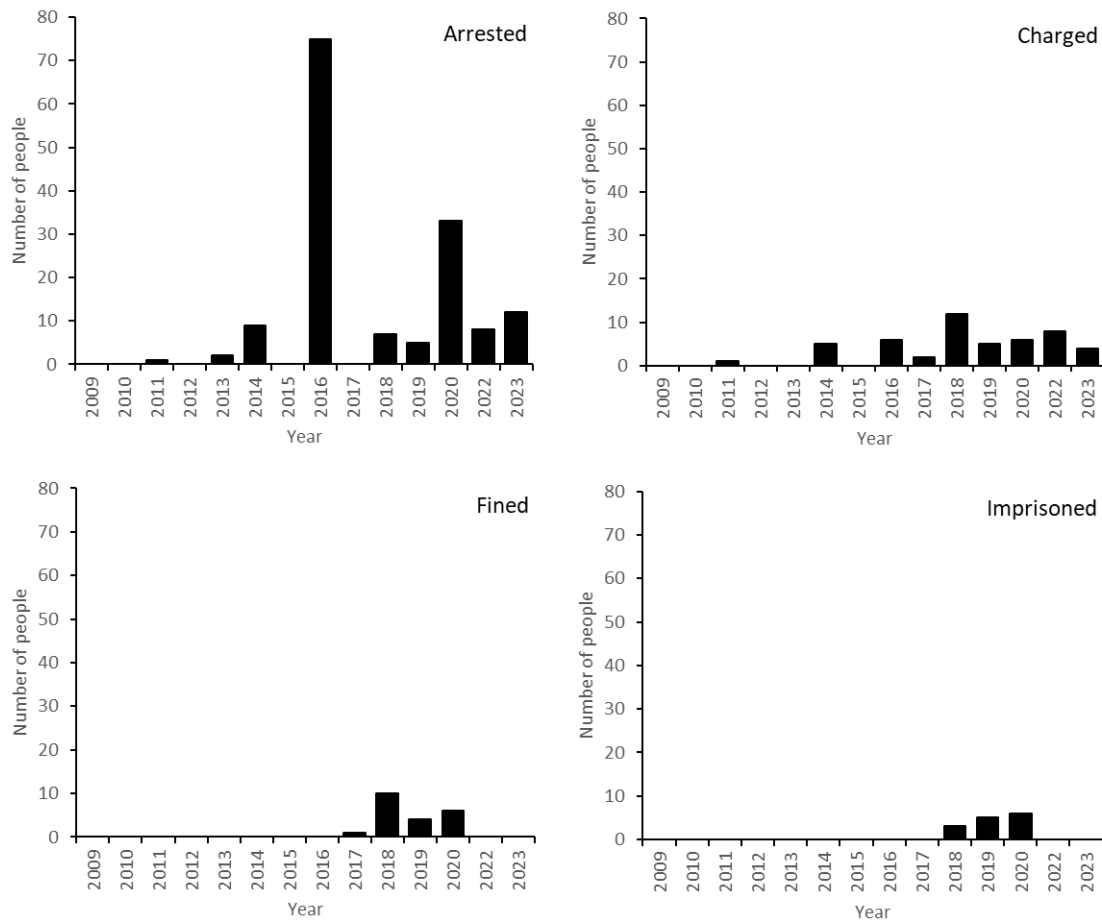


**Figure 13.** Wildlife Trade Portal (<https://www.wildlifetradeportal.org>) annual figures from reports for the global enforcement actions in relation to the IUU fishing and trafficking of European eel between 2009 and 2023).

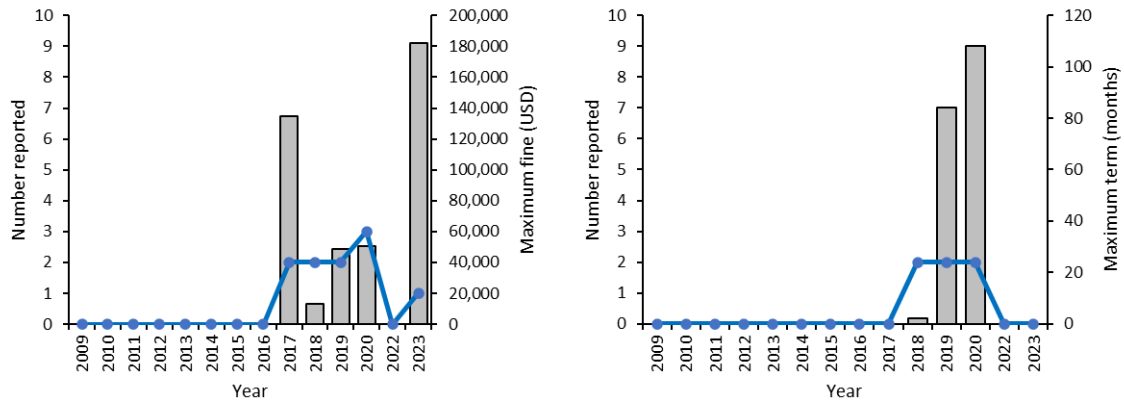


**Figure 14.** Wildlife Trade Portal (<https://www.wildlifetradeportal.org>) annual figures from reports for the global enforcement actions in relation to the IUU fishing and trafficking of European eel between 2009 and 2023. The top panel indicates continental locations of enforcement actions, and the bottom figures indicate key countries in Europe (left) and Asia (right). Total numbers of enforcement actions between 2009 and 2023 are given for each country.

In more recent years a number of arrests, criminal charges/prosecutions and punishments have been recorded in the database (Figure 10). Although the data are by no means complete since the number of arrests each year do not reflect the numbers reported in press releases related to Operation LAKE (Figure 5). The database contains records of fines and prison terms (Figure 11), the maximum tariffs of which have been larger in recent years. The maximum fine reported was approximately \$182,000 in 2023 for smuggling of 90,000kg of eel meat in Canada and a prison term of 108 months was handed down in 2020 for smuggling of 700,000 fingerling eels in China. There are numerous ongoing court cases from recent enforcement actions, and these often take many years to be completed. SEG monitors all prosecutions and publicises these on their website and social media.



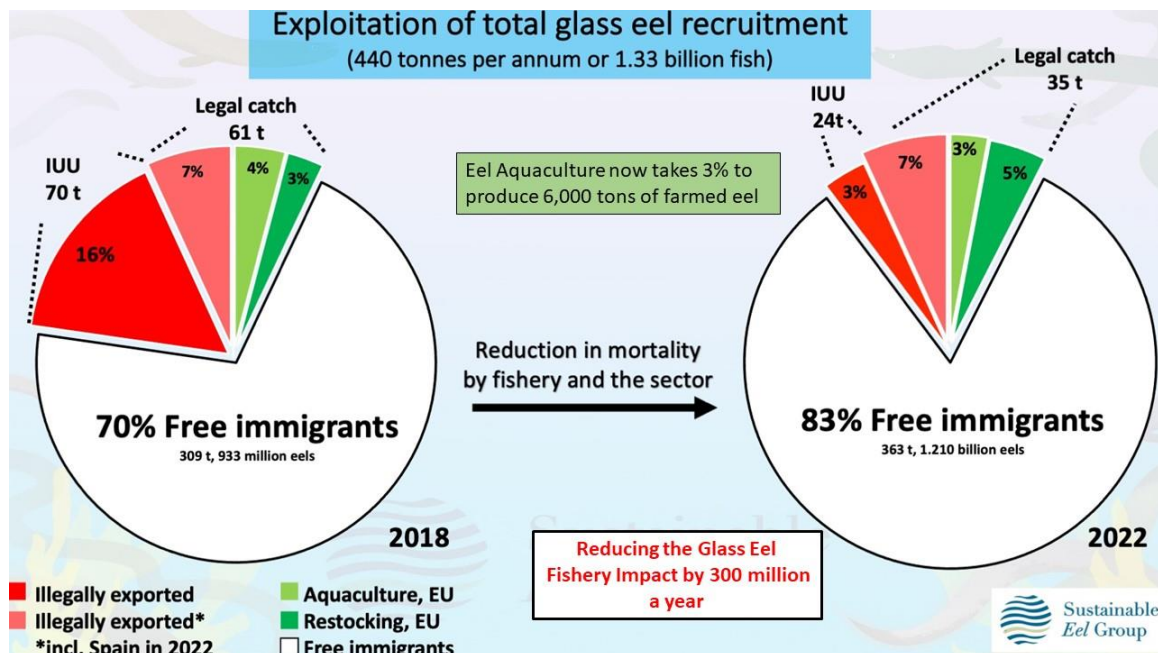
**Figure 15.** Wildlife Trade Portal (<https://www.wildlifetradeportal.org>) annual figures from reports for number of people arrested (top left), charged (top right), fined (bottom left) or imprisoned (bottom right) in relation to the IUU fishing and trafficking of European eel between 2009 and 2023.



**Figure 16.** Wildlife Trade Portal (<https://www.wildlifetradeportal.org>) annual figures from reports for number of people fined (left – blue line = numbers, grey bars = maximum fine in US dollars) or imprisoned (right – blue line = numbers, grey bars = maximum term in years) in relation to the IUU fishing and trafficking of European eel between 2009 and 2023.

### 3.4.5 The impact of eel trafficking

SEG estimates in a 2022 report (that around 3% of total glass eel recruitment is used in Aquaculture in the EU, 5% goes to restocking in the EU and around 10% was thought to have been illegally exported (around 44 tonnes including an estimated 24 tonnes from IUU). SEG estimates (SEG 2018, 2022) suggest that in 2018 the combined legal exploitation (61 tonnes) and assumed illegal exploitation (70 tonnes) represents around 30% of the total annual recruitment (as estimated by ICES). This reduced to around 17% of total recruitment in estimates for 2022, following potential reductions in IUU caught eels (24 tonnes) and legal catch (35 tonnes) (Figure 7).



**Figure 17.** SEG estimation of the impact of IUU fishing and legal exploitation on the total glass eel recruitment in 2018 and 2022 (from presentations provided by Andrew Kerr).

The ICES Eel Working Group (WGEEL, 2023) recently concluded that whilst “*IUU fisheries certainly exist for glass, yellow and silver eel, there are insufficient data available to quantify their effect on the total stock size or status with any level of certainty*”. It is clear that the estimates of impact are limited based on the quality of evidence for the different components between the estimates of the total stock size (as estimated by ICES), the extent of the legal fishery (as reported to ICES and traced through the SEG certified operators and SEG market surveys), the extent of trafficking (as estimated by Europol) and the extent of IUU-fishing (estimated as the difference between estimated quantities of legally caught but untraceable glass eels and the total trafficking estimate) As such the evidence presented here and the assumptions that underpin it appear to be a best estimate of the impact of IUU fishing and trafficking on the eel stock, the recent impact of enforcement activities on the reduction of the impact of trafficking on the stock and the improvements in traceability of the certified component of the supply chain.

### **3.4.6 Current situation and conclusions**

The data pertaining to the current extent of trafficking and IUU are necessarily unclear and not reported with a high level of certainty. Most indicators listed here are by their nature both partial (not all enforcement actions/outcomes are recorded consistently in all available datasets) and also only indicators of the extent of enforcement actions and the volumes of glass eels seized either in holding or in transit. As stated by TRAFFIC for the Wildlife Trade Portal data “*wildlife (seizure) data are a vital source of information, (however) it should not be inferred that there is a direct correlation between incidents and the overall illegal wildlife trade, or that information across locations, species or time is consistent*”. Therefore, these indicators presented here give only a limited indication of the extent of trafficking and IUU fishing. The estimates of the totals of trafficking presented by Europol and OLAF press releases undoubtedly incorporate a myriad of confidential intelligence and ongoing investigations/prosecutions but are almost certainly the most robust indicators available. The indicators for the most recent season are reported to show declines from around 100 tonnes illegally exported from the EU annually cited in Europol press releases up and including the 2022/2023 season. However, some of the estimates are presented differently in some years and some of the headline figures which get reported are difficult to substantiate. These include inconsistent statements such as:

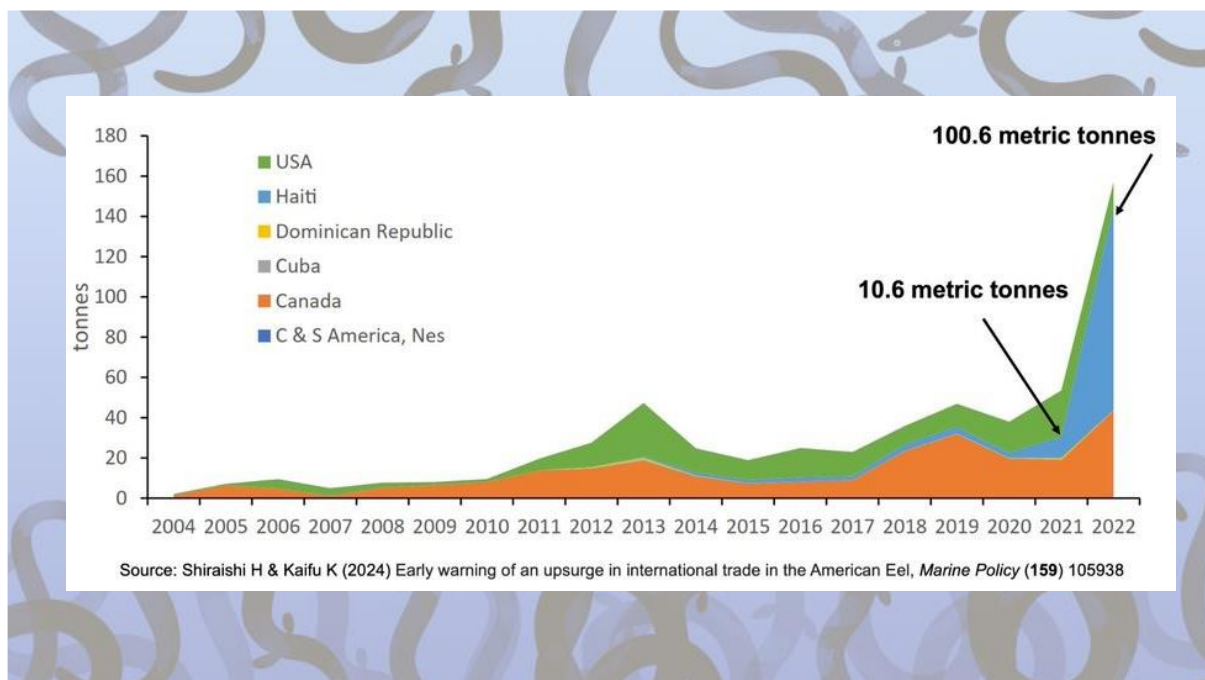
- “It is believed that, for the current season, 100 tonnes of eels have been smuggled from EU to China” (Europol 2018).
- “Estimates show that the trafficking of eels is now 50 % lower than in 2016” (Europol 2022)
- “It is believed that, for the current season, 10 tonnes of eels have been smuggled from EU to China, with a profit estimated at EUR 10 million” (Europol 2016).

Consequently, since the actual numbers and estimates made by the enforcement agencies are not in the public domain it is difficult to assess the true level of ongoing trafficking and IUU fishing with high levels of confidence in this report.

The seizures and arrests reported in 2022/23, including the arrests of “two high value targets and 50 close associates” will likely have a significant impact on the illegal trafficking of glass eels from the EU. Although prosecution of these cases and impacts on the criminal networks may take time to deliver reductions in trafficking. The arrests and prosecutions were focussed

on eel trading operations in France, Spain and Portugal and were of EU nationals misusing legally operating EU companies under their control<sup>23</sup>. The identities of the two high value targets are known within the sector, although not publicly named in Europol releases.

The reports of major enforcement actions countering the networks of high value targets, combined with reports of an upsurge in importing of other *Anguilla* species to East Asia in 2022 (53 tonnes in 2021 and 157 tonnes in 2022 of *Anguilla rostrata*, Figure 18, Shiraishi & Kaifu, 2024) could suggest that this is potentially caused by a loss of access to illegally exported European eel. Despite the significant enforcement actions on illegal trade in European eel and apparent success in countering the previous high volume of trafficking it is likely that trafficking of European eel is ongoing and a continues to threaten the protection of European eel stocks and viability of the commercial sector in Europe.



**Figure 18.** Annual trade in *Anguilla rostrata* glass eels as recorded in East Asian customs records, from Shiraishi & Kaifu (2024). Image provided by Andrew Kerr.

<sup>23</sup> <https://www.europol.europa.eu/media-press/newsroom/news/law-enforcement-casts-net-over-256-eel-smugglers>

## **4 EVALUATION OF SEG AND ITS OUTCOMES**

### **4.1 The roles of SEG and other actors in counter-trafficking**

Fundamentally, SEG is an NGO which is not directly involved in enforcement of counter-trafficking of European eel. However, they have developed a role in alerting, negotiating and publicising in the enforcement sphere. Since 2015 SEG has undertaken a lead on highlighting and reporting on IUU fishing and trafficking of glass eels and in 2016 made counter trafficking a priority as stated in their 2016 declaration. SEG is now positioned as a focal voice in the debate and drive for a responsible sector. SEG therefore has a key focus on communication, negotiation, collaboration and networking with other organisations and stakeholders within the sector. The other key role that SEG has developed for counter trafficking is the implementation of the Standard and the development of traceability of the legal capture, culture, restocking and trade of eels within Europe. SEG views this role as critical to responsible eel use and the primary instrument to restrict the grey area between legal and illegal trade.

There are several other NGOs and institutions who operate within a similar sphere in relation to monitoring and reporting of eel trafficking and trade. These include the CITES Secretariate and standing committees, the ICES/EIFAAC Joint Working Group on Eels (WGEEL) and TRAFFIC (UK-Based charity and NGO focussing on ensuring trade in wildlife is legal and sustainable) (Table 7). Each of these organisations at various times since eels were CITES listed have analysed and reported on trade and trafficking data for the European eel.

The counter-trafficking enforcement network in 2022/23 was a global operation and comprised regional law enforcement agencies across 32 different countries (including Europe, USA, Canada, North Africa and South America) and DG SANTE (EC Directorate-General for Health and Food Safety), EFCA (European Fisheries Control Agency), Eurojust (European Union Agency for Criminal Justice Cooperation), OLAF (European Anti-Fraud Office), EUROPOL and INTERPOL (Table 7). The main counter trafficking operations have included Operation Thunderbird (Interpol) and Operation LAKE (Europol). These are internationally coordinated and led operations implemented through the enforcement actions of regional policing and border control forces (Table 7).

SEG has developed a direct liaison with international and regional enforcement agencies acting as a fulcrum and interface between the certified sector and these enforcement agencies. Furthermore, SEG has made representations to those stakeholders and policy makers acting in the international policy sector (for examples through various Director Generals at the European Commission and EU parliament) aiming to influence the prioritisation of countering wildlife crime involving the trafficking of eels. SEG has developed a strategic communication and influencing plan for coordinating communication across Europe and have professional support in developing an influencing strategy with the European Commission, European Parliament and focal committees within them (e.g. PECH Committee). This strategy has led to successful dialogue between SEG and EC Director Generals and a number of events in Brussels to debate the future protection and restoration of European eels (with the importance of counter-trafficking as one of the key messages).



**Table 6.** Actors within the counter-IUU fishing/trafficking sector, their remits and roles.

Actor	Remit	Role
<b>NGOs/Institutions/Charities</b>		
Sustainable Eel Group	International NGO	<p>Aims to provide the respected leadership alliance that enables and promotes the joined-up conservation and management of the eel in the EU Member States of Europe and beyond.</p> <p>Developed and implemented the SEG Standard.</p> <p>Alerting and informing in counter-trafficking network</p>
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora	<p>International agreement between governments.</p> <p>CITES Secretariat - play a coordinating, advisory and servicing role in the working of the Convention</p>
ICES/EIFAAC WGEEL	<p>International Council for the Exploration of the Sea</p> <p>European Inland Fisheries and Aquaculture Advisory Commission</p>	<p>Joint Working Group on Eels (WGEELS) – active since 2014</p> <p>Assess trends in population, fisheries and anthropogenic factors.</p> <p>Provide guidance on management</p>
TRAFFIC	Focus on trade in protected species	Working to ensure that trade in wild species is legal and sustainable for the benefit of the planet and people. TRAFFIC aims to provide evidence-based solutions through rigorous research and analysis, rooted in science, data, and their expertise.
<b>International Enforcement Agencies</b>		
Europol	EU Agency	<p>International Agency supporting investigations initiated by Member States</p> <p>Coordinates Operation LAKE</p>
Interpol	International Criminal Police Organisation	<p>International Inter-Governmental Organisation</p> <p>Enables the sharing of and access to data on crimes and criminals, provides a range of technical and operational support to national police forces.</p> <p>Coordinates networks of police and experts in different crime areas, who come together through working groups and at conferences to share experiences and ideas.</p>

		Led on Operation Thunderbird - global operation tackling the illegal trade in wildlife and timber
OLAF	European Anti-Fraud Office	OLAF investigates fraud against the EU budget, corruption and serious misconduct within the European institutions, and develops anti-fraud policy for the European Commission.  OLAF provides analytical support to the units investigating companies involved in trafficking and ensures a smooth interaction between the different competent authorities in the Member States involved. The primary contribution of OLAF concerns customs control – with a focus on curbing the illegal outflow of eels.
Eurojust	European Union Agency for Criminal Justice Cooperation	Eurojust actively supported the operational actions on financial investigations and glass eel trafficking. In September 2023, the Agency hosted an operational meeting on the illegal trafficking in glass eels. <sup>24</sup>
UNODC	United Nations Office on Drugs and Crime	UNODC provides technical assistance, research and normative support to Member States to help them develop and implement comprehensive, evidence-based solutions to the complex and interconnected threats that they face at the national, regional and global levels.  World Wildlife Crime Report 2020 by the United Nations Office on Drugs and Crime  UNODC's World WISE database – global database on wildlife crime seizures
<b>Regional Enforcement Agencies</b>		
Guardia Civil	Spanish National Police Force (Civil Guard)	Leads on counter trafficking enforcement in Spain with a remit that covers law enforcement in rural areas, highways, ports and anti-smuggling operations (customs and port of entry control).  Includes Servicio de Protección de la Naturaleza (SEPRONA)
Office Francais de la Biodiversite	French Office for Biodiversity (OFB)	Public institution dedicated to the protection and restoration of biodiversity in mainland France and overseas , under the supervision of the ministries responsible for ecology and agriculture. The Office also ensures the application of the International Convention on Trade in Endangered Species (CITES) on French territory.
Gendarmerie National	French Police	National Gendarmerie is the French armed force responsible for policing, particularly in rural and peri-urban areas and on communication routes

<sup>24</sup> <https://www.eurojust.europa.eu/annual-report-2023/environmental-crime>

La Douanes Francais	French Customs Authority	Responsible for administration of borders and goods, protection of the territory, citizens and national or community economic and financial interests. Responsible for seizures of glass eels in the Paris region in 2022
UK Wildlife Crime	National Wildlife Crime Unit (UK)	The main role is to assist in the prevention and detection of wildlife crime. They obtain and disseminating information from a wide range of organisations and assist regional police forces in wildlife crime investigation. Hosted a meeting of enforcement agencies from across Europe and North America working on the illegal trade of eels at the Natural History Museum, London in 2019.
National Crime Agency (UK)	Non-ministerial civil service department, operationally independent and accountable to Parliament	Leads the UK's response, locally, regionally and nationally, to reduce the impact of serious and organised crime on the UK and our communities – particular focus on the organised crime aspect of eel trafficking.
UK Border Force	UK Border Control and law enforcement command	Border Force is a law enforcement command within the UK Home Office. They secure the UK border by carrying out immigration and customs controls for people and goods entering the UK. Responsible for seizure of 600,000 live glass eels at Heathrow Airport in 2017 (total of 182 seizures during Operation Thunderbird)

## **4.2 Perceptions of SEG by other stakeholders**

As part of this review a series of email contacts and unstructured interviews were held with individuals from a range of organisations active within the wildlife crime, commercial eel trade and eel science sectors. As part the discussions the individuals' views on the roles and impacts of SEG were sought. This section summarises the comments and views that were provided. However, comments are not attributed to individuals and anonymity is maintained. In some cases individuals were clear that their individual views did not necessarily represent the view (or range of views) held by the organisation for which they worked.

All respondents agreed that SEG were:

- A primary source of information about trafficking and eel conservation and management
- The primary voice for eel in Europe.
- A key ally in the fight against trafficking.

Further to this it was apparent that different stakeholder and individuals held some reservations in their opinions on the role and success of SEG. These included:

- Conflict of SEG approach with other conservation groups - due others believing that commercial exploitation is unacceptable (the "Green" NGO's).
- SEG being formed from within the commercial eel sector (with a perception that they work purely in the interest of the sector) so there is some level of scepticism and mistrust as to their information and actions.
- Questions over how successful SEG was actually being at establishing traceability in traded certified eels rather than just certification of operators (specifically in being able to report exactly what volume of eels were traded in fully certified supply chains).

From the point of view of the respondents working in counter-trafficking it was clear that they had established relationships with SEG enabling the sharing of information. In one case the relationship was established after SEG contacted them and in the other case the enforcement agency initiated contact themselves. From the point of view of both these respondents one of the major impacts of SEG on trafficking was the continued pressure to maintain and raise the profile of counter-trafficking and to increasingly influence MPs, MEPs, national and international parliaments which maintains counter-trafficking as a priority issue. This then filters down into the priorities for the enforcement agencies. Whilst the respondents valued their relationship with SEG they were clear that firstly that the relationship was typically only with a limited number of trusted individuals and that they retain an unbiased and balanced view of all actors in the commercial eel sector. Both recognised the importance of the ambition in the Standard and the push for traceability and the minimising the grey area between illegal and legal trade. Despite the value they see in the Standard the certification of an individual/outfit does not influence how they are treated or viewed by enforcement agencies/investigations. Ultimately, being SEG certified does not put any operator above suspicion or investigation by the enforcement agencies.

## **4.3 SEG's impact on IUU fishing & trafficking**

Whilst SEG is not directly involved in enforcement of counter-trafficking they have, since 2015, developed a role in alerting, negotiating and publicising in the enforcement sphere. Their direct

liaison with international and regional enforcement agencies and their representations to those acting in the EU policy sector (various Director Generals at the European Commission and EU parliament) have undoubtedly influenced the movement to prioritising wildlife crime involving the trafficking of eels. Much of the impact of SEG through actions relating to the Standard and their role in monitoring, alerting and negotiating is clearly substantiated. The species-specific focus of SEG has elevated illegal trafficking of eels in the policy agenda and has complemented the activities of other organisations working in wildlife crime more generally. Furthermore, the progress towards a responsible and certified sector and the development of a network within it has likely contributed to the reduction in illegal fishing and exports and an increased awareness of where and how illegal activity is taking place.

Implementation of the Standard and active work by enforcement agencies has actively worked towards a reduction in eel trafficking and illegal exploitation, the results of which may, after recent events in 2022/23, only just be starting to cascade. It is clear that activity within the wider SEG network following the promotion of responsibility, traceability and stewardship has influenced a reinvention in the sector which has contributed to counter trafficking successes in less direct and unrecorded ways. The Standard has seen significant uptake by the sector, particularly within the dominant French fishery and the traders/producers in France, Netherlands and Germany leading to increased responsibility and traceability in supply chains and a reduction in the grey area between legal and illegal activities. The situation in Spain and Portugal is reflective of rigorous implementation of the Standard, the complexities of the network in this region and the blurred lines between illegal and legal fishing/export. The perceived regional “gap” in coverage by the Standard in this region can actually be perceived as a strength, linked to the ambition and robustness of the Standard. This is particularly as evidenced by the outcomes of enforcement action undertaken in Operation LAKE VII significant disrupting trafficking organisations operating within this region seemingly through legal but uncertified operators. This disruption presents a significant opportunity to address the legal trade in eels in this region and establish a fully certified legal trade in this region going forward.

## **4.4 Evaluation**

### **4.4.1 *Is the SEG Standard and SEG’s wider intervention producing desired and intended sustainability outcomes or impacts?***

SEG has been able to demonstrate through its position statements, reports and management documents areas in which their actions and implementation and adoption of the Standard have influenced the nature of trade in the commercial eel sector which itself will have directly or indirectly influenced trafficking/counter-trafficking. Primarily these include:

- Lower mortality in certified glass eel trade meaning fewer glass eels should need to be harvested from the wild stock to support legal demand for aquaculture and restocking programmes.
- Reduction of the “grey area” for mixing of legal/illegal trade through the clear delineation between those in the commercial sector who are willing and able to adopt the Standard and commit to operating within legal frameworks and to the transparency and traceability of their trade. This has included those certified operators caught acting illegally having their certificates withdrawn adding assurance to the standard system.

Outside of the Standard, SEG's role as a negotiating and influencing partner has supported the global counter-trafficking network. Although there are no consistent data for tracking the volume of trafficking through time (other than the extent of seizures and enforcement actions) it is apparent that the scale and global nature of enforcement has delivered significant successes of anti-trafficking enforcement measures, breaking up major criminal gangs and a resulting in a reduction in the volumes of trafficking (both in terms of incidents and numbers of eels) from Europe to Asia. This reported reduction in supply of trafficked eels from Europe is also corroborated by the apparent uplift in trade and trafficking of glass eels from other regions to replace loss of access to European glass eels.

Much of what SEG has achieved beyond the implementation of the Standard and improved traceability in the supply chain of eels is perceived by those consulted for this report to relate to SEG's role in increasing awareness of eel trafficking as significant wildlife crime and maintained pressure on governments and enforcement agencies to prioritise trafficking of European eel as a major wildlife crime. In addition to this alerting role, SEG through representations to the policy sector, has undertaken to influence policy such that the EC has refocussed and increased pressure on states to deliver the Eel Regulation through improved implementations of Eel Management Plans. Indeed it is apparent that much of SEG's credibility in negotiating and influences arises from the commitment to a holistic approach to eel protection, support for the Eel Regulation and wider environmental actions. As such, SEG's vision and actions have worked for increased protection for eels rather than simply acting in the interests of the commercial sector.

#### **4.4.2 *What unintended effects (positive or negative) resulted from the activities or intervention assessed?***

One clear unintended effect of the reported successes of recent years of the enforcement agencies disrupting the criminal gangs running the illegal export of European glass eels to East Asia has been the rapid development of imports of *Anguilla rostrata* from the USA and Canada revealed in import data for the last couple of years (Shiraishi & Kaifu, 2024). The rapid uplift in import and trafficking of this species appears to be a response to the decline in availability of trafficked European eel and has led to the closure of legal fisheries due to the level of illegal operations observed.<sup>25</sup> Intelligence from enforcement agencies dealing with trafficking of European eels suggest that trafficking is organised by international criminal gangs which are actively responding and adapting to counter-trafficking measures and looking to find new ways to exploit this lucrative black market.

#### **4.4.3 *To what extent is it possible to attribute the observed effects to the activity or intervention of the SEG Standard system?***

Since counter-trafficking is a multi-actor international network and SEG is not an enforcement agency, it is difficult to directly attribute the changes in the trafficking sector and the successes of enforcement actions to the role played by SEG. The majority of the reduction in trafficking is clearly due to the extent and international nature of the concerted enforcement actions such

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<sup>25</sup> <https://www.cbc.ca/news/canada/nova-scotia/canada-faced-hundreds-of-baby-eel-poachers-every-day-1.6816097>

as Operation LAKE. However, the role played by SEG in influencing the prioritisation of these enforcement actions at a political level was perceived to be vital by the enforcement agencies.

Since 2015, when TRAFFIC was actively analysing and publicising data pertaining to European eel trade and trafficking, SEG has taken the lead working with others in quantifying the extent of trafficking and in publishing these data. To the extent now that enforcement agencies have highlighted SEG as the go to group for information about eel trade and trafficking.

Whilst data for IUU fishing and the actual extent of trafficking are unclear and uncertain the implementation and adoption of the Standard is the primary tool delivering traceability in glass eel supply chains and in reducing the volume of legally caught glass eels which were untraceable and assumed to enter the illegal trade to East Asia. Whilst certification in and of itself does not put an operator above suspicion, and enforcement agencies investigate both certified and uncertified operators, the process of certification and auditing has undoubtedly aided enforcement agencies in identifying those operating within the grey area between legal and illegal trade. Given the recent arrests and intelligence published by Europol and their success targeting uncertified traders apparently operating in this grey area, it is not unreasonable to attribute the targeting of the enforcement measures and investigations to those that are unable or unwilling to sign-up to the Standard and be independently certified as operating responsibly and within the law.

#### **4.4.4 *What factors could have influenced the results (factors within the control of the standard system and other external factors)?***

There are potentially four key factors that that influenced the successful implementation of the Standard and contributed to its role in supporting counter- trafficking actions. These include:

1. The Standard emerged from collaboration within the eel sector with a shared drive towards responsibility and traceability. It is likely that a standard that developed within the sector will have had more traction and acceptance than any attempt to regulate and audit the sector from external authorities.
2. SEG is committed to quality assurance and protection of the credibility of the Standard and the reputation of SEG. Of note is the appointment of an independent Conformity Assessment Body (CAB) which separates SEG from the role of certification and auditing and enables it to focus on developing the Standard/best practice.
3. SEG is committed to iterative improvement of the Standard and does so through extensive consultation with the diversity of stakeholders. As such the Standard aims higher than the requirements of the Eel Regulation and other laws and has wider remit than just the narrow aims of the commercial sector. This has undoubtedly enhanced acceptance of the Standard and strengthened its credibility.
4. SEG takes a holistic view of eel protection and recovery and works to engage and collaborate with stakeholders with differing views. This engagement with constructive criticism and alternative views has contributed to improvements in the Standard to address these concerns and issues.

Outside of SEG's actions and direct roles the impacts on trafficking by counter-trafficking actions have been influenced by:

- Operation LAKE / international enforcement actions interrupting illegal supply chains and disrupting the activities of criminal trafficking gangs.

- Covid Global Pandemic – causing changes to trafficking methods and routes (containers vs passenger luggage) and affecting the implementation of enforcement activities.

Furthermore, the decision of the UK to leave the European Union had significant repercussions for the certified trade of glass eels in Europe (Stein & Bunt 2021, Stein & Nijman 2021) and the certification of one for the four main European countries with an active glass eel fishery. Whilst the decision to leave the EU and the response of certified UK fishermen/traders was outside of the control of SEG (with UK operators choosing to let their certificates lapse since they lost access to the EU market under CITES legislation), the recent developments in the UK fishery and granting of a NDF enabling a re-establishment of international trade from the UK has necessitated SEG to take a position and to mitigate the risks posed by opening up of trade to areas where its traceability cannot be assured.

#### **4.4.5 *What would be the likely position now if SEG did not exist, or did not pursue these strategies?***

One of the clear messages emerging from those interviewed for this report was that SEG was the foremost voice for eel on the European stage. Their work has delivered a working and credible standard for responsibility in the sector and has influenced policy in the reinforcement of the Eel Regulation and effective counter-trafficking enforcement. SEG is perceived as one of the few organisations influencing for responsible use of eels as well as on wider sustainability issues (i.e. renewed focus on EU Eel Regulations and other sources of eel mortality rather than just closing the fishery). If SEG were not to have existed or were not pursuing their current strategies it is likely possible that the following situations may have arisen:

- Eel sector remained fragmented and disparate with limited regional coordination and inconsistent regulations and implementation.
- No development or implementation of traceability within glass eel trade – significant blurring of legal and illegal trade.
- The reliance on “top down” regulation of the fishery and enforcement being imposed on the sector.
- Prevalence of the “extreme green” policy agenda and increased pressure to close the eel fisheries in Europe – thus driving all trade into the black market.
- The shifting of the policy agenda away from the holistic implementation of the EU Eel Regulation and the wider protective/recovery measures it supports.

Whilst it is not clear to what extent any of these situations may have developed or been realised it is likely that without SEG the level of protection for eel would be weaker than it currently is.



## **4.5 Conclusions & recommendations**

### **4.5.1 *Impacts of the SEG Standard***

SEG's notable impacts on trafficking relate to the development and implementation of the SEG Standard and their efforts to maintain credibility and assurance for the Standard. SEG can now demonstrate that 61% of the European glass eel catches (consequently 61% of traded glass eels) are fully SEG certified at this stage in the supply chain and 80% of aquaculture eels in the EU are certified eels.

This uplift in certification has led to significant progress in implementing traceability in the commercial eel sector and is reducing the grey area of illegal activities within the legal commercial sector through clearly differentiating between those who can demonstrate best practice, responsibility and traceability and those who can't. Implementation of an independent Conformity Assessment Body, iterative improvements in the Standard and rigour in enforcement of the Standard have improved assurance and strengthened credibility. Whilst it is important to retain focus on certification of the actors/operators in the supply chain it is also important for SEG to further develop monitoring and reporting for certified eels as well as certified stakeholders. One criticism of SEG was that it was not able to easily and clearly report the volume of trade in certified and uncertified eels and quantify certified trade as a proportion of the sector. Whilst SEG were able to provide these data during the course of this report and have collected and estimated these values internally as part of their market surveys, they are not data that are necessarily published routinely in a transparent and consistent manner. Data for specific years have been used in presentations but annual trends have not been clearly reported. Enhancements in transparency in this area would focus on traceability and quantification of the proportion of stock certified/uncertified eels flowing through the different stages of the supply chain. This would support SEG in demonstrating their impact in terms of the eel stock in addition to the members of the sector.

Whilst developed holistically for the whole eel sector there has been limited uptake of the Standard by restocking operators and the yellow/silver eel fisheries. Whilst traceability and responsibility within the glass eel trade was a priority for countering trafficking, SEG should, in addition to further efforts in this sector, make a concerted effort to encourage restocking programmes to apply for certification. This is important since under the Eel Regulation 60% of commercial catch should be used for restocking (a large component of which focuses on compensating wild yellow/silver eel fisheries) and the fact that intelligence has suggested that some component of the quota purportedly used for restocking has entered the illegal trafficking supply chain. Working towards the adoption in of the Standard by the restocking sector will enhance traceability and credibility in the certified glass eel supply chain, promote the adoption of the Standard by yellow/silver eel fisheries in the future and enable demonstration of achievement of the 60:40 targets of the Eel Regulation.

### **4.5.2 *Alerting, negotiating and influencing***

Whilst SEG is not an enforcement agency it is a valued stakeholder in the counter-trafficking network, particularly in terms of communication and sharing of information. SEG is now viewed by many as the leading voice for eel sector within Europe. Their activities have highlighted the extent of trafficking revealed through their own analyses and the work of others (e.g. TRAFFIC,

CITES etc.) and have maintained pressure on EC and member states to deliver protection as agreed in the Eel Regulation and to prioritise investment counter-trafficking activities. Through their strategic communication and influencing plan, SEG has established a dialog with key MEPs and Director Generals within the European Parliament and Commission and promoted their holistic approach to eel protection and restoration, one strand of which is the importance of stopping the illegal trafficking of eel. SEG was one of the key voices in the counter-trafficking debate (alongside groups such as TRAFFIC) around 2015 and were at that stage developing the communication and influencing plan, it was during this period that policy decisions within the EU prioritised counter-trafficking of European eel and mandated Europol to lead on Operation LAKE.

Enforcement agents interviewed for this report were of the clear opinion that without SEG and their roles of alerting and influencing that eel trafficking would not be in the public and political consciousness and thus would not be prioritised and supported in the way that it currently is. Therefore, it is recommended that, at this critical phase following disruption to major trafficking gangs and reported success in counter-trafficking, SEG renews its efforts to maintain public awareness of eel trafficking globally and to work strategically to keep counter-trafficking a political and law enforcement priority.

One area that SEG should consider investing time and effort in, as part of its monitoring and evaluation plan, is the consistency and reproducibility of trade/trafficking metrics. This is particularly important in terms of tracking the level of trafficking and illegal fishing and the ability to substantiate the impacts of enforcement activities going forward. There are a number of sources of information about enforcement actions (e.g. EU-Twix and the Wildlife Trade Portal) but these are either not publicly available or incomplete. Furthermore, there are limited direct or consistent estimates of the extent of trafficking (either represented in different forms by enforcement agencies or inferred from problematic trade records). Even the most recent analysis of Operation LAKE (Stein *et al.* 2024) focussed on data publicised within press releases supported by confidential data within Europol reports (necessitated by ongoing enquiries and protection of enforcement methods and strategies). The lack of clear metrics for the levels of trafficking made evidencing changes in trafficking and substantiating the reduction reported by SEG using unconfirmed market intelligence difficult.

As part of developing traceability metrics within the sector SEG could also make a difference by coordinating groups such as TRAFFIC, CITES Secretariat, WGEEL, enforcement agencies (e.g. Europol) and independent researchers/academics to prioritise consistent recording/reporting of trafficking incidents (e.g. to the Wildlife Trade Portal) and the development and regular reporting of agreed consistent and robust indicators of trafficking. Whilst it is recognised that investigations by international agencies are ongoing and much intelligence and evidence by necessity remains out of the public eye, clear and consistent messaging, and terminology in the press releases by enforcement agencies would make tracking of the extent of trafficking easier. Improvements in direct indicators of trafficking are critical to understand trends in trafficking and its impact on the legal trade and the stock. They are also important to enhance public messaging and underpin the evidence for prioritisation of enforcement in counter-trafficking.

SEG has developed working relationships across the sector and with international/regional enforcement agencies. This has enabled them to share information and to influence others with their aims and vision. However, SEG is a small organisation driven by a core of respected individuals on the Board. It was apparent that to a certain extent that the professional

relationships established were underpinned by individual relationships and trust that had been established between individuals. As such succession planning in organisational relationships is imperative for SEG to maintain influence and effective information sharing in the coming years, where and when individuals within the SEG board/leadership change.

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## Press Releases

<https://www.europol.europa.eu/media-press/newsroom/news/law-enforcement-casts-net-over-256-eel-smugglers>

<https://www.europol.europa.eu/media-press/newsroom/news/49-individuals-across-europe-arrested-in-major-blow-to-eels-trafficking>

<https://www.europol.europa.eu/media-press/newsroom/news/eels-shipped-air-found-in-operation-lake-v>

<https://www.europol.europa.eu/media-press/newsroom/news/glass-eel-traffickers-earned-more-eur-37-million-illegal-exports-to-asia>

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## **SEG Documentation**

The SEG Standard –

<https://www.sustainableeelgroup.org/wp-content/uploads/2024/01/103-SEG-Standard-V7.2-EN.pdf>

SEG Monitoring and Evaluation Plan –

<https://www.sustainableeelgroup.org/wp-content/uploads/2024/01/302-SEG-MEL-Plan-V2.0-Nov-2023.pdf>

SEG Theory of Change –

<https://www.sustainableeelgroup.org/wp-content/uploads/2024/01/009-SEG-Theory-of-Change-V2.0.pdf>

SEG Stakeholder Analyses –

<https://www.sustainableeelgroup.org/wp-content/uploads/2024/05/008-SEG-Stakeholder-Analysis-V2.1-May-2024.pdf>

SEG Trafficking Report 2018 –

<https://www.sustainableeelgroup.org/wp-content/uploads/2018/05/SEG-Report-2018-1-V2.pdf>

SEG Restocking Report 2018 –

[https://www.sustainableeelgroup.org/wp-content/uploads/2019/05/SEG\\_Report-2018-2-V1.pdf](https://www.sustainableeelgroup.org/wp-content/uploads/2019/05/SEG_Report-2018-2-V1.pdf)

## APPENDICES

### Published SEG Certified Register (as of October 2023)

Category	Country	Conditional Pass	Pass	Lapsed	Total
<b>Aquaculture</b>	DE		3		3
	DK			1*	1
	MR		1		1
	NL		6		6
	SE		1		1
	<b>Total</b>			<b>11</b>	
<b>Fishery</b>	FR	7	16		23
	UK			2	2
	<b>Total</b>	<b>7</b>	<b>16</b>	<b>2</b>	<b>25</b>
<b>Processor</b>	DE		1		1
	NL		14		14
	SE		1		1
	UK		1	1	2
	<b>Total</b>		<b>17</b>	<b>1</b>	<b>18</b>
	<b>Trader</b>	FR	2	4	
UK			1	2	3
<b>Total</b>		<b>2</b>	<b>5</b>	<b>2</b>	<b>9</b>
<b>Trader &amp; Aquaculture</b>	FR	1			1
	NL		1		1
	<b>Total</b>	<b>1</b>	<b>1</b>		<b>2</b>
<b>Overall</b>		<b>10</b>	<b>50</b>	<b>6</b>	<b>66</b>

\* under reassessment