Insights into the European eel market chain

June 2014
The European eel market chain
The European eel destiny

Color codes for easier understanding of the following slides

Glass eels → Elvers → Eels

Supply: fishing and import

First sale to fish merchant & traders

Restocking

Farming and consumption

Yellow and silver eels fishing

Volumes (kg or t) 2012-2013 data (mostly)

Prices (€) 2014 data (mostly)

Source of data: PGA’s, ICES reports, interviews and calculation whenever necessary.
The European eel destiny

**Consumption** 40% ~ 20t

50 – 65 t

320 -> 45 €/kg

Restocking 60% ~ 30t

France: Requirement: 2-3t

Other EU member states: Requirement: 10-12t

Cooking units

ิน~350 €/kg

**CONSUMPTION** 15-20 t

Direct consumption (Spanish market) ~ 5 t

Cooking units

Cooked glass eels consumption (declining in Spain)

~5 t

2-600 €/kg

Fresh eels consumption

~500 t

16-20 €/kg

Smoked eels consumption (declining)

~5000 t

35-90 €/kg

**(RE)STOCKING** 12 – 15 t

~350 -> 75 €/kg

Other EU member states: Requirement: 10-12t

France: Requirement: 2-3t

Rivers (GER, NL, DK, SW,)

Lakes: (POL, EST)

Rivers F

Fresh eels consumption

~5 t

~5 t

~5 t

Glass eels
Young eels
Eels

Eel fishing

3200 t

7-15 €/kg

35  – 90 €/kg

300 t (EPV)

~350 -> 75 €/kg

~350 €/kg

320 -> 45 €/kg

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Who does what in the EU eel market?

- **NETHERLANDS**
  - Farming: ~13
  - Restocking
  - Processing
  - Consumption

- **DENMARK**
  - Farming: 5
  - Restocking
  - Processing
  - Consumption

- **SWEDEN**
  - Restocking
  - Farming: 1
  - Export

- **LITHUANIA**
  - Restocking

- **ESTONIA**
  - Restocking
  - Farming: 3

- **POLAND**
  - Restocking

- **UK**
  - Restocking
  - Glass eels fishing

- **SPAIN**
  - Farming: 1
  - Glass eels fishing
  - Consumption

- **FRANCE**
  - GE fishing
  - GE export
  - Restocking

- **GERMANY**
  - Farming: 2
  - Restocking
  - Consumption

- **ITALY**
  - Farming: 2
  - Glass eels fishing
  - Consumption

- **PORTUGAL**
  - Glass eels fishing

- **TCHEQ REPUBLIC**
  - Restocking

- **GREECE**
  - Farming: 4
  - Restocking
Some specificities within the EU
The European eel sector at country scale
Outlook of the French glass eel chain

French Quota
33.6 t (2012-2013)
42.5 t (2013-2014)

Inland water fishermen
13% = 4.4 t

Coastal fishermen
87% = 29.2 t

300 -> 80 €/kg

~ 10 Fish merchants (5 majors)

Consumption: 40% i.e 13.4 t

1-2 t
6-8 t
~300€/kg

Export to Spain for direct consumption

Export to European farms (NL, DK, GER, SP)

Restocking: 60% i.e 20.2 t

6-8 t
120-350 €/kg
3 t

Restocking other UE countries

Restocking France (Various project holders)

Financing
DPMA 80%, ONEMA 16 ARA 2% PP 2%

Budget ~ 2 M€

Yellow and Silver eel fishing
~600 fishermen (inland and coastal waters)

Export (Italy)

EU market consumption

500 t

Fresh eel consumption

~ 20 €/kg

Smoking (traditional)

> 60 €/kg

1300 t

8 - 10 €/kg

Glass eels
Young eels
Eels

Glass eels

2014
Outlook of the UK glass eel chain

Severn, Wye & Perrett rivers

~450 recreational fishermen
Handfishing (dipnet) / January - May

5.6 t in 2013
12 t in 2014
125 € -> 45 €/kg

European glass eels import
(France, Spain)

8.7 t in 2013 (decreasing)

3 fish merchants (1 major ~90% of the market)

Collecting stations

~ 2 t
~300€/kg

Export to EU farms
(SW, NL, DK, EST, GR..)

No local farm

~4 t
120-350 €/kg

Restocking in EU member states

~ 2 t

Private financing by UK eel traders and processors

Private / pedagogic restocking in UK

Consumption EU market

Export

Yellow and silver eel fishing
(South-Est UK coast)

~33 t (yellow)
~6 t (silver)
Outlook of the Spanish glass eel chain

- **France**: Local farm (Valencia) for local consumption (declining)
- **Spain**: Galicia, Pais Vasco (recreational) Asturias, Cantabrica, Valencia, Cataluna-Ebro, Andalucia
- **Portugal (Mino)**

**Grocers and fish merchants** (Aguinaga, Ebro rivermouth, Valencia etc..)
French and UK fish merchants

- **Local farm (Valencia)**
  - 10-16 t/an
  - 8-14 t/an
  - 350 ->180 €/kg

**Government collecting station**
Financing in kind by sampling 10% of the catches

- Restocking ~100kg + some local initiatives

**UE Farming**
DK / NL / GER / PO

- Glass eel cooking units: 15-20 enterprises
- 2t
- 1,5 t (5g)
- 16€/kg

**Fresh eel for local consumption ~140 t**

**Fishing**
<100t/an

**Export (NL, F, Portugal)** 260 t

**Glass eels** Young eels

**Rivers**

**Cooked glass eels for local consumption** (declining)

- 200 -600€/kg
- ~250 -300 €/kg
- ~ 5t/an

**Glass eel**

**Outlook of the Spanish glass eel chain**

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Outlook of the Dutch glass eel chain

- **EU farms (Spain)**
  - **CONSUMPTION** 8-10 t
  - **Farming** ~15 farms
    - Smoking
      - 35 - 90 €/kg
    - Smoked eel consumption (has declined by 50% since ENGO campaigns)
    - Fresh eel consumption in the NL (marginal)
  - Fresh eel import
    - 5 - 9 €/kg
  - 2900 t
    - 80%
    - 20%

- **RESTOCKING** 12 – 15 t
  - 2013: 630 kg
    - 2013: 450 €/kg
    - 2014: 78 €/kg
  - 2014: 4576 kg

- **France**
  - Fish merchants and Agents
  - ~350 -> 80 €/kg

- **UK**
  - ~350 -> 80 €/kg

- **Government**
  - (Productschapvis) -> Dupan
  - Fishermen (100-120)
  - Rivers et Lakes

- **CVB**
  - Budget 375 + 80 k€

- **Fresh eel export (bigger size)** 20%
  - 20%
  - ~50 t
  - “Over the dyke”
  - 300 t (5-12 €/kg)

- **Fresh eel fishing “catch & release”**
  - ~50/80 t

- **Professionnal Fishing**
  - 100% Governmt. / EMFF

- **5-9 €/kg**
  - ~50 t
Outlook of the German glass eel chain

Fish merchants and agents

~350 -> 80 €/kg

Smoked eel import

Farming (2 farms) 750 – 1200 t

Fishing (pro and leisure) 400 – 800 t

2000 - 2500 t

Smoking

20%

Fresh and cooked eels (lean products) ~450t

80%

Smoked eel consumption ~1800 t (has declined by 50% since ENGOs campaigns)

30-55 €/kg

400-800 t (10-20) €/kg

Restocking operators: Länder Professional and leisure fishermen

Rivers, Lakes and coastal waters

Professional and leisure fishing

German intermediary restocking agents

2250 kg

EU Farms

30t (5-15g) + bigger young eels

Financing 3 M€ Länder EMFF Professional and leisure fishermen

Glass eels Young eels Eels
Outlook of the Danish glass eel chain

Fish merchants and agents

~350 -> 80 €/kg

Farming (5 farms)
~ 800 t
(out of which 2-4 M young eels)

Young eels export

~1200 t

Professional and leisure fishing
430 t

DK, UE Farms
1.5 M young eels
(3-5g)

Restocking operators: professional and leisure fishermen

Rivers and Lakes

May – August

Semi professional fishing:
35 000 fishermen
100 t (private consumption)

10.80 €/kg

Professional fishing:
250 fishermen / 330 t

Export to Dutch smokeries

Smoked eel export

Smoked and cooked eels consumption
(declining since ENGOs campaigns)

30-55 €/kg

Export Farming Rstocking

Smoking

Export

Financing = governmental subsidies + auto financing
425 k€

Glass eels ➔
Young eels ➔
Eels ➔
Outlook of the Swedish glass eel chain

- France
- UK
- Others?

Fish merchants and Grocers

Public Purchases (Skane County Board)
- 1 M GE
  - 377 kg
- 2.5 M GE
  - 720 kg (2014)
- 350 €/kg
- ~1 M GE
  - 377 kg
- 2.5 M GE
  - 720 kg
- 350 €/kg

Quarantine (mandatory) 70 à 80 days (1 company)

- Farming:
  - 1 enterprise (SSE)
  - 150 g – 1 kg
- Export (NL)
  - 150 g eels
  - 80 €/kg (2013)
- Local market
  - 1 kg eels
- Smoked eel (industry)
  - 10 enterprises
  - 35-90 €/kg

- Smoked eels (small scale)
  - ~ 50 workshops

Public Puchases
- 150 g eels
- Local market
- Smoked eel (industry)
- Export (NL)
- Coastal waters (East coast)
- Lakes
- Professional fishing:
  - 251 licences / 300 t
  - ~11 €/kg
- Leisure fishing (very limited)

~35 Restocking operators

Skane County Board

~1 M GE
- 377 kg

Financing

- ~42% EU/EMFF
- ~42% Government
- 30-50 k€ Hydropower Alfonden

Budget
- ~ 252 000 €

~May - August

Export (NL)
- 150 g eels
- 80 €/kg (2013)

Smoked eel (industry)
- 10 enterprises
- 35-90 €/kg

Local market
- 1 kg eels

Smoked eels (small scale)
- ~ 50 workshops
Outlook of the Polish glass eel chain

**Fish merchants / Agents**

- **France**
- **UK**

**Farming: 1 enterprise**
- 2-10 g young eels (2-3 t)
- 40 €/kg
- 1.5 M x 2-10 g

**Other EU farms**
- (NL - DK – GER)
- 40 €/kg
- 1.5 M x 2-10 g +

**Public (re) stocking**
- (centralized)
- Young eels 2-10g
- 40 €/kg
- 1.5 M x 2-10 g

**Private (re) stocking**
- (not centralized)
- 40 €/kg
- 1.5 M x 2-10 g +

**Public financing**
- EMFF / IFI
- ~50 % (decreasing)

**Private financing**
- (Fishermen)
- ~50 % (increasing)

**Budget**
- 0.8 -1 M€

**June - August**

- Inland Fisheries Institute
- Direct purchases
- 1800 private operators
  - individuals
  - Fishermen associations

**Import**
- Russia, NL, DK
- 800 g – 2 kg
- Fresh and smoked eel

**Local consumption**

- Fresh: 15-20 €/kg
- Smoked: 35 – 50 €/kg

**Outlook of the Polish glass eel chain**

**Fresh and smoked eel**

- Fishing: 800 enterprises
  - 200 t > 50 cm

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Outlook of the Estonian glass eel chain

**France**
- 270 kg (2013)
- 900 kg (2014)
- 180-220 €/kg
- Lake Vörtjäve Fisheries Development Agency (LVFDA)

**UK**
- 330 kg
- ~320€/kg

**Fish merchants and agents**

**Farming:** 3 farms

- Small scale smoking
  - ~50 t
  - 5 - 8 €/kg

- 2-3 t
  - 35 -90 €/kg

**Restocking operators = fishermen**

- Fishing
  - Fresh eels
    - 800 g – 2 kg
    - 15-20 €/kg
  - 15-17t

- Lakes (Vörtjäve, Pepsi, ...)
  - ~0

- Rivers
  - ~0

***Budget***
- EU (EMFF) 33 %
- Government 33 %
- Fishing licences 33 %
- 140 K€

**April - June**

**Export (NL)**
- Fresh and smoked eel
  - Local consumption
  - ~50 t

**Outlook of the Estonian glass eel chain**

- Fresh and smoked eel
  - Local consumption
  - 800 g – 2 kg
  - 15-20 €/kg

- Export (NL)
  - Fresh eels
  - 800 g – 2 kg
  - 15-20 €/kg

- Restocking (Re)stocking) purchases
  - Lake Vörtjäve Fisheries Development Agency (LVFDA)

- Fishing
  - Fresh eels
    - 800 g – 2 kg
    - 15-20 €/kg
  - 15-17t
Outlook of the Czech glass eel chain

Fish merchants and traders

(Re)stocking purchases Czech Anglers Union

(Re)stocking operators

Lakes
Rivers

Leisure fishing

11.8 t (2014)

Small scale smokeries
Home consumption
Catch & release

570 kg
221 € (2014)

> May

EU (EMFF)
Fishing licenses

Budget 2.2 M€ over 2007-2014 (275 000 €/year)
Outlook of the Greek glass eel chain

**French & UK fish merchants and agents**

- **UK**
- **France**

**Local glass eel catches for transfer**

- Water resource users (Hydropower plants, dams and others)

- 100% private financing = 10% of imports + « water users »

- Restocking + Transfer

- 200 kg

**Farming:**

- 3 enterprises

- > 30 cm Yellow and silver eels fishing
  - Individual fishermen (lagoons, lakes and rivers)
  - Professional fishing (lagoons)

- Local consumption

- Silver eels release at sea (30% of total catches)

- ~300 t

- 100 t

- Glass eels
  - Young eels
  - Eels
Outlook of the Italian glass eel chain

Local glass eel catches in 9 out of 20 provinces

- 200 kg
- 400 kg

Farming: 2 enterprises

- ~280 t (2009)

(Re)stocking

- 145 kg
- 300 kg

Yellow and silver eel professional (140 t) and recreational (74 t) fishing

- 210 t

Local market (consumption)

UK

Fish merchants and agents

Public Financing 100%

France

> 12 cm eel import (France)

1900 kg

Local glass eel catches in 9 out of 20 provinces

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Thematic approach of the European eel sector
Restocking mechanisms

GLASS EEL FISHING

51t (2013)
- France: 33.6 t
- UK: 8.6 t
- Italy: 0.4 t
- Spain: 7.8 t
- Portugal: 1 t

Glass eel fishermen

Key operators: Must remain concerned and motivated

Consumption 40%
Restocking 60%

Farmers
Young eels

Processing

Fish merchants
Glass eels

Direct sales OR Tender

Restocking operators
- Fishermen
- Dedicated authorities

Glass eel or young eels purchasing budget

RESTOCKING (Rivers and Lakes)

Scientific advice to reach 40% escapement

Available financing
- EFF / EMFF
- Other public financing
- Leisure fishing licenses
- Sustainable labeling
- Hydropower operators
- Private financing

Eel Management plans

EU Regulation (1100/2007)

Glass eel fishing vs. other fishing activities

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Understanding the actors roles and interactions

+International Organizations
- CITES, CIEM, IUCN
- Provide scientific advice

EU Commission
- DG Mare
- DG Env
- DG Energie
- Regulate

European eel sector
- Fishermen, traders, processors, restocking operators, distributors
- Influnce « + »

ENGOs
- WWF, Greenpeace, France Nature Environnement, etc.
- Warn and influence « - »

Sustainable quality organisations and certification bodies
- (SEG)
- Reassure & certify

Produce and bear consequences

VIA AQUA for FRANCE AGRIMER – Eel market chain study - 2014
Contradictions / Distortions / Discrepancies within the EU eel market chain: focus on glass eels

- Fishermen ↔ Traders
- French traders ↔ European traders
- Northern EU ↔ Southern EU
- Pro SEG ↔ SEG skeptics
- Pro export ban ↔ Anti export ban
- Manual fishing ↔ « Trawling »
- Pro Restocking ↔ Restocking skeptics
- Conservationists ↔ Hydropower companies
- DG Mare ↔ DG Env – DG Energy
- Supplying countries (West EU) ↔ purchasing countries (Eastern EU)
- Legal operations ↔ Illegal operations
- EU member states ↔ EU Commission
- ENGOs ↔ European eel supply chain
- Etc.
The EU eel sector: focus on consumption

• A species with strong cultural roots, and strong segmentations
  – Long tradition of festive product (Christmas, Easter, family occasions), "emotion food"

  – Effect of eel size:
    • glass eel: Spain
    • 120-200 g: Netherlands
    • 150-300 g: Belgium, Denmark
    • 300-500 g: Germany, Baltic countries
    • 500-1000 g: Poland

  – Effect of the mode of production
    • Fishing (less fatty): fresh-cooked and smoked
    • Breeding (fattier): smoked

• A restricted distribution
  – Near absence in supermarkets due to ENGOS campaigns
  – Mainly in fish shops, markets, traditional and Japanese restaurants
  – Some direct and Internet sales
  – Accordingly high consumer prices (superior to those of salmon)
    • 20 €/kg for fresh eel
    • 40-90 €/kg for smoked eel filets
    • 200-600 €/kg for glass eels
The EU eel sector: focus on consumption

- Consumption declining everywhere, due to
  - ENGO campaigns resulting in a 25 to 50% declining consumption in Germany, Denmark and Holland for smoked products
  - Aging consumers population
  - Expensive product
  - Traditional product in France, concentrated in limited areas (West coast & lakes areas)
  However,
  - Some glass eel consumption resuming in UK and France due to very low prices in 2014
  - Lesser impact for products smoked and consumed traditionally (small scale processing and direct sales)

- An image to be revived
  - Very fat fish
  - A weird appearance (snake form)
  - Consumers normally don’t know much about the product
  - Distributors are not eager to promote eel

- A very sensitive yet essential communication
  - Communication is key to revive consumption on the long term
  - Based ion a paradox: promote consumption of an endangered species
  - Need to tell the customer a fascinating story about eel
The EU eel sector: focus on consumption

Good communication assets

• **Toward NGO’s, Supermarket chains, EU Commission**
  – Today: a responsible resource management based on good practices (SEG)
  – Tomorrow: a sustainable management of the resource supported by recognized certification program (SEG/SES)

• **Towards the consumers**
  – A migrating fish which life cycle still bears a certain level of uncertainty and mystery
  – A very “old” species with many stories and legends to tell
  – New taste to experience (smoked eel filets in France)
  – Could stand as the symbol of the EU: panmictic population spread over ~all EU member states
  – Endangered, yet not in extinction and benefiting of intensive care (ex: Dupan in NL)

• **Towards hydropower companies and water « users »**
  – An obvious « Greenwashing » opportunity that would benefit companies, but commitment is the first objective
Focus on **SEG** (Sustainable Eel group)

- A clear picture at first sight: a good practices standard and certification. SEG has a recognized edge and offers a strategic advantage for restocking and farming markets (selection criteria, good support of the product image).

- A more controversial positioning, as perceived by French, German, Dutch and Spanish operators: promoting a « sustainable » eel cannot be justified so far and is considered as an abusive statement that cannot be used to promote the product at the consumer level.

- A criticized governance, considered as insufficiently democratic (no election process), monopolistic (a single certification body), and not enough federative and attractive (no French representative in the standard panel).

**NB:** neither MSC nor ASC have been able to develop a similar standard for eel. It is an opportunity for SEG, which is by far the most advanced certification but does not enjoy the same level of notoriety.
The EU eel sector: focus on consumption

Focus on **DUPAN** and other similar labels

- **Clear objectives:**
  - Develop public awareness about actions carried out by the eel sector (fishermen, farmers, processors, traders) to preserve the species and rebuild the stocks
  - Invite consumers to participate actively in these actions

- **No governance problems**

- **Dramatic success for DUPAN, but a failure for the similar German initiative, considered by NGO’s as useless communication**
The EU eel sector: focus on restocking

- A strategic management choice but not a legal obligation in the EU 1100 / 2007 regulation
  - Some countries do not restock much (Spain)
  - Germany restocks very intensively

- Different methods and objectives according to countries and operators
  - Glass eels (F, NL, GER) / young eels (DK, PL, ALL, LIT)
  - Restocking in rivers (F, NL), in lakes (EST, PL), in coastal waters (SU, ALL)
  - Stocking for further catches (fishermen associations), restocking for species conservation (governments)

- Various and limited sources of financing
  - A mix of EU EMFF / government / region / funding and private funding (fishermen, Hydropower companies)
  - EU financing will not increase, and may well decrease
  - Public financing varies from country to country
  - Private financing varies too, but tends to increase.
  - DUPAN financing system is an example that should be followed in all EU countries

=> Other than the arising of new financing sources, restocking intensity can only depend on glass eels buying price

- Restocking efficiency is controversial
  - Scientists do not agree on that point
  - Without consensus, precaution principle plays against glass eel and eel fishing
  - Other factors endangering the species are not sufficiently taken into consideration (pollution, illegal fishing, rivers ecological continuity)

- Hydropower companies stand is quite contradictory (France)
  - They finance survey and studies, restock above dams, but
  - They do not invest enough in obstacles improvement => do not prove their good faith in species conservation
The EU eel sector: focus on restocking

- **Timeframes do not tally**
  - Fishing and restocking do not take place simultaneously
  - Tenders final decision further delays restocking operations

- **No contact nor communication so far between glass eel suppliers (fishermen) and their final customers (restocking operators)**
  - 3 to 4 intermediary sales that prevent any « win-win » communication
  - Language barriers between EU countries
  - Administration procedures are not standardized between countries

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### Glass eel fishing (coastal waters)

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### Suitable température (> 8°C) to release glass eels into inland waters

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### Tenders for restocking operations

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### Sales

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VIA AQUA for FRANCE AGRIMER – Eel market chain study - 2014
The EU eel sector: focus on restocking

- Some pending questions

  - Glass eels translocation: what actual effects on mortality, growth, migration, stocks improvement?
  - Restocking conditions: How do eel size and water temperature affect the restocking efficiency?
  - What glass eel density at the river mouth would allow the deduction of some quantities from the upstream migrating population (for restocking) without jeopardizing the eel population of the said river?

- Cross boarder cooperation approaches to develop:

  - About restocking efficiency (2012 PAWSON report)
  - About « balance zero » investigated by DUPAN (no effect of glass eel sampling on stocks)
  - On financing (R&D programs, « European DUPAN » label)
  - On setting a common set of defense arguments to be brought to opponents’ attention (EU Commission, ENGOs, supermarkets and consumers).
## The EU eel sector: focus on restocking

<table>
<thead>
<tr>
<th>Country</th>
<th>Glass eels</th>
<th>Young eels</th>
<th>Technical choice</th>
<th>Total sales from fishermen to restocking</th>
<th>Yearly budget</th>
<th>Public subsidies</th>
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<tr>
<td>HOLLAND</td>
<td>2</td>
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<td>375</td>
<td>60-100</td>
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<td>GERMANY</td>
<td>3</td>
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<td>335</td>
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<td></td>
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<td>420</td>
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<td>FRANCE</td>
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<td>2000</td>
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<tr>
<td>UK</td>
<td>1</td>
<td>1 ton glass eels (foc)</td>
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<tr>
<td>SWEDEN</td>
<td>3</td>
<td>3</td>
<td>permanent choice</td>
<td>252 (purchases) + 255 (quarant.)</td>
<td>84%</td>
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<tr>
<td>ESTONIA</td>
<td>2</td>
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<td>147</td>
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<td>POLAND</td>
<td>Public: 3</td>
<td>Public: 3</td>
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<tr>
<td></td>
<td>Private: 4</td>
<td>Private: 4</td>
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<td>SPAIN</td>
<td>Donation (eels)</td>
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<td>CZECH REP.</td>
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<td>GREECE</td>
<td>100-120</td>
<td>100-120</td>
<td>frequent choice</td>
<td>100-120 10% catches + private financing</td>
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<td>ITALY</td>
<td>2</td>
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<td>frequent choice</td>
<td>130</td>
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<td>LITHUANIA</td>
<td>2</td>
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<td>frequent choice</td>
<td>90-100</td>
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</table>

- **Holland**: Public subsidies are 100%, with a total sales range of 375-600€.
- **Germany**: Public subsidies are 80%, with a total sales range of 335-750€.
- **Denmark**: Public subsidies are 50%, with a total sales range of 380-1200€.
- **France**: Public subsidies are 96%, with a total sales of 2000€.
- **UK**: Public subsidies are 0%, with a sales of 1 ton glass eels.
- **Sweden**: Public subsidies are 84%, with a total sales range of 252-255€.
- **Estonia**: Public subsidies are 66%, with a total sales of 147€.
- **Poland**: Public subsidies are 100%, with a sales range of 500€.
- **Spain**: Public subsidies are 0%, with a donation of eels.
- **Czech Republic**: Public subsidies are 0%, with a total sales of 275€.
- **Greece**: Public subsidies are 0%, with a sales range of 100-120€.
- **Italy**: Public subsidies are 1%, with a total sales of 130€.
- **Lithuania**: Public subsidies are 90%, with a sales range of 90-100€.

Note: The choices for technical choice are classified as "seldom", "frequent choice", and "permanent choice".
The EU eel sector: focus on farming

- Highly concentrated in Holland and Germany: respectively 50% et 25% of European volumes

- Strong technological edge from Dutch and Danish operators, and particularly from Nijvis group

- "Rule of thumb": 1 ton glass eel yields ⇔
  - 300 tons fresh eels commercial size (German ratio)
  - 175 tons smoked eel filets (Dutch ratio)
  - 1 ton of glass eels in natural environment yields to 3 to 100 t of silver eels (according to various scientific sources)

- Strong links between farms and the processing industry (smokeries) and between farms and restocking operators (glass eels holding in tanks, and young eels production)

- Controlled reproduction program on the way (Pro Eel), but no expected outcome before 10 years
The EU eel sector: focus on farming

- Farming production has decreased by ~75% since the beginning of the eel crisis

- Unsold inventories in 2014: ~1500 t = ~30% of yearly production  
  => « panic selling » below cost price, that further worsens the market  
  - Average market price (2013): 7-9 €/kg ex farm  
  - 2014 selling price: 5-6 €/kg

- Artificial reproduction is a true perspective to release the fishing pressure on glass eels, but  
  - NGO’s may not understand that in the meantime, the eel sector, as the main user of this research program, has to be protected and operating  
  - What future for this program should the resource come back for good?  
  - What future for the resource (through restocking ) should this research program be a success?
The EU eel sector: focus on glass eel fishing

• Different fishing time slots from South to North of Europe

• Professional status and production costs vary:
  – Leisure fishing (UK, «pocket money» vs. professional fishing (France, main income)
  – Investment: 250 € (UK, hand fishing from river banks), 2000€ (Spain, hand fishing from light boats) 20 000 € (France, trawling in wide river mouths)
  ⇒ Profitability distortions and different socio-economic stakes

• Various fishing methods => uneven quality:
  – Survival rate (<1% to > 50%)
  – Glass eel fishing image («soft» fishing vs. «hard» fishing)
  – Restocking image

• Better image for a «soft fishing» at the EU level
  – Useless for the Spanish market for direct consumption
  – Important for the farming market
  – Crucial for the restocking market
The EU eel sector: focus on glass eel fishing

• Very strong recruitment of high quality glass eels in France, UK and Spain,
  – For the past 3 years
  – 2014 close to 1980’s situation

• Some recruitment in countries formerly deserted by glass eels: Holland, Germany

• Price collapse further to:
  – Offer increase (strong recruitment)
  – Demand decrease (smoked eel consumption decrease)

=> Price decrease from 300-400 €/kg (2010-2013) to less than 50 €/kg (late 2014 fishing campaign)
EU/Cites Export ban outside the EU

• The initial objectives of the ban:
  – Preserve the resource
  – Keep glass eels within the EU
  – Keep glass eel prices low enough to facilitate restocking

• Consequences of the ban
  – The whole eel sector has been badly affected: fishing boats dismantling, retrenchments, buying price to fishermen decreasing below breakeven point.
  – Outbreak of organized illegal glass eel export to Asia
    ⇒ Official market figures do not mean much any more
    But:
    – Restocking has been intensified due to low prices

• Disappointing results of the EU decision, and questionable decision of the eel sector to refuse a 14 t export quota offered by the EU commission in 2009
Illegal glass eel export rumors and facts

- Portugal
- Spain
- France
- UK

- Morocco and other Maghreb countries
- Bulgaria, Greece, Russia (Kaliningrad), Belarus, Albania

Net margin for «operators» > 1000 €

Estimated volumes 25-50t ???

- China, Philippines
- Japan (Kabayaki) 100 000 t/year
- Other Asian countries 150 000 t/year

50/80 €/kg

- Spain

800 - 3000 €/kg

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The EU eel sector: focus on export outside the EU

Illegal glass eel export rumors and facts

• Volumes estimation
  – « very important quantities »
  – Figures range around 25 t/year to > 50t / year

• Organizations
  – Many routes
  – Operators are well organized and move from country to country depending on the repressive pressure
  – Repression : is also well structured in France (Onema, Ministère de l’Intérieur) and in Spain (Guardia Civil / SEPRONA) with significant results (« Operacion suculenta ») but a strong feeling of unachievable objective.

• Suggested points of improvement
  – Improve full traceability and controls
  – Implement specific commodity codes for glass eels to help traceability
  – Standardize EU commercial documents
  – Connect member states administrations in charge of checking their national operators’ invoices
The EU eel sector: focus on export outside the EU

On what grounds should the EU / Cites ban be renegotiated?

- Cites does not prevent the trade of endangered species but demands their trade to be under control.

- The EU export ban has been decided « urgently » and upon insufficient and unchallenged scientific grounds.

- 2 conclusions :
  - Scientific work has to be updated and agreed upon.
  - It is unfair and hazardous to suddenly deprive fishermen from their vital resource. A transition period had, at least, to be set in order for them to adapt to the situation.
The EU eel sector: focus on export outside the EU

What arguments can be set forth to renegotiate the EU Ban?

• Glass eel fisheries may well disappear resulting in the whole sector to be affected: no more smoking, nor restocking

• Inland fishermen have to be taken care of, as they have a key role as witnesses of the rivers health

• Fishermen are not the only cause of eel depletion, but they are the first victim of the ban

• Glass eel recruitment has been excellent in 2014, for the third year in a row

• Export may be used to finance restocking, by implementing an export tax

• Such tax could also be used to finance river continuity programs

• Why cannot grown up eel be exported from the EU whereas the same product can be exported from Maghreb countries?
The EU eel sector: focus on export outside the EU

What difficulties in renegotiating the export ban?

- As long as the resource has not come back and stabilized at a satisfactory level, Cites and the EU will not allow any export.

- Even if an export quota was set for finished product, a « made in France » Kabayaki may not be welcome on the Asia market.

- The political context is not favorable to a reopening of the export: pure conservationists have strengthened their position within the EU Commission, and rivalries between General Directories are strong.

- An export quota for glass eel could not be accepted without an equivalent import quota for Asian eel to the EU, resulting in a price war that already occurred in the past.
The EU eel sector: focus on environmental issues

- Hydraulic issues are being addressed by some countries as a major cause of the species endangering

- River ecologic continuity
  - As major producing country, France does not keep its promises on improving its 1200 migratory obstacles
  - Hydropower lobby has no sufficient concern about improving the ecologic continuity of the French rivers

- In the Netherlands: recent investigations about the origin of the species depletion confirms the effects of the building of polders and dykes. The closing of inland seas may have resulted in:
  - Glass eels recruitment has become impossible
  - Fresh water of Inland seas does not press eels to migrate upstream to continental waters
  - Downstream migration has become impossible.

- Such constructions were decided to improve people safety (further to 2000 flooding casualties in 1953), and sanitary security (drinking water supply for Amsterdam). « Today, similar objectives could definitely not be met using the same means »
What perspective for the European eel sector?

- Parameters that can help improve the current situation will become effective at different timeframes
  - Resource reconstitution
  - Export outside the EU
  - River ecological continuity
  - Controlled reproduction
  - Consumption
  - Glass eel nursery (in France)

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<td>Controlled Reproduction</td>
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</table>

- How long can the eel sector survive until a positive change occurs?
What perspective for the European eel sector?

• The current and future difficulties are not only those of the French eel fishing sector, but those of the whole European eel sector. French operators must realize that cooperation with the other EU countries is the only way to face this challenge.

• Given the resource condition, the resource ⇝ sector issue is relevant.

• Although everyone agrees on the « resource » point (which has to be saved and restored), the « sector » issue divides opinions into two:
  - Ban eel fishing to protect the resource => terminate the sector
  - Use the resource to protect it => preserve the fishing and processing sectors

• However, the EU 1100/2007 regulation follows the « use to protect » option, which is considered by pure conservationists as a “soft compromise” rather than a firm stand.

• The European eel sector as a whole has to change this wrong perception.
Tackling 2014 threats and grabbing 2014 opportunities

• It is the right moment to have the «European eel sector» concept blossom since all member states and operator do suffer:
  – fishermen (eels and glass eel): do not live out of their fishing
  – Farmers: cannot sell their inventories
  – Processors: reduce their production to adapt to a shrinking consumption
  – Certifications bodies (SEG): are losing members
  – National authorities: face a long term crisis
  – Scientists: cannot find enough financing

• The review of the **EU1100/2007 regulation** is a risky and key step, but a good opportunity to launch that concept and speak with one “European eel” voice.
Tackling 2014 threats and grabbing 2014 opportunities

• The European eel sector as a united whole to emerge as a reliable and pro-active counterpart to the EU, and key international organizations: EU, Cites, ICES, eNGOs, public opinion and consumers

• The European eel sector to address priorities:
  
  – Adapt communication tool to target:
    • A « European SEG » to talk to officials and industries concerned
    • A « European DUPAN » to talk to consumers
  
  – Succeed in keeping the EU 1100/2007 regulation framework unchanged

  – Act on the identified leverages:
    • Support the glass eel fisheries through an EU SEG, full traceability, stringent controls and closer links between fishermen and European restocking operators
    • Support consumption through a « European Dupan »
    • Support and justify restocking through ad hoc scientific cooperation
    • Unlock the export ban through a common negotiation with the EU authorities based on a possible tax on imports that would support eel restoration actions
    • Farming: include eel into the « European aquaculture project », and support the « Pro Eel project »
    • Environmental issues: press the relevant authorities to balance the pressure equally on all causes that endanger eel and not only the fishing industry, and address that issue at the European level with all parties concerned.
Tackling 2014 threats and grabbing 2014 opportunities

• The French eel industry to address its weaknesses:
  – **Improve French glass eels quality** to enhance the image of the French glass eel for restocking and farming
    • Accurate analyze of the glass eel fishing sector
    • Where / when / how can ‘UK quality » glass eel be caught in France
    • Where / when / how can French fishing techniques be improved?
    • How can a «French controlled quality eel » be developed, and /or, how to join SEG?
  – **Improve eel fishing profitability**
    • Cost analysis and comparison between EMUs and fishing fleet
    • Improvement of the fishing gears and methods in a cost effective objective (hand fishing, less quantity / better quality, fish on order, certified fish etc..
  – **Get a better market understanding**
    • Identify the restocking and farming operators in other EU member states
    • Initiate contacts and communication between the fishing sector and the final users

• The French eel sector to profile itself as a leading force of the European sector
  – Organize in France a European eel symposium aiming at finding common and global solutions to the current situation
  – Unlock sensitive issues and possible causes of misunderstanding between EU operators
  – Create consensus spirit
  – Identify urgent research issues that have to be investigated
  – Overcome misunderstandings and join forces to address the problems at EU level in a unified way
Appendices
<table>
<thead>
<tr>
<th>Country</th>
<th>Contact</th>
<th>Address / Business</th>
<th>Position</th>
</tr>
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<tbody>
<tr>
<td>France</td>
<td>Philippe BOISNEAU</td>
<td>CONAPEDD</td>
<td>Freshwater Professional Fishermen Organisation Chairman</td>
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<td>Marc-Adrien MARCELLIER</td>
<td>SEG France</td>
<td>SEG France's Representative</td>
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<td>Didier MOREAU</td>
<td>ETHNOCONSERVATION</td>
<td>NGO France's Representative</td>
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<td>Patrick PROUZET</td>
<td>IFREMER</td>
<td>Research institute</td>
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<td>José JOUNEAU</td>
<td>COREPEM</td>
<td>Vendée-Loire Professional Fishermen Organisation Chairman</td>
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<tr>
<td></td>
<td>José AGUIRREBARRENA</td>
<td>AGUIRRE BARRENA</td>
<td>Fishmonger General manager</td>
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<td>Vianney LOZEAL</td>
<td>AGUIRRE BARRENA</td>
<td>Fishmonger Salesman</td>
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<td>Nicolas MICHELET</td>
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<td>Thomas NIELSEN</td>
<td>CRPM Aquitaine</td>
<td>Trader, biologist Trader, biologist</td>
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<td>Daniel DÉLANAY</td>
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<td>Eric FEUNTEUN</td>
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<td>Museum National d'Histoire Naturelle biologist</td>
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<td>Jérémie SOUBEN</td>
<td>ARA FRANCE</td>
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<td>Mireille SEGUIN</td>
<td>GIE AIGUILLON</td>
<td>Fishmonger Board member</td>
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<td>Multiple retailer Counter clerk</td>
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<td>M. LOPEZ</td>
<td>CARREFOUR Balaruc</td>
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<td>Edouard ROLLAND</td>
<td>LE FUMET DES DOMBES</td>
<td>Fish processing President</td>
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<td>M. GUILLIBEAU</td>
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<td></td>
<td>Marco CIAMBELLI</td>
<td>Ministry for Environment, Sustainable Development and Energy</td>
<td>CITES/ Direction Inspection Foreign Trade Attaché</td>
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<td>Erwann LE FLOC'CH</td>
<td>SMIDAP</td>
<td>Regional Seafood Development Board - Loire Vendée General manager</td>
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<td>Mme MATHIEU</td>
<td>Ets FOUCHER MAURY</td>
<td>Fishmonger Manager</td>
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<td>OP ESTUAIES</td>
<td>Producers Organisation Sales director</td>
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<td>Benoit BOURBON</td>
<td>DPMA / Ministry for Agriculture &amp; Fisheries</td>
<td>Bureau Pisciculture Pêche continentale Attaché</td>
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<td>Denmark</td>
<td>Michael ANDERSEN</td>
<td>DANISH FISHERMEN ASSOCIATION</td>
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<td></td>
<td>Lene JENSEN SCHEEL-BECH</td>
<td>DANISH DIRECTORATE for FISHERIES/ Ministry of Food, Agriculture &amp; Fisheries</td>
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<td>Michael INGEMANN PEDERSEN</td>
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