

## Golden Valley Fish and Wildlife Association

### GOLDEN VALLEY EEL PROJECT



### 2015 RESULTS AND HIGHLIGHTS

Author: Ian McCulloch, M.A, Environmental Management; M.I.F.M. (project leader)

#### Key successes

##### **1 – Funding**

We were very grateful for the additional support of a grant from Herefordshire Community Foundation to our elver purchasing funds. This is on top of our gifts from Duchy of Cornwall (Herefordshire) (£200), The Countryside Restoration Trust at Turnastone (£100), other generous personal donations and the funds raised through plant sales via the Plants for Wildlife Project. These funds will hopefully be utilised to maximum effect in 2016 (see below).

##### **2 – Saving from export/stocking/translocation/**

Stocking authorisations (site permits) were obtained well in advance from the Environment Agency, but unfortunately and with heavy hearts it was decided that funds should be held-back until next year (2016) due to the scarcity of elvers and the resultant high price. New exporters were reported to have entered the market, all of which raised the price to upwards of £400 per kilo. Since the start of the project in 2011-2012 the Association has saved from export and translocated back into Golden Valley waters a total of 124,000 juvenile eels.

##### **3 - Stock survey results/ translocation success**

- Environment Agency routine bi-annual electro-fishing survey results received, showing up to eleven-fold increase in eel numbers at all River

Dore sites since the start of the project. Very encouraging news!

Below is an excerpt from the excel spreadsheet document relating to the survey results. Prior to 2014 in all available records dating back into Environment Agency (Wales) management days, only 1 eel had been recorded. In the 2014 survey, 4 eels were caught. And this year there were 11. Stocks are moving in the right direction.

Below -Table 1– excerpt from 2016 Environment Agency River Dore electro-fishing site catch statistics<sup>1</sup>

-Number		European eels > elvers	Anguilla anguilla	11.0000
-Weight		European eels > elvers	Anguilla anguilla	482.1300
-Density		European eels > elvers	Anguilla anguilla	1.5710
-Standing crop		European eels > elvers	Anguilla anguilla	68.8760

Table 1

This is a continuation in an upward trend from a very low status that began to manifest itself in 2013, with survey results shown below in Table 2:

( Site NGR) SO3410039000	10/07/1989	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3970028500	10/07/1989	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3410039000	11/07/1990	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3970028500	11/07/1990	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3410039000	30/07/1991	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3970028500	30/07/1991	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3410039000	11/08/1992	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3580036500	11/08/1992	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3660035800	11/08/1992	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3000041700	11/08/1992	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3410039000	05/08/1993	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3970028500	05/08/1993	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3540037100	21/08/1995	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3970028500	21/08/1995	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3540037100	30/07/1997	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3410039000	30/07/1997	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3970028500	30/07/1997	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3540037100	29/05/1998	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3410039000	29/05/1998	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3000041700	29/05/1998	1	Number (of Catch) by Species on Survey	Anguilla anguilla	1.0000
SO3540037100	31/07/1999	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3410039000	31/07/1999	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3970028500	31/07/1999	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3540037100	15/07/2008	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3970028500	24/07/2008	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
<b>SO3876730804</b>	<b>30/08/2013</b>	<b>1</b>	<b>Number (of Catch) by Species on Survey</b>	<b>Anguilla anguilla</b>	<b>4.0000</b>
SO3527437303	30/08/2013	1	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000

Table 2

<sup>1</sup> Environment Agency Data and Monitoring, Riversmeet House, Tewkesbury, 2015

### Other comparator rivers

This is in contrast to a downward pattern on other rivers. Table 3 below<sup>2</sup> is an excerpt from Environment Agency data on eel catches on the River Frome between 2006 and 2012, showing a decrease for a very low level. The Frome is of similar size to the Dore but enters the Wye from the far eastern of Herefordshire via the Lugg

<b>2006</b> Number (of Catch) by Species on Survey – River Frome (Herefordshire)	European eel	Anguilla anguilla	1.0000
<b>2007</b> Number (of Catch) by Species on Survey - River Frome (Herefordshire)	European eel	Anguilla anguilla	0.0000
<b>2009</b> Number (of Catch) by Species on Survey - River Frome (Herefordshire)	European eel	Anguilla anguilla	0.0000
<b>2010</b> Number (of Catch) by Species on Survey - River Frome (Herefordshire)	European eel	Anguilla anguilla	0.0000
<b>2012</b> Number (of Catch) by Species on Survey - River Frome (Herefordshire)	European eel	Anguilla anguilla	0.0000

**Table 3**

### River Arrow

In addition to this there is very extensive multi-site data since 1989 on the much larger Herefordshire River Arrow, (Also a Wye tributary) which shows a similar, relatively flat, picture. (Data gathered from River Arrow eel trap operators in 2014 showed a catastrophic crash in eel catches (by a factor of over 99 per cent) since 1984). See Table 4 below.<sup>3</sup>

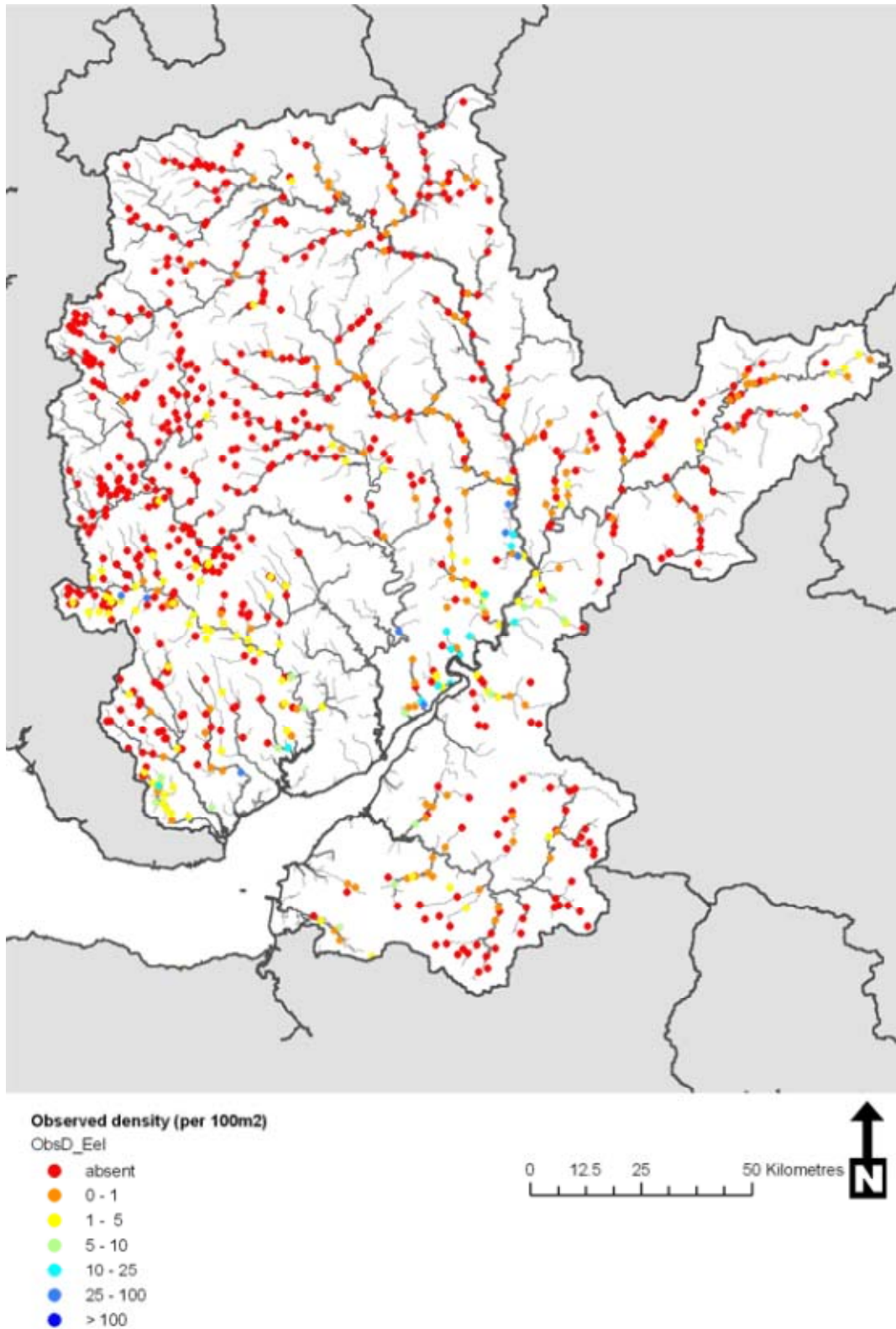
SO3340058700	08/09/1989	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3340058700	08/09/1989	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3340058700	13/08/1991	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3340058700	13/08/1991	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3920058400	29/09/1992	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3920058400	29/09/1992	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3340058700	03/08/1993	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3340058700	03/08/1993	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3340058700	04/08/1994	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO3340058700	04/08/1994	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO4980057100	01/09/1998	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO4140058800	02/09/1998	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO4140058800	02/09/1998	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000
SO4750057000	12/09/1998	Number (of Catch) by Species on Survey	Anguilla anguilla	0.0000

<sup>2</sup> Environment Agency Data and Monitoring, Riversmeet House, Tewkesbury, 2015

<sup>3</sup> Environment Agency Data and Monitoring, Riversmeet House, Tewkesbury, 2015



Data gathered between 2001 and 2005 (see below) across the Severn/Wye river basin shows the alarming pattern of total absence of eels during Environment Agency surveys, particularly on the Wye tributaries. The River Dore can clearly be seen with just one red dot showing eels to be totally absent, in line with other rivers.

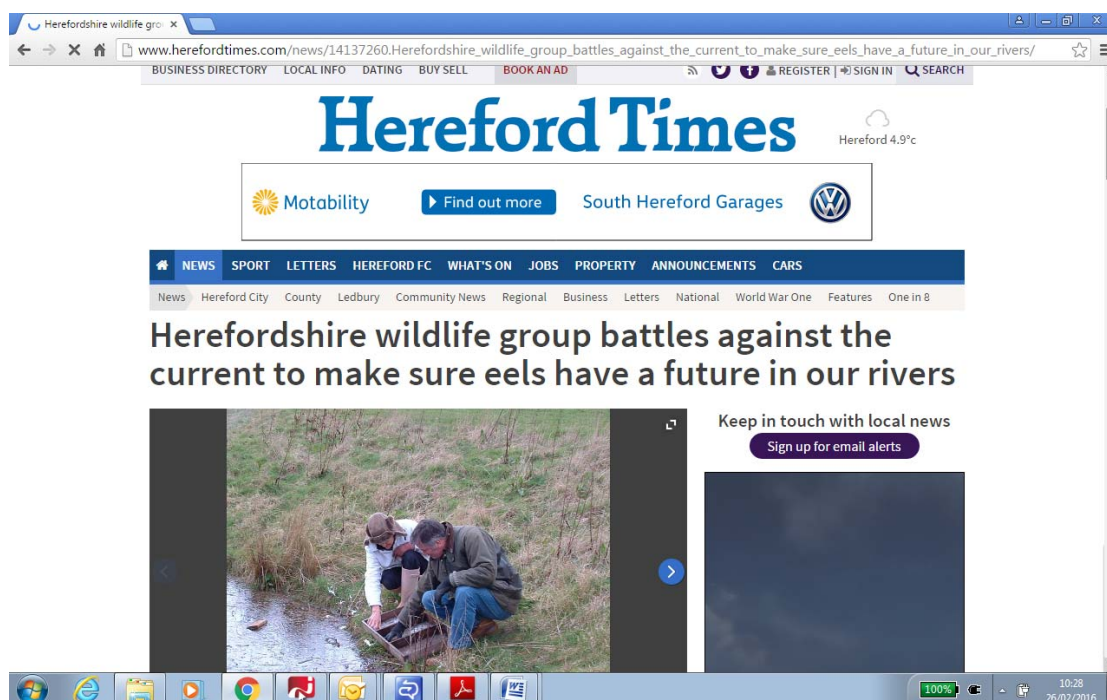


Source: Eel Management Plan for the United Kingdom; (defra) - March, 2010

## 4 – Press coverage and media campaign

Below – Article in the *Hereford Times* dated 10/12/2015

(\*Note – This project and the Association is **NOT** against eel fishing. This was inaccurately altered from the original Press Release. We support responsible rod and line fishing for eels in their adult stage, and encourage catch-and-release while stocks remain perilously low. We are opposed to the lawful and illegal export of juvenile eels from our rivers.)



“A GROUP of wildlife campaigners in Herefordshire is battling against the current to ensure the endangered European eel remains common to our waterways.

Eels are currently on the Red List of critically endangered species in the county, with a population 90% lower than it was in the 1970's.

This is due to millions of baby eels, known as elvers, being caught and sold to foreign fish markets for a high price by international dealers.

But thanks to the Golden Valley Fish and Wildlife Association, 124,000 baby eels have been saved and re-integrated into local waters in the past four years.

*Hereford Times* contd.... Routine surveys of the area by the Environment Agency have confirmed that since the start of the project, there are now up to 11 times more eels in their natural habitat.

Growth has been exponential, but Ian McCulloch, project leader for the association described the work so far as “only a sticking-plaster”.

The group aims to reintegrate two million elvers back into the water by 2019.

Ultimately Mr McCulloch believes what is needed is for a complete ban on elver fishing, with all rivers in Herefordshire are still critically affected by this problem.

So far, pleas for this ban have been ignored, but there is an ongoing petition to make this a reality. Eel fishing is already banned in Ireland and Norway. Over-fishing can have a severe impact on the environment. Eels are a main food source for otters, with the International Otter Survival Fund recognising the severity of the situation and previously donating to the cause.

Eels have a rich local history, and used to be a staple part of a local diet. They were even documented as a form of currency in the Domesday book.

Association chairman Nick Longman said “We cannot stave off their extinction by ourselves. If you want to help us or get involved on your own rivers please get in touch and we can offer help and advice.”

The group is looking to restock next spring, with the help of local campaigners and a donation of £1000 from the Herefordshire Community Foundation.

Mr McCulloch says anyone in the county can touch with him for help and advice in starting their own projects to help.

For more information, or to get involved please visit [goldenvallyfishandwildlife.co.uk](http://goldenvallyfishandwildlife.co.uk) or show your support by signing the online petition. ”

### *Ross Gazette*

We also had good coverage in the *Ross Gazette* newspaper. This local news journal is widely-read, and being widely sold in a well-connected part of the

county, particularly at the A49/M50 service stations, is particularly relevant, as it is because its connections with the Wye, and the Marine Conservation Society, whose headquarters are in Ross. See below<sup>4</sup> :

The Ross Gazette | @RossGazette 1345068

## Eel numbers on the rise

AFTER saving 124,000 baby eels (elvers) from being exported, and returning them to Golden Valley waters in the past four years, a Herefordshire wildlife group is pleased to receive confirmation that their restocking appears to be working.

Recent routine survey work conducted by the Environment Agency has confirmed that since the start of the project, eel numbers have risen by up to 11 times.

European eels in general are fast disappearing from Herefordshire rivers, and they are now on the international Red List of critically endangered species. They are still legally caught and exported in their millions every spring as they arrive in the River Wye estuary as tiny elvers, headed for Herefordshire, where they would otherwise live and grow for up to 50 years. However a large proportion of them never make it, being removed and exported to foreign fish farms for a very high price.

Golden Valley Fish and Wildlife Association eel project leader, Ian McCulloch told the *Ross Gazette*: "The situation is critical. We are doing all we can locally to offset this export, but while it may benefit our local river environment for many years, this is only a sticking-plaster. Other Herefordshire rivers are not benefitting from this project, and the eel species continues its critical state. We have campaigned long and hard for a precautionary ban on eel exports, but it seems to be falling on deaf



ears.

"This year we could not buy any because we were priced out of the market by an influx of new exporters. In spring 2016 we will again be seeking to restock, supported by local people, by £1000 gratefully received from Herefordshire Community Foundation and also by significant donations from the Duchy of Cornwall (Herefordshire) and the Countryside Restoration Trust."

Association Chairman Nick Longman added: "We are keen to work together with all groups in an alliance to save the eel. However we cannot stave off their extinction by ourselves. "If you want to help us or get involved on your own rivers please get in touch and we can offer help and advice. Our Number One objective is to stop commercial export. Please google 'Stop the commercial export of baby eels' and sign the on-line petition, or just send an e-mail with your support and it will be added to our petition to government."

The group encourages anyone with the ability to support them to e-mail them at [goldenvalleymfishandwildlife@hotmail.co.uk](mailto:goldenvalleymfishandwildlife@hotmail.co.uk) or telephone 07787 711797.



<sup>4</sup> Ross Gazette newspaper, Wednesday, December 30, 2015



## 5 – STOP THE COMMERCIAL EXPORT OF BABY EELS

Our on-line petition at <http://www.ipetitions.com/petition/stop-the-commercial-export-of-baby-eels> continues to gather momentum and at the time of writing numbers 396 signatures and 162 supportive comments. The message is clear: **“We plead with DEFRA, the UK government and the European Union to place a precautionary immediate closure on the commercial export of internationally-endangered(Red-listed) European eel juveniles taken from their home rivers. We urge them to do this in order to stop eels becoming extinct from our rivers. ”**

We aim to reach the target of 1000 signatures, and lodge the petition, this year.

## 6 – HEREFORDSHIRE EEL PROJECT/ RIVER ARROW PROJECT EXTENSION.

During 2015 a bid for significant funding of £30,000 was placed with a well-known environmental grant-funding charity. Unfortunately we were unsuccessful.

This was based on widening the scope of the project as outlined below, given the catastrophic decline in eel numbers we have identified on other Herefordshire rivers including the Arrow. This project description (see overleaf) will remain “on the shelf”in 2016-17, and will remain available after this time if and when funds and necessity coincide:

## HEREFORDSHIRE EEL STOCK RECOVERY PROJECT

### **Plans to widen the scope of the project.**

2015 saw an elver fishing season which was notable for far less returning elvers than in the previous three years. While this may well be a result of natural cycles, it is still of significant concern. New buyers/exporters had entered the market, which had the extra effect of pushing up prices beyond the already high levels. It was decided not to use hard-won funds to purchase elvers at the very inflated price of up to £300 per kilo. This failure to maintain the momentum of the translocation project in 2015 has led to even greater resolve to up-scale the project next year, and it is now intended to bid for far greater funds, to link arms with more influential organisations, and to significantly enlarge the project while we still have the opportunity. Shortly after the decision not to buy was made, we received a welcome boost of a significant grant of £1000 from Herefordshire Community Fund as a result of a relatively hastily-arranged funding bid for the Golden Valley Project. The decision was then made to re-bid for a larger sum for the Herefordshire Eel Stock Recovery Project.

### **River Arrow eel fishery decline**

Herefordshire's River Arrow has been historically such a rich eel fishery that a number of Victorian era iron eel sluice traps have been operating for a century and a half. The Arrow is a highly productive, slow-flowing tributary of the Lugg, the Wye's principal tributary. J Arthur Hutton, in *Wye Salmon and other Fish* noted the productiveness of the Lugg sub-catchment, referring to evidence that the largest salmon smolts were found in the Lugg. The Lugg and Arrow, with their slow-flowing, deep meandering nature, are known to have been very rich eel fisheries, and it is probably for this reason that the large investment was made in eel traps.

The 1989 National Rivers Authority Annual Fisheries Report for the Wye Area details the largest eel of 5 lbs in weight caught on the Arrow. This is a very good size for a mature eel, and is a good indicator of the potential of the river as an eel fishery. The presence of these River Arrow eel traps has supplied us with valuable data from catch returns showing that between 1984 and 2014 eel catches at these traps fell by over 99 per cent. Last year (2014) just one adult eel was captured and returned. (Hall, R. and Lowe, H. , 2014). This crash in numbers

exceeds international projections for European eels (IUCN). However this drop in stocks and the presence of a clear system of monitoring eel numbers gives the Herefordshire Eel Project a significant opportunity for a stocking (translocation) project on the River Arrow sub-catchment.

## **OBJECTIVES**

- 1 – Scope, together with the Environment Agency, the potential for an eel stocking/translocation project on the River Arrow catchment, finding suitable nursery still waters connected to the main river Arrow. Suitable locations will follow the latest guidance from the Environment Agency and be relatively shallow, productive pools or slow-flowing ditches connected to the river system.**
- 2 – Seek the co-operation of owners on the River Arrow system and the support of local fisheries and conservation interests in order to maximise the potential for the project, gain resource and assistance, and raise awareness and participation in eel conservation. Continue to work together for the benefit of Herefordshire eels, involving young people wherever possible.**
- 3 – Work with the Environment Agency at an early stage to plan the project.**
- 4 – Seek a co-operative voluntary total or partial suspension of eel fishing for adult migrating eels at eels sluice traps on the River Arrow to maximise spawning stock escapement. Seek to utilise the local knowledge and skills of the trap operatives to conduct survey fishing instead, releasing any eels caught.**
- 5 - Obtain funds for a significant first year stocking of the Arrow catchment. Target: Minimum of £30,000 in year 1**
- 6 – Plan a translocation/stocking operation in partnership and conjunction with the Environment Agency.**
- 7 – Continue the translocation project for 5 years.**
- 8 – Obtain Environment Agency assistance with surveying and monitoring (electrofishing results) and monitor eel catches at the Arrow traps.**
- 9 – Develop and review the project on an annual basis, and continue to involve local people and partner organisations, and build awareness.**
- 10 – Produce an annual report each year.**

## 7 - NEW EVIDENCE SHOWS THE DAMAGING EFFECTS OF HYDROPOWER ON EELS

2015 brought some new evidence on the damaging effects of hydropower structures on migrating eels. 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<sup>5</sup>, 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

This is particularly concerning to the River Dore, and wider Wye/Severn catchment, which in recent decades has become a major source for European restocking projects. It is also very concerning due to the hydropower station installed with the authorisation of Environment Agency Wales in 2009 on the lower River Monnow, where our eels will be heading as they migrate back to sea in the coming years.

Investigation into the possible effects of the new Monnow hydropower station on our eels will be a priority for the project during 2016, and we will seek to ensure that the Authorities responsible for this structure have adequate measures in place to record, monitor and assess eel casualties, and to impose measures to remedy any damage caused.



Above – The Osbaston weir hydropower station on the Monnow

---

<sup>5</sup> <http://www.sustainableeelgroup.com/2015/06/21/new-evidence-published-showing-hydropower-mortality-and-importance-of-translocation-in-sweden/#.VtQpB9lFdg>

