



**Iascach Intíre Éireann
Inland Fisheries Ireland**

Stock Management Plan

2020

Contents

1	Introduction	3
2	Gill Netting Operations - WRBD	4
3	Electrofishing Operations -WRBD	5
4	Lough Sheelin Stock Management Plan	7

1 Introduction

In accordance with IFI's policies on both pike and trout, stock management operations are indicated for six lake catchments in the Western River Basin District (WRBD) and one in the Shannon River Basin District (ShRBD): Loughs Corrib, Mask, Carra, Conn, Cullin, Arrow and Sheelin, all of which are designated managed wild brown trout fisheries.

Gill netting and electrofishing (EF) operations are planned for all six WRBD lake catchments while and electrofishing (EF) only is planned for Lough Sheelin. This report outlines the plan for stock management operations (both gill netting and electrofishing) for 2020. Details of the proposed start and finish dates are tabulated below and estimates of the numbers of pike to be removed.

To ensure that the allocated man days will be used efficiently in 2020, it is proposed that the window in which gill netting operations are carried out is extended. In recent years this period was restricted to 4 weeks during March (usually running concurrently on several lakes) with a further 2 weeks on Loughs Carra and Arrow. Sometimes this resulted in missing out on opportunities due to adverse weather conditions and other extenuating circumstances. In 2020 it is proposed that the effort (Man days) is spread over a longer period giving a better opportunity to target specific areas at different times, thus improving the efficiency of the operations.

The operations will be carried out in accordance with IFI's Standard Operating Procedures (SOPs) for both electrofishing and gill netting operations. The electrofishing SOP has been amended to provide for the safe retention of some pike with a view to restocking in designated pike fisheries. All staff handling pike will do so in accordance with IFI's SOPs and all have received fish welfare training. All euthanised pike carcasses will be appropriately disposed of with an approved fallen animal collection company.

The proposed pike removal programme detailed below was drafted having regard to the outturn of previous operations and also had regard to IFI's Pike Dietary Study, *Pike (Esox lucius) in Ireland: Developing Knowledge and Tools to Support Policy and Management* study.

Particular regard was given to the study on co-existence of pike and trout carried out by Fitzgerald *et al.*, which described the attributes of a given waterbody in terms of the vulnerability of its trout stocks to predation by pike. Small, shallow waterbodies (<60Ha) with low complexity and poor connectivity are considered to provide conditions where salmonids are more vulnerable to pike predation. Results from surveys carried out on the Owenriff lakes in Galway reinforce the view that trout stocks are especially vulnerable to predation in shallow, low complexity systems.

It is difficult to estimate the outcome of such operations due to a range of factors, but the projected numbers of pike to be removed, as advised by very experienced senior personnel, have been included in the tables presented below. Should the Designated Salmonid Bye-Law be introduced, IFI reserves the right to review this plan.

2 Gill Netting Operations - WRBD

Netting will be concentrated into specific areas on each lake during different periods of the pike management season. Known spawning areas are targeted during periods of maximum spawning activity while other operations will take advantage of congregations of pike which occur as a result of specific feeding behaviour associated with smolt migrations. Gill netting operations should commence in January on L. Conn & Cullin and in February on L. Corrib Mask &. Arrow. Assuming suitable weather conditions occur any time after these commencement dates Gill netting will be carried out on both lakes as appropriate, until such time as catch returns dwindle to a point where the effort is no longer worthwhile or desirable. It is proposed that any remaining man days not done in the spring period will be used the following December to catch the tail end of the congregations of pike at river mouths when they feed on autumn running trout and salmon juveniles. All pike will be handled carefully quickly euthanised and all pike $\geq 85\text{cm}$ will be returned immediately subject to these being viable. Nets will be serviced daily and will not be set if there are concerns in relation to weather conditions the following day.

Table 1: Details of gill netting operations planned for 2020

Gill-Netting Lake (2020)	Period	Days	Man Days	Estimated no. of Pike to be Removed
Arrow	Feb - April	25	75	175
Conn	Jan-Mar & Dec.	25	100	700
Cullin	Jan-Mar & Dec.	20	80	300
Carra	April	15	50	260
Mask	Feb - April	25	100	550
Corrib	Feb - April	35	140	500
Totals		145	545	2485

3 Electrofishing Operations -WRBD

Electrofishing (EF) operations can be carried out year round on all lakes subject to suitable weather and water conditions. The number of man-days proposed for each lake is outlined in the table below. As such, the period identified for EF operations on each lake is much longer and can effectively run from 1 January to 31 December in any year. Operations have been scheduled to commence from 1 Jan and continue to December, depending on the lake and particular circumstances in a given area. The table below quantifies the planned electrofishing effort on the 2 lakes and their inflowing river mouths.

Table 2 Details of Electrofishing operations planned for 2020

Electro-fishing Lake (2020)	Period	Days	Man Days	Estimated no. of Pike to be Removed
Arrow	April - Sept.	20	60	800
Conn	Mar - Nov.	20	60	400
Cullin	Mar - Nov.	20	60	400
Carra	Jan - Dec	5	15	200
Mask	Jan - Dec	20	60	800
Corrib	Jan - Dec	20	60	800
Totals		105	315	3400

In addition to targeting the nursery margins, EF will also be used to control pike numbers in the lower reaches of a number of rivers. There is ample evidence of severe predation of salmon smolts and juvenile trout near and in the mouths of nursery rivers and streams, especially when salmonids are migrating in March, April and October.

Surveys on Lower Deel Robe, Clare and Mukana rivers have shown that large numbers of salmon smolts and juvenile trout can be consumed by pike on their outward migration and even while resident in slow flowing sections of rivers. EF operations on some rivers will, therefore, be scheduled for early spring the potential impacts of this predation on migrating salmonids.

Owenriff

Weather conditions and availability of skilled staff at key periods made operations difficult on Owenriff last year. Electro fishing on the feeder channels proved to be the most successful method and efforts will be intensified in these locations during 2020. Whilst the conductivity for electricity in the water of the main lakes can result in sub-optimal conditions for these operations,

it is planned to continue with these efforts especially in the margins where it is possible to pick up smaller pike in the 0+ to 2+ year class.

Gill nets and perch/pike traps will be deployed where appropriate and a team from the Connemara district will concentrate on operations for a two-week period during March, at a time when all Corrib staff are taken up operations on the main lakes.

Lake	Period	Man Days : Gill nets, Fyke nets, perch traps	Electrofishing & other methods	No. of Pike
Owenriff: Q1	Jan - Mar	20	0	
Owenriff: Q2	Apr - Jun	20	20	
Owenriff: Q3	July - Sept	20	30	
Owenriff: Q4	Oct - Dec	0	10	
Total		60	60	720

Staff

Extra staff may be required from other districts for the successful operation of pike management on the Owenriff system during the spring and summer months and this inter district cooperation has worked well in previous years. This can be arranged at local level between Inspectors and A/Inspectors.

Summary

The projected total output of the 2020 programme is to remove 5885 pike plus 720 from the Owenriff.

4 Lough Sheelin Stock Management Plan

In accordance with IFI's current policies on both pike and trout, stock management operations are indicated for one lake catchment in the ShRBD: Lough Sheelin which is designated managed wild brown trout fishery.

Electrofishing (EF) operations are planned for Lough Sheelin and full details of the proposed start and finish dates are tabulated below and include projected costs and projected numbers of pike to be removed.

Gill netting operation, normally carried out on Lough Sheelin, will not be carried out in 2020 as electrofishing trials carried out in 2019 have resulted in better numbers of Pike being removed and relocated to other recipient waters.

Electrofishing Operations

In contrast to netting operations, electrofishing (EF) operations can be carried out year round subject to suitable weather (calm & dry) and water conditions. The months of September and October can also be productive as juvenile pike will have reached a size large enough to be seen and picked up. The main focus of EF operations will be to target juvenile pike in the nursery areas around the margins of the lake.

The table below quantifies the planned electrofishing effort on lough Sheelin over 20 days during the months of March to April and over 20 days during the months of August to October weather permitting.

Table 5: Details of electrofishing operations planned for 2020

Electro-fishing Lake (2020)	Period	Days	
Sheelin	Mar-Apr	20	
Sheelin	Sep-Oct	20	
Estimated Pike to be removed			9115

Summary

The stock management programme for 2020 aims to remove 9,000+ pike.