

Appendix

Background

In Ireland, the eel stock is managed and reported to the EU at the River Basin District (RBDs) level. Ireland is divided into 6 RBDs, Eastern RBD, SouthEast RBD, SouthWest RBD, Shannon International RBD, Western RBD and the transboundary NorthWest International RBD. As a result of the knowledge gained through the Eel Monitoring Programme and taking note of the recommendations from various ICES workshops on eel (WGEEL, WKESDCF) IFI proposed focusing work on Eel Index Catchments. It is recommended that at least one Eel Index catchment per River Basin District is monitored. This will ensure an even spread of monitoring activities within each river basin district for all life stages recorded and in all water body types.

The data gathered using Index catchments will fill the gaps in our knowledge and facilitate the use of modelling techniques to extrapolate from 'data rich' areas to 'data poor' areas. A long term index catchment monitoring programme will aid in the modelling of eel distribution, production and escapement into the future. The information will be used by IFI I to fulfil Ireland's obligation to report under the Eel Regulation. The data will also be made available to the ICES Working Group on Eel to assess the state of the stock at the European level.

Proposal

IFI are in the process of developing a range of scientific eel fisheries in designated catchments. We are seeking applications from interested fishermen who wish to partake in this operation. The fisheries will be fished as a catch and release scientific fishery and IFI staff will be on site to take biological measurements of eels. IFI are fully compliant with EU Directive 2010/63/EU and Irish Law SI No 543 of 2012 governing protection of animals used in scientific procedures. The timing of when fisheries are operating will be a collaborative process involving environmental conditions and a degree of flexibility to ensure IFI staff is present at all locations.

IFI propose setting up scientific fisheries in the following areas (subject to applications)

1. Barrow Catchment
 1. Silver Eel fishery
2. Boyne Catchment
 1. Silver eel fishery
 2. Yellow eel survey Lough Ramor
 3. Elver Monitoring survey
3. Corrib Catchment
 1. Yellow eel survey Upper Lough Corrib
 2. Yellow eel survey Lower Lough Corrib
4. Fane catchment
 1. Yellow eel survey Lough Muckno
 2. Elver Monitoring survey
 3. Yellow eel survey of Estuary

5. Moy catchment
 1. Yellow eel survey Lough Conn & Lough Cullin
 2. Elver Monitoring Survey
6. Munster Blackwater
 1. Yellow eel survey of Estuary
7. Shannon Estuary
 1. Glass Eel survey
8. Waterford Harbour

1.1 Glass Eel Monitoring

A recovery in the eel stocks will first be visible in the recruitment of glass eels and elvers back to our inland waters. IFI are interested in setting up a pilot glass eel monitoring survey in the Shannon Estuary. The east/west orientation of the Shannon Estuary, similar to the Severn and the Bay of Biscay and the large volume of freshwater that disperses into the Atlantic Ocean indicate that this is the best location for assessing the glass eel population arriving in Ireland. Studies have been carried out on capturing glass eels in the Shannon by the ESB and contracted parties. This operation will adapt those methods in order to provide the information required to fulfil stock assessment requirements.

It is anticipated that the study will take place from November to May but will be dependent on environmental conditions. Once the glass eels are identified as present approximately 25 - 35 nights will be fished. Successful candidates need to be aware of IFI's biosecurity protocol and the importance of disinfecting clothing and equipment when moving between watercourses. The successful candidate must be tax compliant, be mindful of the health and safety act and provide IFI with a letter of indemnity from their insurer for personal and public liability.

1.2 Elver Monitoring Programme

In addition to the pilot glass eel survey it is proposed to investigate new elver monitoring sites on the River Boyne, Fane and the Moy (Table 1). The elver monitoring will focus on the active migration of elvers from the estuaries into freshwater. For the new locations exploratory surveys will be carried out to observe the migration of elvers into freshwater and to search for a suitable location in which to set up a monitoring station. Depending on the site, pipe traps and eel collectors will be used to simulate suitable habitat for identifying that elvers are present. The first year will be an exploratory study to find a suitable location to install a trap. Information gathered on timings of sightings and water conditions will all help in the trap set up. Once a trap is installed the frequency of checking the traps will be dependent on the volume of elvers caught. Traps will be serviced every other day at the start when catches are low however this will increase to every day and potentially twice a day when the main migration run is occurring and catches are high. It takes about 1 hour to process the catch and release upstream. The elver season can run from April to August however peaks in the runs are observed over a number of

days where the majority of the elvers migrate upstream and this normally coincides with warm weather.

Ideally interested fishermen should be located near the high water mark in the designated catchment in order to facilitate the monitoring of a trap as they require servicing every other day and every day during peak runs, the elver season is potentially long but is influenced by environmental conditions. The rate is €60 per day for approximately 90 days spread out over the elver season. The operation will involve identifying a suitable location on the river to set up a monitoring station in consultation with IFI and the monitoring of the station over the course of the elver season with counts and weights of elvers recorded. Successful candidates need to be aware of IFI’s biosecurity protocol and the importance of disinfecting clothing and equipment when moving between watercourses. The successful candidate must be tax compliant, be mindful of the health and safety act and provide IFI with a letter of indemnity from their insurer for personal and public liability.

To apply send a written application to
‘Scientific Eel Fishery: Elver’, Inland Fisheries Ireland, 3044 Lake Drive, Citywest Business Campus, Dublin 24. D24 Y265

Detailing

- the location you wish to apply for (Boyne, Fane, Moy)
- outline of experience as an eel fisherman
- knowledge of the area
- any information deemed relevant for the operation

Table 1 Proposed elver monitoring locations

EMU	Location
ERBD	Boyne
NBRBD/ERBD	Fane
WRBD	Moy

1.3 Scientific Yellow Eel Fishery: Lake Surveys

IFI are interested in monitoring key lakes using fyke nets surveys (Table 2). Fishing with fyke nets provides catch per unit effort data and estimates of length, weight, sex ratios, growth and age distributions along with parasite prevalence of *Anguillicola crassus*. Each lake will be surveyed using fyke nets supplied by IFI. Forty fyke nets (8 chains of 5 fyke nets) will be set nightly for 8 nights in total split into 2 surveys between June and September. Each survey will involve 5 days; 4 nights of fishing, nets will be hauled every day, eels removed to IFI staff on shore and nets reset in a new location within the lake. The survey will be repeated approximately 4 weeks later. IFI will supply Fyke nets, rope, buoys and keep nets. Eels from each chain will be stored separately. A suitable boat and engine will be required. Successful candidates need to be aware of IFI’s biosecurity protocol and the importance of disinfecting boats and nets when moving between watercourses.

The available rate for each lake identified is €400 a day for 10 days. There is a requirement for 2 people in the boat for safety. The successful candidate must be tax compliant, be mindful of the health and safety act and provide IFI with a letter of indemnity from their insurer for personal and public liability.

To apply send a written application to

'Scientific Eel Fishery: Yellow Eel', Inland Fisheries Ireland, 3044 Lake Drive, Citywest Business Campus, Dublin 24. D24 Y265

Detailing

- name of lake to be fished (Upper Lough Corrib, Lower L. Corrib, Lough Conn, Lough Muckno, Lough Ramor)
- outline of eel fishing experience
- knowledge of the area to be fished
- any relevant information

1.4 Scientific Yellow Eel Fishery: Estuaries

Our estuaries are the first port of call for the arrival of glass eels in Ireland and while some eels decide to move into freshwater a proportion will spend their yellow eel phase or growing phase in the estuary or travelling between both freshwater and estuarine waters. To improve our knowledge of eel distribution in estuaries an intensive yellow eel study will be undertaken in 2 estuaries, Waterford harbour and the Munster Blackwater (Table 2). The location within the estuary will be determined in collaboration with IFI and the successful candidate. The estuary survey will be dependent on suitable weather conditions and tide. A potential 15 – 20 day survey over the summer season is anticipated.

The available rate for each estuary identified is €500 a day for 15-20 days. There is a requirement for 2 people in the boat for safety. The successful candidate must be tax compliant, be mindful of the health and safety act and provide IFI with a letter of indemnity from their insurer for personal and public liability. A suitable boat will be required. Successful candidates need to be aware of IFI's biosecurity protocol and the importance of disinfecting boats and nets when moving between watercourses.

To apply send a written application to

'Scientific Eel Fishery: Estuary', Inland Fisheries Ireland, 3044 Lake Drive, Citywest Business Campus, Dublin 24. D24 Y265

Detailing

- name of estuary to be fished (Barrow or Munster Blackwater)
- outline of eel fishing experience
- knowledge of the area to be fished
- fishing method and availability of gear/ winch
- boat handling qualifications/experience
- any relevant information

Table 2 Location of proposed scientific yellow eel fisheries

Eel Management Unit	Catchment	Waterbody	Methodology
WRBD	Corrib	Upr L. Corrib	Fyke nets
WRBD	Corrib	Lwr L. Corrib	Fyke nets
WRBD	Moy	Lough Conn	Fyke nets
ERBD	Boyne	Ramor	Fyke Nets
NBRBD/ERBD	Fane	Muckno	Fyke Nets
SERBD	Barrow	Barrow	Pots/ Fyke Nets
SWRBD	Munster Blackwater	Estuary	Pots/Fyke Nets
		Estuary	

1.5 Scientific Silver Eel Fishery

The assessment of silver eel escapement is an important element in fulfilling the objectives of the National Eel Management Plan. Under this proposal it is intended to set up 2 additional scientific silver eel fisheries (Table 3). A silver eel fishery is proposed in the lower reaches of the Barrow catchment, this fishery will operate in conjunction with the existing IFI research fishery. This double fishery set up will improve the estimates of silver eel escapement for this large riverine catchment. It is proposed to set up a second scientific silver eel fishery on the Boyne Catchment. The Boyne's Kells Blackwater subcatchment has been monitored for eel by IFI over the last 6 years. The size of the catchment lends itself to a small scale fishery to estimate the silver eel escapement from Lough Ramor.

The scientific silver eel fishery will fish for a minimum of 20 nights over the silver eel season (September – December). A rate of €400 a night is available. There is a requirement for 2 people to operate the fishery for safety. The successful candidate must be tax compliant, be mindful of the health and safety act and provide IFI with a letter of indemnity from their insurer for personal and public liability. Successful candidates need to be aware of IFI's biosecurity protocol and the importance of disinfecting clothing and equipment when moving between watercourses.

To apply send a written application to
'Scientific Eel Fishery Silver Eel', Inland Fisheries Ireland, 3044 Lake Drive, Citywest Business Campus, Dublin 24. D24 Y265

Detailing

- name of catchment to be fished (Barrow or Boyne)
- Details on the suitable proposed location within catchment to set up fishery
 - Including GPS coordinates or map detailing location
- Method of fishing and availability of gear
- outline of eel fishing experience
- knowledge of the area to be fished
- Response time to flood events (how quickly can nets be set)

- any relevant information


Table 3 Proposed location of scientific silver eel fishery

Eel Management Unit	Catchment
1. SERBD	Barrow
2. ERBD	Boyne

1.1. Applications

Applications delivered by hand or by post or email must be marked with the Title 'Scientific Eel Fishery' and the category (Glass Eel/Elver, Yellow eel, Estuary or Silver eel) and the word "Confidential". Applications must clearly set out a return address within the application.

Please fill in name and tick which location and fishery you are interested in and send with completed application letter.

		
Name:		
Fishery	Location	Please tick ✓
Glass Eel	Shannon	
Elver	Boyne	
	Fane	
	Moy	
Scientific Yellow Eel Fishery (Lake)	Upper Lough Corrib	
	Lower Lough Corrib	
	Lough Conn	
	Lough Ramor	
	Lough Muckno	
Scientific Yellow Eel Fishery (Estuary)	Waterford Harbour	
	Blackwater Estuary	
Scientific Silver eel Fishery	Barrow	
	Boyne	

Award Criteria

All applications will be evaluated for completeness and scored using the following criteria.

Award Criterion Glass Eel /Elver Monitoring Programme	Percentage Weighting
Experience in eel fishing	25%
Demonstration of understanding of work requested	25%
Local knowledge of Area	25%
Proximity to river	25%

Award Criterion Yellow Eel Lake Fishery	Percentage Weighting
Experience in eel fishing	25%
Local knowledge of Lake	25%
Availability of historical knowledge on eel stocks in area	25%
Demonstration of understanding of work requested	25%

Award Criterion Yellow Eel Estuary Fishery	Percentage Weighting
Experience in eel fishing	25%
Local knowledge of Estuary	25%
Availability of historical knowledge on eel stocks in area	25%
Demonstration of understanding of work requested	10%
Fishing gear available	10%
Relevant boat handling experience	5%

Award Criterion Silver Eel Fishery	Percentage Weighting
Experience in eel fishing	20%
Demonstration of understanding of work requested	20%
Site location	20%
Availability of knowledge & historical eel data	10%
Proximity to fishing site (ability to set nets following rise in water/ on short notice)	20%
Relevant boat handling experience (if necessary)	10%