Latest news updates from the Sustainable Eel Group

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Sustainable *Eel* Group

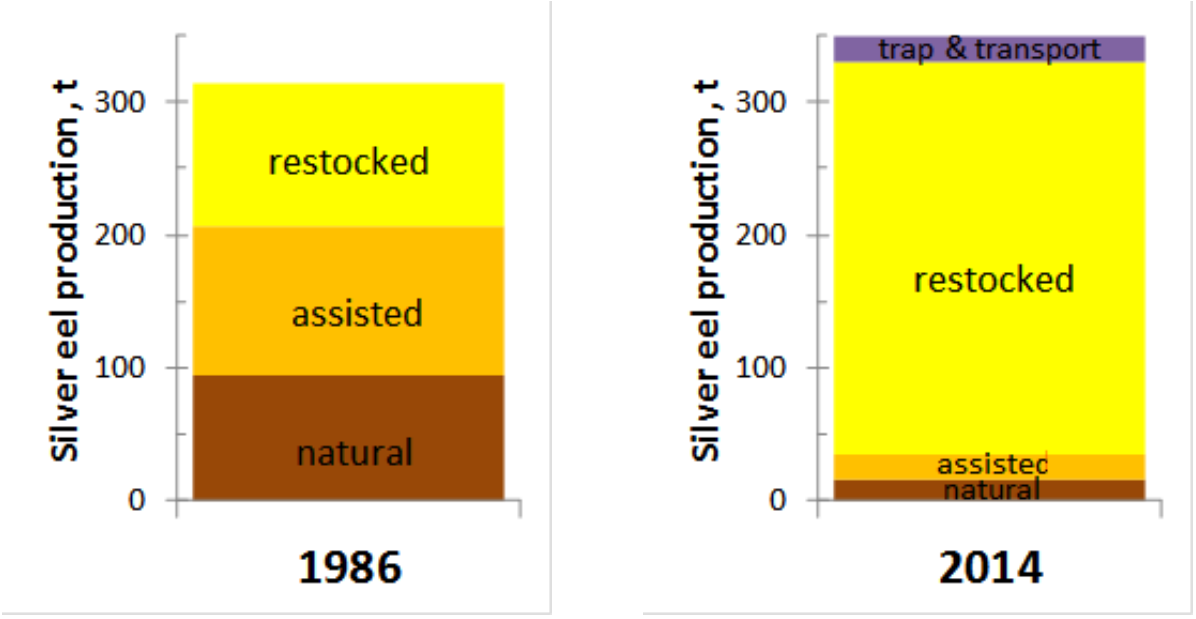
Newsletter June 2015

Eel Recovery – dramatic new evidence published

Critical new evidence that re-evaluates the global priorities for eel recovery has been published in Sweden. The report from Sweden's leading eel scientists, Willem Dekker and Håkan Wickström of the Department of Aquatic Resources at the Swedish University of Agricultural Sciences, reveals that:

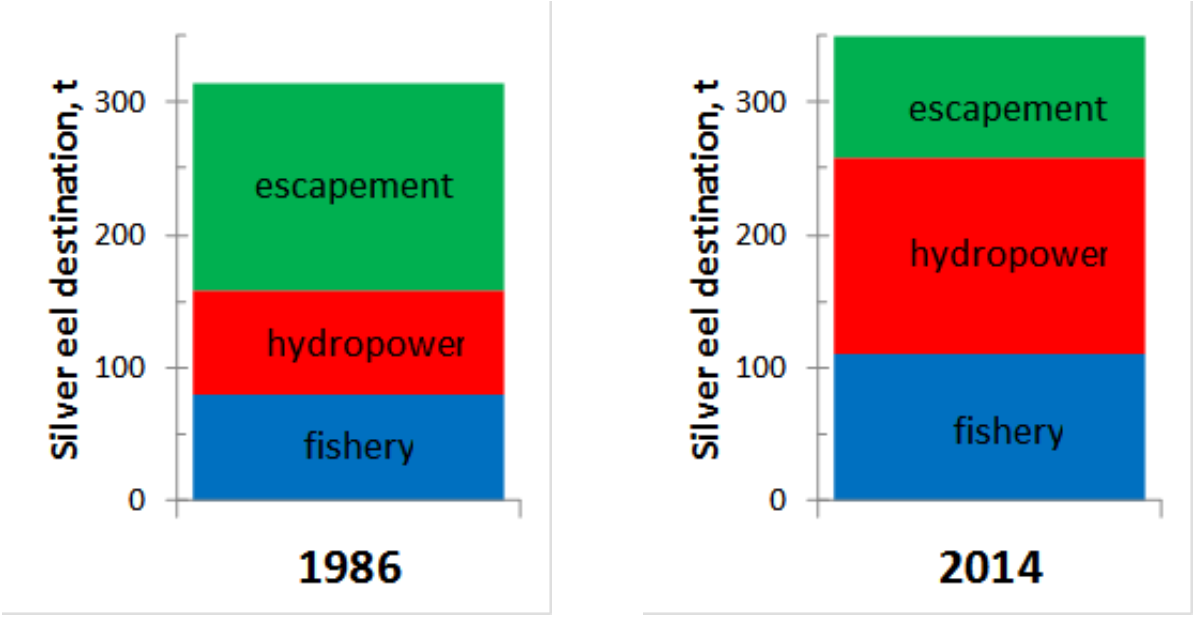
- In inland waters hydroelectric power turbines are now the largest cause of eel mortality in Sweden
- the vast majority of freshwater eels in Swedish waterways have been relocated from rivers in the UK and France

The groundbreaking new evidence is disclosed following analysis of 75 years of data from power companies, marine authorities and other research institutes in Sweden. This showed that while the source of silver eels in earlier times, e.g. 1986, was divided equally between restocking, assisted immigration and natural recruitment, by 2014 restocking is responsible for 90% of Swedish silver eel production.



> *'Every time I see this plot I am surprised how important restocking has become in Sweden and how much the composition has changed'*
> *Willem Dekker, 8 June 2015*

The report also shows the fate of silver eels in respective years. In 1986 the fresh water eel fishery and hydropower were each responsible for about 25% of silver eel mortality, and 50% were able to continue their migration. But in 2014, although overall numbers were up, only 26% were able to escape for migration, with 32% mortality due to fishery and 42% due to hydropower (some 147 tonnes of silver eels).



Willem Dekker concludes there are no easy answers, as the principal causes of eel mortality also play a critical role in its sustainable future. "The fishery has a double role, and hydropower is the main mortality" he said. "But at the bottom line, hydropower is providing the main money for any action on eel, and the fishery is critical for trap and transport initiatives. Without the restocking, there would hardly be an inland stock;

without the fishery, there would be no trapping for transporting; and without the hydropower, there would be no financial basis – a real catch-22 situation."

"When and where the fishery exceeds sustainable limits, restrictions should be applied – even if the gain would still be annihilated by other impacts. But equally well: where and when hydropower mortality exceeds sustainable limits, restrictions should be applied – even if the full potential will only be achieved after the fishery has been restricted too. And best: When and where the total impact exceeds sustainable limits, parties should cooperate to jointly achieve those limits."
An explanation of this increase in hydropower mortality is due to an increase in restocking during the 1980s and 1990s, and more recently restocking efforts have been concentrated in westward flowing rivers (and on the open west coast) (*Dekker and Wickström*). The power companies have also restocked in coastal water to compensate for the hydropower mortalities in rivers and lakes and increase escapement. However this is unlikely to show results yet, given the time to maturity as silver eels of at least 15 years. Trap and Transport has been practiced since 2011 and has resulted in an immediate effect on escapement.

Sweden operates a quarantine system to try and eliminate the risk of importing any viruses. The minimum length of the quarantine is 65 days to allow time for all virus tests to be completed. Survival is very high and the total mortality from capture to restocking using glass eels that meet the Sustainable Eel Standard (UK Glass Eels and Scandinavian Silver Eel) is on average less than 10%. The figure of 10% is much lower than any figure reported for the natural mortality in the Severn glass eel fishery. At the restocking release moment the quarantined eels have at least doubled their weight and during the next 15 years they grow an average of 4.4 cm/year (*Dekker and Wickström*). The authors calculated mortality to be approximately 10%/year and after 15 years there are 15% silver eels remaining.

The research into the navigation patterns, completed by Håkan Westerberg and Niklas Sjoberg in the EELIAD project, prove that the restocked eels leaving Sweden use the same routes into the Atlantic as those silver eels with a completely natural recruitment background. They are therefore likely have the same chances of completing the return migration to the Sargasso Sea.

The 2014 Evaluation Project (www.krafttagal.se) program was followed by a steering committee with representatives from Vattenfall hydroelectric AB, the governmental Marine and Water Authority, E.ON Hydro Sweden AB, Fortum Generation, Holmen Energi, Statkraft Sweden AB, Technical Office in Linköping AB and Elforsk / Energy Research Institute; and the report includes an evaluation of the targets set for the program measuring Krafttag eel. The objectives of the measures would be evaluated at the end of the program was decided already when the program started, in 2011. The aim was to get an analysis and documentation of goal attainment. See www.krafttagal.se for the full report.

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Chairman's Letter

June is upon us, the sun is shining and another eel migration season has passed. The challenges facing those of us working for eel recovery seem as great as ever as SEG passes its 5th anniversary – and the core question remains: are we making a difference?

At the SEG anniversary gathering this spring, leading eel scientist Dr Willem Dekker gave the key address and left the audience of 60 people at Fishmongers Hall sharing his sense of hope for the future, rather than the despair that he had felt for so many decades.

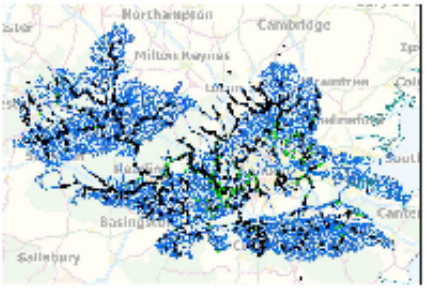
As our lead story shows, Willem and his colleague Håkan Westerberg have produced dramatic further evidence to show that their programme of translocation of glass eels from the river Severn to Sweden really works. It also shows how serious the problem of hydropower has become and also how without the money from the power companies there would be no translocation programme.
So the hope is based not so much on the recent indicative statistics of recovery, but on the fact that the people who really care about eels are now banding together and taking collective action to save the species throughout its natural range. The science is showing that collaboration and working with other organisations from all walks of life is the only way to make a difference.

This sense of hope is also realistic – and is based on a long term view. On the road to recovery we should all expect many ups and downs. Whilst it is true that glass eel recruitment numbers have always varied widely year to year, and it has shown significant improvements for three years in a row, it is likely that the 2014/15 season will record a significant dip - back to 2011 / 2012 levels. It is still very early as the scientists gather in the information and feedback their returns, and we all wait with keen interest to see how the new data impacts the 5 year rolling average.

SEG is all about taking effective action, and my message to you all is keep doing more of the same - that is concentrate on the migration pathways, control and limit exploitation and deliver the translocation / restocking programmes.

Our additional energies need to go into organising better and more measurement of eel populations and at all life stages (glass, yellow and silver).

I commend the outstanding work of ZSL on the Thames with their army of over 300 trained Citizen Scientists, who carry out the monitoring, counting and the maintenance at their eel passes. All the major eel river basins urgently need such a mobilised volunteer force.



It is not clear yet whether the European Commission will revise the existing Eel Regulation, however we need to acknowledge that it calls for 60/40 ratio of restocking to consumption. This target has been hopelessly missed in all the major glass eel fisheries except in England. We are going to have to find answers to meet this challenge - particularly because, given the economic climate, the answers are unlikely to come from governments. A possible example is the Parrett fishermen and collectors who in 2014 between them donated their fish to SEG for translocation in order to meet the goal. So maybe SEG and the industry / fishery has to find the answer. Perhaps the consumption 40% has to help provide the trigger cash and time to fuel the conservation 60%.
The only secure future for the eel is a sustainable one – in this way the combined energies of conservation, science and the industry can make the difference.
As Dr Dekker said at our conference and in this newsletter: There is Hope.

Andrew Kerr, SEG Chairman

P.S. SEG will be at the Fish Passage 2015 Conference in Groningen 22-24 June - do come along and see us.

Eel heroes recognised at SEG's 5th anniversary conference

Five leading figures behind the development and progress of the sustainable eel movement were recognised during the SEG 5th Anniversary conference at Fishmonger's Hall in April.
The awards were given by the Environment Minister of the last UK Government, Lord de Mauley. The citations from the awards panel and SEG Chair Andrew Kerr are as follows:

"These Awards are given in recognition of long term important contributions made to the sustainable eel agenda. They are given to individuals but let us not forget

that alongside them, within their organisations, there are many others. My thanks to all of you who wrote in and especially to Miran, Brian and Richard for their conclusions and citations."

CONSERVATION

David Bunt (Environment Agency, England and IFM)
Since starting on this citation/award exercise, I have come to realise that David is an ‘unsung hero’ of SEG and deserves more recognition. He has made major contributions to SEG, being intimately involved in its inception and playing vital roles as its Secretary and dogsbody administrator etc and, especially, as Chair of the Eel Standard Panel.

SCIENCE

Willem Dekker (Department of Aquatic Resources, SLU, Sweden)
For his long-term contributions to the study of eel biology, population biology and conservation. Especially for his work at raising the awareness of the plight of the eel, for his Chairmanship of ICES at a difficult time, and for his continuing energies within ICES and the advice to the European Commission.

INDUSTRY

Peter Wood (UK Glass Eels)
For his work over many years refining the technology for catching, storing and transporting glass eels resulting in very low mortalities. Peter has been instrumental in establishing the Sustainable Eel Group and promoting the Sustainable Eel Standard and in setting the benchmark . He has also supported many restocking projects and continues be very generous and active within SEG.

CONSERVATION

Andy Don (Environment Agency, England)
Andy has been professionally involved with eel issues for 25 years; championing the plight of the eel even when it was ‘unfashionable’ to do so. He had the original concept of and was co-organizer with David Bunt of the Bridgwater and London eel conferences, the first of which helped form the fledgling SEG. He has contributed both at an operational and strategy

level in improving the lot of eel: developed the ‘Eel Pass Tile’ in his own time, and was the chief architect of the ‘alternative measures’ process to deliver contributions from industry to deliver EMP outcomes.

INDUSTRY
Alex Koelewijn (DUPAN Foundation, Holland)
To recognise the role he has played in the formation and development of DUPAN. Without his leadership the largest European market and industry would not have made the decision to adopt the Sustainable Eel Standard and to champion the recovery through conservation and sustainability.

Despair turns to hope – European eel leaders told at SEG 5th Anniversary

The significant increases in elver recruitment in recent years, and the accelerating support for sustainability across Europe, are giving renewed hope for the eel – Europe’s principal eel scientists, conservations and industry leaders agreed at the SEG 5th anniversary conference in April.

Dr Willem Dekker of Swedish University of Agricultural Sciences opened the conference at Fishmonger’s Hall with a detailed look at eel populations and human interventions over the last 1,000 years – concluding that sudden increases in the last 4 years provided renewed hope for the fortunes of the eel in Europe.

Over 60 delegates gathered at the SEG 5th Anniversary conference in London to hear a variety of presentations that outlined the positive and unexpected increase in elver recruitment, and also the extensive projects underway across Europe to open up key waterways and remove barriers to migration.

Frank Hoffman of Wetlands International and Peter Philipsen of EIA demonstrated the plans to create clear passage for eels and other migrating in thousands of kilometres of waterways in the Netherlands and the wider Rhine-Delta.

Mike Morris of the Severn Rivers Trust and Sam Chapman of the Environment Agency gave details of the plans to open up the River Severn to enable eel migration, a project that will involve a wide number of innovative partnerships across many sectors.

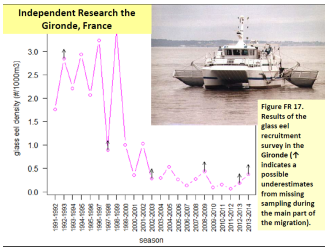
Andrew Kerr, Chairman of SEG said: “The atmosphere in the eel world is much more hopeful than at our inception 5 years ago. While we’ve seen a huge amount of progress in the last 5 years, and are excited about what else can be achieved in future, there is still much more work needed. This will require new partnerships of many organisations and people building transnational projects all based on science, conservation and the eel industry – all coming together to collaborate for a sustainable outcome.”

News from Nantes, France:

Elvers poachers fined

Twelve amateur and professional fishermen were appearing Tuesday before the Criminal Court of Nantes for capturing eels as they did not have the right.
The defendants, many "usual poachers" who stalk elvers, at night, on the locks of the Erdre or la Martinière Canal. One of them, an unemployed native of Gorges said to have been verbalized "30 to 40 times" and have paid in whole, at least 30,000 euros in fines. That did not stop him from again by placing a trap at the entrance of a nozzle on the Goulaine.
The perfect trap.

Some recognize the facts without blinking. "It was to eat. Not for resale", they assure while the price of eel fry kilo has a price between 300 and 400 euros. Others deny the obvious pretext that they had no hand sieve when they were arrested.
Thirteen defendants were all convicted and sentenced to terms ranging from 500 to 8000 euros for a repeat offender.



River Parrett and Tone Sustainable Fishery

The 2015 elver season started with high expectations, with many of the same faces, as well as some newcomers, preparing their gear for what they hoped would be another good elver run. There were approximately 200 Authorisations issued this year, however, the numbers fishing the Parrett and Tone were far less than this. Unfortunately quantities were well down this season and ‘The Big Run’ didn’t materialise.

The elvers were definitely there as sightings were plentiful. It is pleasing to note that amongst the by-catch, particularly toward the end of the season, were many small eels (last year's elvers). This bodes well for the future.
Some of the factors causing the elvers to become ever more elusive and difficult to catch included: changes to the river caused by dredging towards the end of last year, dominant easterly winds, high atmospheric pressure, unseasonably low water temperatures in February and early March, numerous daylight tides and very few dark tides and, sometimes, just bad luck!

Many fishermen ended their season early; only seeing 25% of their 2014 catches. A few die-hards were still out to the end of the season; just in case the elvers ran in the final days of the season. The feeling on the river is one of disappointment and frustration after last year's high. Despite this, there has been no illegal activity. The fishery is pleased to report that 2015 will be the first year that no infringements have been recorded. This is in no small way thanks to the elvermen who remain determined to support and protect this great traditional fishery so that it may achieve its aim of becoming a totally sustainable artisan industry for generations to come.
Liaising with the Environment Agency, fishermen have worked hard since 2010 to achieve this aim, most notably changing equipment including using smaller sized nets with pole restrictions. We have assisted in developing new rules and followed these; limiting the time the net can be in the flow, sorting the by-catch and returning it to the river and staying with the net at all times. All this has greatly contributed to the sustainability of elvering.

We would like to extend our thanks to all parties involved in supporting our fishery particularly SEG and Andrew Kerr for starting the ball rolling as well as the elvermen and woman of the Parrett and Tone whose achievements are held as a model for sustainable fisheries across Europe. It is now up to each of us to continue our efforts, support our fishery and strive to achieve a secure, sustainable artisan industry.

Bristol Water's Spawn to be Wild Project and Eel Protection Schemes

Spawn to be Wild is an innovative school project run in partnership with Bristol Water and the Avon Wildlife Trust, which brings elvers into Bristol schools. The children then learn about their lifecycle and the challenges they face, as well as sessions on the water cycle, conservation, freshwater habitats and pollution. The project finishes with a fieldtrip at the Bristol Water owned Blagdon Lake to release

the elvers back into the wild.

The project forms part of Bristol Water's National Environment Programme to open up migratory pathways and screen abstraction points to prevent entrainment under the EU Eel Regulation 2007. Bristol Water has 11 eel protection schemes to deliver over the next five years, this includes seven investigations and four construction projects. The alternative measures scheme, which Spawn to be Wild is delivered under, has already seen collaboration with key stakeholders within the catchment. Projects on the horizon include habitat creation and restocking, as well as a feasibility study into screening the abstraction at this site.

By Sophie Edwards, Environmental Officer

5 years DUPAN and Sustainable Eel Fund

Five years ago, on 1 June 2010, the Chairmen of the Dutch eel farmers (NeVeVi), the Dutch Eel Traders (NeVePaling) and the professional fishermen (CvB) joined their strength to help the eel in Netherlands. They founded the DUPAN Foundation in the same year the Sustainable Eel Fund was created. Ever since, DUPAN's motto is: ***working together for a sustainable eel sector***. In 5 years, a lot has been achieved. The industry is very well organized, and every year there is a vast amount of money available to carry out important projects to help the eel in the Netherlands and Europe. But we are not there yet. So we will certainly continue our work in the coming years.

Successful project restocking glass eels 14 April

On April 14, about 860,000 glass eels where released in the lakes of Wolderwijd and Veluwemeer. This year the Dutch nature is restocked with millions of young eels in several projects, both glass eels and juvenile eels. With these projects the Dutch government and DUPAN intend to boost the eel population in The Netherlands.
The glass eels where recruited in France. To be able to buy the eels, DUPAN received a grant from the European Fisheries Fund. The trader was selected after a European tender procedure. In the beginning of April, they were transported by truck in 273 cool boxes. Professional fishermen Henk Timmer and Jan Foppen, took off with their ships and released the many hundreds of thousands glass eels in the Dutch lakes. The government specially selects the waters where the young eels are released. From here, after the eels have grown to silver eels in a decade, they will meet no obstacles when they want to go back to the ocean to spawn in the Sargasso see.

The restocking activities and ‘the story behind it’ were covered by several regional and national broadcasting stations on TV, including the eight ‘o clock news.

Restocking with juvenile eels 10 June and august
Some 430,000 juvenile eels will be released on 10 June in the Dutch lakes Gooimeer and Eemmeer. The trader for this project was selected after a European tender procedure. DUPAN received a grant from the European fisheries fund. In august a second project, also granted by the EFF, will take place. The tender procedure is still going on at this moment.

Several private restocking initiatives
In 2015 DUPAN helps several associations and clubs with their restocking initiatives. The recreational fishermen from KIJG and Ons Belang, collect money to buy eels for restocking. DUPAN doubles their budget with the help of the Sustainable Eel Fund (Duurzaam Paling Fonds). This way KIJG was able to buy 37,000 juvenile eels, Ons Belang bought 8000. Both clubs give a lot more eels back to nature than the number they catch on a yearly basis.

Waterboard realises eel passage in the province of Zeeland
The waterborad in the province of Zeeland, Waterschap Scheldestromen, has realized two big fish passages that connect the inlands with the Oosterschelde. The passages are monitored by professional fisherman Peter Kooistra. He found out that the passages are very successful for the migration of glass eels. Since March 2014 he detected 1500 glass eels per night during the season from March until June. Click on the video below to see him in action!

Catching and releasing glass eels in Holland

History of Eel in Europe

At SEG's lustrum meeting in Fishmongers Hall in London, Willem Dekker gave a presentation on the history of eel fisheries and management across Europe. For SEG's Newsletter, he summarises:

Eel fisheries are found all over the continent. Hence, historical sources discussing eel are not hard to find - but few sources provide more than anecdotal information. The 'Domesday Book', though, documents the tax levied by William the Conqueror in 1086: 225 fisheries at watermills across England paid a total of 200 tonnes of silver eel as tax in kind, and an additional 400 fisheries (on eel too?) paid their tax in cash. In our modern eyes: incredibly large volumes.

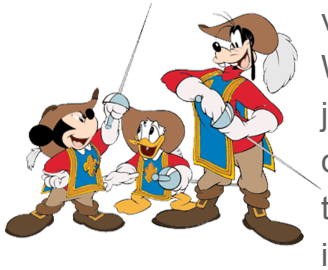
In the mid-1800s, upcoming industrialization and 'improved' water management had an increasing impact on freshwater fish. In order to compensate, one developed artificial reproduction and stocking. But – despite all endeavours – that technique did not work for one of the most valuable and appreciated species: the eel. So how did that creature reproduce? For many decades (and still!), scientists across Europe racked their brains over what became known as "The Eel Problem".

In the 1900s, technological developments (restocking, gears, transport, processing, and so forth) made eel fisheries blossom all over the continent. Even though some sources kept mentioning the ongoing decline of the stock - in the early and late 1800s, and again in the early and late 1900s – most attention focused on technical compensation and development. Eternal optimism and the lack of a continental overview prevented adequate action - until the very end of the 20th century, when one finally took notice of the deplorable state of the stock.

In the early 2000s, the EU initiated its plans to protect and restore the stock. Protective actions are now coordinated across the continent, and comprehensive management is initiated in many countries – witness SEG's first lustrum (that many more may follow). As complex as eel discussions can be, the core of the European protection plan is simple: One for all, and all for one – one fish for us all, so all of us care for that one fish. Where anyone is yet under-achieving (we have to be honest about that), all can be the weaker brother's keeper and mainstay.

A history of decline and failed attempts to deal with that; a stock cut by so many knives; so many different interests; and such a wide area to be coordinated – what pie in the sky are we aiming for? Since 1980, the volume of glass eel arriving from the

ocean has declined by 10-15% per year, almost consistently. Would a bit of protection here or there make any difference? Well, the rise in glass eel numbers observed in the very last years did break with the decadal downward trend. Whether that break was actually related to protective actions, or just a lucky incident, remains to be seen. However, after many decades of continuous decline, the current break does indicate that our depleted eel stock still has the potential to recover. That is the more reason to manage them well, and to establish adequate protection where not yet done. Halfway to our 'pie in the sky', there is hope!



First elver school project in Scotland

Pupils at Chryston Primary School in North Lanarkshire have become the first to receive a tank full of elvers, thanks to a project by the Clyde River Foundation, Avon Wildlife Trust and SEG.
The eels were transported from the Severn and will spend the summer helping pupils understand about the incredible eel story and the importance of sustainability.

Project Manager Willie Yeomans said: "We're keen to raise the profile of eels in Scotland. This is a great start and we're very grateful for all the help we received from partners around the UK."

Update from Tour de Valat

On Wednesday 3 June 2015, the Tour du Valat received the Ramsar Convention Award for Merit, at the 12th Conference of the Contracting Parties to the Ramsar

Convention in Punta del Este, Uruguay.

The award, presented to the Tour du Valat's General Director Jean Jalbert, is in recognition of 60 years of research and action for the study, management, and preservation of Mediterranean wetlands. It is also in honour of an extraordinary human adventure led by Luc Hoffmann, who created this unique research centre in the Camargue in 1954. The Tour du Valat has since welcomed generation after generation of researchers from many nationalities, all passionate about wetlands and the biodiversity they host.

The Tour du Valat was one of the initiators of the Ramsar Convention, and then played a decisive role in the creation of the MedWet initiative in 1991. It has also actively contributed to the implementation of the principles of the Ramsar Convention in the Mediterranean Basin. In this 12th COP, it has been very active and involved, working on draft resolutions, taking part in many events at the "Mediterranean Agora", and presenting the results of the Mediterranean Wetlands Observatory.

The Tour du Valat would like to wholeheartedly thank all our partners who have contributed to our achievements, and give them their share of this success. For more information visit the Tour du Valat website.

Kennet and Lambourn Environment Agency Project wins award for Multiple Benefits

A major Environment Agency project to improve fish passage in the Kennet and Lambourn region of England has won an award from the River Restoration Council.

The River Lambourn and part of the River Kennet are chalk stream SSSIs (Sites of Special Scientific Interest), with the Lambourn also of Special Area of Conservation status. Both rivers have been impacted by a range of pressures

Over the last 15 years or more, a programme of habitat restoration has included the removal of structures, morphological enhancement, floodplain wetland creation and fish passage provision, much of this undertaken with partners and local communities. This has been supported by extensive measures to address water quality and quantity, including a comprehensive programme of phosphate stripping at STWs, Catchment Sensitive Farming and community led land-use and management projects, installation of bypass weirs to reduce the interaction between the canal and the river, and a programme of abstraction licence reductions. There is an active

including historic land drainage and flood defence activities, construction of mills, on-line lakes and broadwaters (particularly the Kennet), point source and diffuse pollution, abstraction and urbanisation. The River Kennet is also impacted by interaction with the Kennet and Avon Canal.

Catchment Partnership for the Kennet which is pursuing further measures to achieve WFD objectives in line with EA programmes for further work.
The Kennet and Lambourn project (which was a category winner and runner up) included works on fish passage and a programme educating children in schools about eels.

Update from Rodolfo Barrera

Last month, the electrical companies start to restock up dams. As I told you some time ago, the Valencia Local Govern passed a specific law for the eels. Between other measures, the law ask to restock all the rivers upstream electric dams in Valencia area.

The amount is calculated by a formula taking account the river, pristine eel population, water volume and surface and some other variables. This year start the eel spreading. 1500 kilos of eels ranging 100 to 200 grams (eels from the season, well-shaped and healthy, no slow growers guarranteed) raised in Valenciana de Acuicultura, S.A. Seeded over clean rivers and plenty of feed.

The Environmental Local Agency (Conselleria de Medio Ambiente) has a restocking plan for more than 20 years. They follow the amount of eels through electric fishing and fish traps. They say that there are now more eels in the rivers than when they start the plan. Population is increasing and colonizing areas where they had disappeared.

They have developed a silvering index that is going to be applied this year for the first time. They will fish eels up dams, calculate the index, and if the fish is starting silvering, they will be translocated down dams to special protected areas with a gate to the sea. In this way, some will not have to cross the turbines!!

Pictures of eel reproduction from Bologna

Research continues at the University of Bologna into the eel life cycle. We hope to bring a more detailed report in the next SEG newsletter.

1. European eel female ready to spawn

2. European eels ready to perform a spontaneous deposition of gametes

3. Larvae of *Anguilla anguilla*, born in Cesenatico, Italy (University of Bologna) 5 days post-hatching.

STOP PRESS

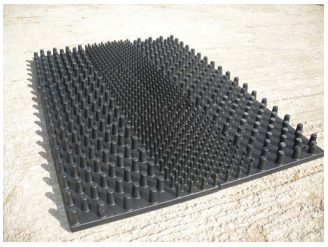
Dr Brian Knights reports: “the latest from Hakan Westerberg and Mike Miller on board the R/V Maria S. Merian on a science cruise in the Sargasso Sea that lepto larvae seem to be numerous this year - good news but early days, it's not clear whether this is significant and whether it will result in large recruitment to Europe/Med and N America in the future.”

Eel Pass Tiles: The Development and Deployment of a Novel Solution

Unblocking migratory pathways is a key component of re-establishing eel populations. Overcoming the many man-made and natural barriers in order for eels to maximize habitat use has, for a long time, been identified as an important element of the whole eel life story. Until recently there has been limited

choice available when specifying a solution at these kinds of obstructions. Evidence-based studies show us that it is not just elvers that are trying to make these upstream migrations, but larger yellow eels too.

To accommodate the problem of migrating large eels & elvers, Berry & Escott Environmental teamed up with the Environment Agency to produce a low cost solution for these scenarios.



This novel product has several advantages, including a double density of protrusions which will allow large eels and very small elvers to ascend through the tile; and tiles are manufactured from a high density co-polymer and are less likely to bio foul. The applications for this format of pass will include most traditional in-river weirs and structures as well as some technical weirs and bespoke fish passes.

The tiles can be installed at sites where bristle passes are being considered and in exposed sites where sediment and boulder transport would cause bristle passes to be damaged. They can be mounted either directly onto the weir face, placed within a simple channel or mounted vertically in cassettes.

The Ledbury supports Sustainable Eel Standard

Eels bearing the Sustainable Eel Standard are back on the menu at the Ledbury, voted the 2014 “Best Restaurant in the UK” by Observer Food Monthly. “Smoked eel is wonderful to cook with and eat, and now that it comes through the SEG Sustainable supply chain we can enjoy it without fear that we are damaging its survival” chef Brett Graham told the Dutch Eel Company.

Eels in the News

Eels have continued to attract attention in the media. In the UK, *BBC Breakfast* joined SEG on the riverbank to learn more about elver migration and the challenges of blocked migratory pathways. Elvers were also a main feature in the *BBC Countryfile* Spring special, with presenter Ellie Harrison joining the Parrett and Tone sustainable elver fishery, Peter Wood from UK Glass Eels, and Andrew Kerr of SEG to learn more about the amazing species.

Schools programmes around the UK, including the Spawn to be Wild programme run

by Bristol Water, and the Eels in the Classroom project run by Severn and Wye smokery, have also featured regularly in local press.

Not all the attention has been favourable. An article in the UK *Sunday Times* in February highlighted the potential costs faced by landowners to abide by the Eel Regulation, headlined “EU”s eel edict costs UK £100m”; and this was followed up by the BBC One Show. Another article in the *Sunday Telegraph* in April took a swipe at the cost of installing eel protection at the potential Swansea Bay Tidal Power development. SEG continues to work with the media and the press departments of all our current and potential partners in eel recovery, to ensure our message is heard.

Finally, SEG was deeply honoured to be invited to take part in the 'Song of the Severn' event at Berkeley Castle in March hosted by Gloucestershire Wildlife Trust. Eels and elvers were among the stars of the evening, which included displays of conservation initiatives, beautiful music associated with the great river, a demonstration of sustainable fishing, and guests enjoyed a delicious starter of sustainable certified eel. The event, attended by local dignitaries, landowners, conservationists and media, was a great example of unity in action!

Ellie Harrison from *Countryfile* telling the stories of the blocked migration pathways on the River Severn – here the steel door in front of Gloucestershire Wildlife Trusts Coombe Hill Wetlands Nature Reserves.
Watch the episode here

From sea to Source in Holland

Regional Water Authority (RWA) Hunze en Aa’s is an 213,000ha large water management organisation in the North eastern part of the Netherlands, managing more than 3500 km of waterways which contain over 1000 locks, weirs and pumping stations.

In 2005 the RWA initiated the vision on fish migration “Van Wad tot Aa” in close cooperation with the Regional Angling Federation and neighbouring RWA Noorderzijlvest. The vision focussed on reopening the most important migration routes for fish between the Wadden Sea and the small rivers.

In the management area of RWA Hunze en Aa’s these routes contain over 130 barriers. In good cooperation with regional partner organisations over 100

locations have been fitted with fishways during the last 10 years. The used solutions can vary based on the location. More technical solutions at pumping stations and tidal barriers and more natural solutions in the small rivers.

As part of the project RWA Hunze en Aa's is monitoring and evaluating the use of the fishways and main migration routes by the use of telemetry studies. These show that the fish now successfully manage to continue their way upstream. A great result which gives good confidence that the remaining barriers will also be adapted in the next few years!

Picture: Fish pass in River Drentsche Aa (loonerdiep)

Stocking of eels in Denmark

In the summer 2015 DTU Aqua plan to stock 1.6 million fingerlings in Danish waters. Inland freshwater will be stocked with about 1.47 mill. and the coast line with about 0.13 mill. small eels, 2-5 gram.
The fingerlings are being reared in Danish eel farms from glass eels caught in France and UK. In Denmark there is a preference for SES-certified fingerlings.
The stocking is financed partly by money coming from recreational fishing licenses and partly by EMFF funds.

Huge lottery boost for River Teme

The Heritage Lottery Fund (HLF) has approved a development grant of £204,000 to allow the Severn Rivers' Trust (SRT) to develop plans and apply

citizen science monitoring programmes; and creating volunteering opportunities and apprenticeships.
A new visitor centre will form a hub for the community across the river. An educational programme is also planned

for a full £3million grant for its *Springs of River* project that will restore the wildlife and revitalise the historic communities along the River Teme, one of the most important tributaries of the Severn.
The *Springs of Rivers* project, which will be managed by SRT, aims to reconnect and improve more than 200km of river through a number of linked initiatives. These will include practical conservation; a range of community events; improving access to the river; that will aim to work with schools and their local rivers and streams across the region.
The importance of the River Teme is already widely recognised; it is designated as a Site of Special Scientific Interest and the wider catchment covers two Areas of Outstanding Natural Beauty and a Special Area of Conservation.

CITES define the meaning of recovery

Executive summary
The Workshop on Eel and CITES met at the ICES Headquarters, Copenhagen from 10th to 12th March 2015, under the chairmanship of Alan Walker (UK). The Workshop was attended by seven experts in eel assessment and management, two experts in CITES, plus observers from eel industry and CITES Scientific Authorities, and one independent reviewer. A second reviewer participated by correspondence.
ICES had beenrequested to provide scientific information and advice on the following issues:
1) What criteria (and if possible, what thresholds) that could be used to make a Non-Detriment Finding in the future.
2) An assessment of the scale that could be used to make a Non-Detriment Finding.
3) An assessment of possible conditions that could be used in association with a Non-Detriment Finding (e.g. quota, or size of specimens, or any other condition).
The Workshop reviewed the current European eel stock assessment approaches used to support ICES stock advice and recent developments in that topic, as well as elements of the eel life history that can support the NDF-assessment process; and the CITES NDF process, and examples of where eel and other species have been considered for NDF.
The Workshop concluded that it was possible to identify a number of indicators, with thresholds suggested for some of these, which could be used to guide an NDF-assessment of international trade in European eels, and that suggested indicators could include the following:
- population indices should be above levels at which the species might qualify for listing in Appendix I of CITES; for European eel this level was adjudged to be 15% of historical baseline, and recruitment time-series are the longest and most reliable data that could constitute an index of abundance;

- a modified precautionary framework considering both anthropogenic mortalities and biomass reference points (40% of pristine biomass and the corresponding mor-tality rate);
- indices indicating that recruitment is trending positively, reflect a recovering popula-tion, and are within confidence limits of reference baseline; and
- the implementation of effective eel management plans (or their equivalents).

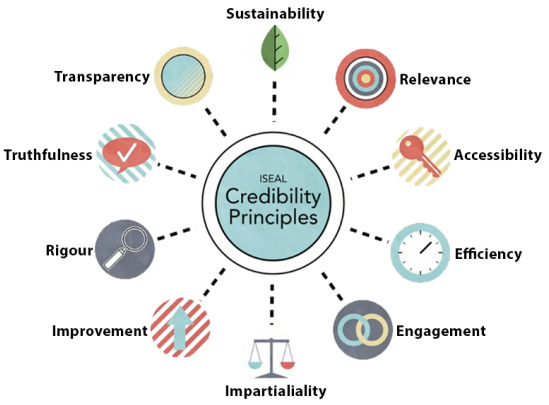
Click the link to the full report and executive summary

SEG aims for ISEAL accreditation

SEG has started the process leading to 3rd party accreditation for the Standard.

The ISEAL Credibility Principles are written into the three Codes:

- Setting Environmental Standards
- Assuring Compliance
- Assessing Impacts



Strengthening the SEG Panel

SEG is looking for additional experts to join the Panel for the Sustainable Eel Standard. If you would like further information or to apply, please email the SEG press office

Eel ties

Exclusive eel ties are available to commemorate the first 5 years of SEG.

To own one of these limited edition designs costing £25 please email SEG.

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