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Subject:
Date:

Lough Neagh Angling Survey
23 April 2026 15:58:32

CAUTION – This email has been received from outside the NICS network. If you have any concerns, please report for investigation.



Just an email to inform DAERA that I will soon be conducting this month's Pike angling surveys as part of my PhD sampling.

Details are as follows:

The two locations used will be:

- **Site 1.** Kinnego Marina Angling Stands (54.492200, -6.368407).
- **Site 2.** Ballymaguigan Ponds (54.744650, -6.506412).

Date and timing:

This will commence on **Monday (27/04/26)** from **8am to 1pm** at **Site 2**.

The **Site 1**. study will be conducted **Tuesday (28/04/26)** from **8am to 1pm**.

AFBI FWF Staff Present:



Equipment: 6 Rods

- 4 Dead bait rods using bait acquired from angling shops.

- 2 Lure rods.

Any queries let me know,

Many thanks,

[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]

12-13 The Strand, Portaferry
Co.Down, Northern Ireland
BT22 1PF

From: [DAERA Private Office](#)

To:



Subject: Submission Decision SUB-0230-2026 : RECREATIONAL ANGLING NOT PERMITTED ON LOUGH NEAGH

Date: 16 March 2026 09:26:22

Attachments: [Minister's clearance.msg](#)
[Sent for clearance.msg](#)
[Submission.msg](#)

Classification: Official

Timing: Routine

Reference: SUB-0230-2026

Subject: SUB-0230-2026 : RECREATIONAL ANGLING NOT PERMITTED ON LOUGH NEAGH



Date: 16/03/2026

The Minister has seen and read your submission of 27/02/2026 and has:

- a. noted the contents of this submission; and
- b. noted the current position regarding recreational angling on Lough Neagh for 2026.

Reminder: It is the Business Area's responsibility to save all correspondence appropriately on Content Manager.



Submission

FROM: (SO or above)	
BRANCH:	Inland Fisheries Inspectorate
CONTACT:	
DATE	27/02/26
TO:	ANDREW MUIR MLA Minister of Agriculture, Environment and Rural Affairs
SUB-XXXX-2026 – RECREATIONAL ANGLING NOT PERMITTED ON LOUGH NEAGH	
SUMMARY	
Issue:	For information only: Lough Neagh Fishermen's Co-operative Society Ltd, as the fishery owner, has not granted any permission for recreational angling on Lough Neagh for the 2026 season.
Timing:	☒ Routine ☐ Urgent ☐ Desk Immediate Desk Immediate (5 working days or less) Urgent (6-10 working days) Routine (11+ working days)
Financial Implications:	None.
Managing Public Money Northern Ireland Implications:	None.
Chief Scientific Adviser's consideration:	Not required.
Windsor Framework Implementation consideration:	N/A.
Climate Change Implications:	None.
Legislation Implications:	None.
FOI Implications:	None.
Equality & Rural Needs Implications:	None – for information purposes only.
Executive Referral:	This issue does not require Executive referral as it is for information only.

Presentation Issues:	There is potential for correspondence from anglers and angling clubs, given a recent increase in angling activity on Lough Neagh and the formation of a new angling club.
Recommendation:	That you: a. note the contents of this submission; and b. note the current position regarding recreational angling on Lough Neagh for 2026.

INTRODUCTION

1. The purpose of this submission is to advise you of the current position taken by the fishery owner, Lough Neagh Fishermen's Co-operative Society Ltd (LNFCS), regarding recreational angling on Lough Neagh for the 2026 season.

BACKGROUND

2. LNFCS, as fishery owner of the scale fishing rights, confirmed to DAERA on 24th February 2026 that no permits or permissions will be issued to any individual angler or angling club to fish on Lough Neagh for the 2026 season.
3. The LNFCS has requested that DAERA, as a matter of courtesy, remind anglers purchasing rod licences that Lough Neagh is a privately owned fishery and that no permission to fish has been granted.
4. DAERA Inland Fisheries has advised LNFCS that the current online rod licence purchasing system does not allow for tailored messaging to be issued to all licence holders regarding private fishery permissions. Where anglers contact DAERA directly, advice is provided on the requirement to obtain permission from the fishery owner.
5. Inland Fisheries enforcement staff have been instructed on the applicable regulations for angling on Lough Neagh and will continue to carry out patrols and compliance checks.
6. There has been a significant increase in angling activity on Lough Neagh due to the increased water clarity over recent years. A new angling club has now been formed on Lough Neagh. In this context, the current position is likely to generate correspondence from anglers seeking clarification or expressing concern.
7. Officials are also seeking verification from the LNFCS regarding two matters: whether the LNFCS has disseminated broader communications to notify the angling community that recreational fishing on Lough Neagh is prohibited, and whether the Honourable Irish Society has been approached, considering their purported limited recreational fishing rights in the north-west region of the lough.

LEGAL ADVICE

8. Legal advice is not required.

ADVICE

9. Given increased angling interest, there is a heightened likelihood of correspondence being directed to you and the Department. I have considered it appropriate that you are sighted on this issue in advance, to support consistent handling of any representations received.

RECOMMENDATION

10. That you:
- a. note the contents of this submission; and
 - b. note the current position regarding recreational angling on Lough Neagh in 2026.

Name: [REDACTED]
Branch: [REDACTED] Inland Fisheries Inspectorate
Contact Details: [REDACTED]

ATTACHMENTS

No attachments

[REDACTED]

From: [REDACTED]
Subject: RE: Angling on Lough Neagh
Date: 25 February 2026 12:14:00
Attachments: [image002.png](#)
[image003.png](#)

[REDACTED] thank you for the update regarding permission for anglers to fish on L Neagh for the 2026 season. The vast majority of rod licences are purchased by means of an online process either from their home or from authorised distributors and the current process does not allow the Department to put in messages concerning private fishery owners about their waters. Thus, whilst we can advise anglers asking DAERA questions about permissions for anglers to fish on L Neagh, we cannot inform all anglers buying a licence that they cannot fish L Neagh. I assume the LNFCS PWBs will be carrying out patrols / checks to enforce these fishing rights.

Just checking if:

- 1) the LNFCS has provided information to the wider angling public to inform them that no recreational angling is allowed on L Neagh - this would be really helpful to get the message out.
- 2) have the [REDACTED] been contacted as our understanding is that they have some recreational fishing rights for the NW area of L Neagh?

[REDACTED]
Ground Floor West, Clare House
303 Airport Road West
Belfast
BT3 9ED

[REDACTED]
[REDACTED]



Please consider the environment - do you really need to print this e-mail?

From: [REDACTED]
Sent: 24 February 2026 15:21
To: DAERA IF Statutory Permissions <IF.StatutoryPermissions@daera-ni.gov.uk>
Cc: [REDACTED]
Subject: Angling on Lough Neagh

CAUTION – This email has been received from outside the NICS network. If you have any concerns, please report for investigation.

Good Afternoon,

I am writing to inform Inland Fisheries DAERA, that as the fishery owner, LNFCS have not issued any permits to anglers or clubs for the incoming season.

Permission to angle on Lough Neagh has not been granted to any club nor individual. I would ask that DAERA, as a matter of courtesy when issuing rod licenses, would remind those purchasing, that the fishery is privately owned and therefore no permission has been granted.

Kind regards

[REDACTED]
[REDACTED]



Subject:
Date:
Attachments:



RE: Angling on Lough Neagh
25 February 2026 13:35:00
[image002.png](#)
[image003.png](#)

[REDACTED] will ensure all Inland Fisheries staff are aware. To note the only bag limit for anglers fishing on L Neagh is in relation to coarse fish:

[Fisheries \(Conservation of Coarse Fish\) Byelaws \(Northern Ireland\) 2008](#) and for pike [Fisheries Regulations \(Northern Ireland\) 2014](#)

Up until your e mail of the 24th February 2026, the position had been that DAERA was not aware of any prohibition on angling in L Neagh but staff will be informed of the change to this position.

Thanks



Ground Floor West, Clare House
303 Airport Road West
Belfast
BT3 9ED



Please consider the environment - do you really need to print this e-mail?



Subject: RE: Angling on Lough Neagh

CAUTION – This email has been received from outside the NICS network. If you have any concerns, please report for investigation.



Thank you for this correspondence. While I understand that electronic payment for rod license is the preferred method, I would appreciate if operational, admin and any other DAERA staff who may be answering queries regarding Lough Neagh could remind of our position. Having spoken lately to many anglers there seems to be messaging coming from DAERA Inland Fisheries staff that

1. Angling is permitted on Lough Neagh
2. Bag limit restricted to that imposed by DAERA on other fisheries managed/owned by DAERA.

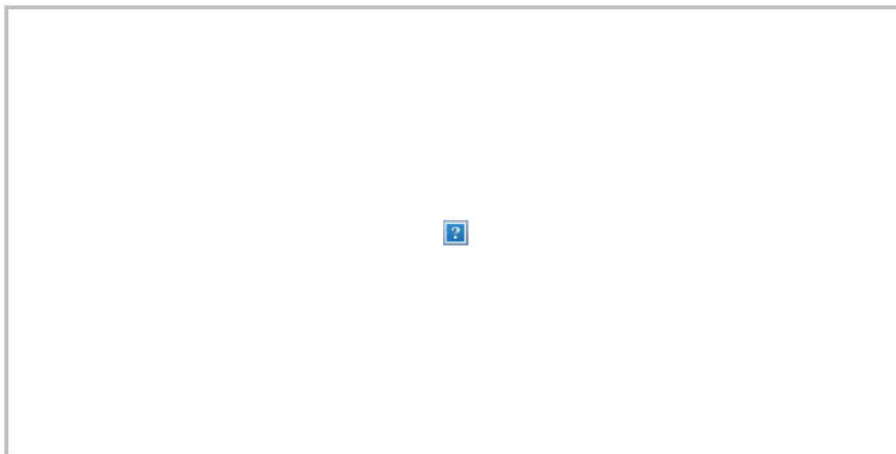
You will understand that this is contradictory to our position. Can you confirm when such staff will be trained/updated of this?

Given the nature of comments received on any social media posts regarding angling, LNFCS will manage comms around this internally.

HIS have been made aware.

Kind regards

[REDACTED]



Sent: 25 February 2026 12:15

To: [REDACTED]

Subject: RE: Angling on Lough Neagh

[REDACTED] thank you for the update regarding permission for anglers to fish on L Neagh for the 2026 season. The vast majority of rod licences are purchased by means of an online process either from their home or from authorised distributors and the current process does not allow the Department to put in messages concerning private fishery owners about their waters. Thus, whilst we can advise anglers asking DAERA questions about permissions for anglers to fish on L Neagh, we cannot inform all anglers buying a licence that they cannot fish L Neagh. I assume the LNFCS PWBs will be carrying out patrols / checks to enforce these fishing rights.

Just checking if:

- 1) the LNFCS has provided information to the wider angling public to inform them that no recreational angling is allowed on L Neagh - this would be really helpful to get the message out.
- 2) have the [REDACTED] been contacted as our understanding is that they have some recreational fishing rights for the NW area of L Neagh?

[REDACTED]

Marine and Fisheries Group
Ground Floor West, Clare House
303 Airport Road West
Belfast
BT3 9ED

[REDACTED]

[REDACTED]

Web: www.daera-ni.gov.uk



Please consider the environment - do you really need to print this e-mail?

[REDACTED]

Sent: 24 February 2026 15:21

To: DAERA IF Statutory Permissions <IF.StatutoryPermissions@daera-ni.gov.uk>

Subject: Angling on Lough Neagh

Good Afternoon,

I am writing to inform Inland Fisheries DAERA, that as the fishery owner, LNFCS have not issued any permits to anglers or clubs for the incoming season.

Permission to angle on Lough Neagh has not been granted to any club nor individual. I would ask that DAERA, as a matter of courtesy when issuing rod licenses, would remind those purchasing, that the fishery is privately owned and therefore no permission has been granted.

Kind regards



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From: [DAERA PermSec](#)

To:



Subject: Closing Correspondence : SCORR-0129-2022 : Letter from Linda Dillon MLA: Lough Neagh Fishery Management Plan (LNFMP)

Date: 23 December 2022 14:12:48

Attachments: [Response Issued.msg](#)

Date: 23/12/2022

Raised By: Linda Dillon

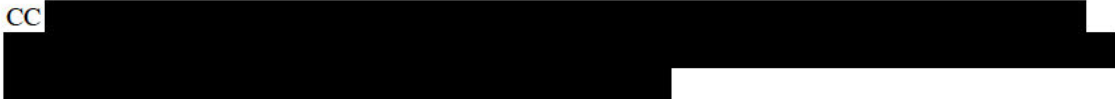
Reference: SCORR-0129-2022

Subject: Closing Correspondence : SCORR-0129-2022 : Letter from Linda Dillon MLA: Lough Neagh Fishery Management Plan (LNFMP)

To:



CC:



Please see final response as issued

Regards,





Linda Dillon MLA
Constituency Office
7-9 The Square, Coalisland
Co. Tyrone. BT71 4LN
Tel: 028 8774 8689

30 November 2022

Katrina Godfrey
Permanent Secretary
DAERA

Katrina, a chara

Ref: Lough Neagh Fishery Management Plan (LNFMP)

I have been contacted by constituents involved in fishing on Lough Neagh who have requested I contact you about concerns and questions they have raised – please see attached (Lough Neagh Fishery Management Plan Constituent Concerns).

They have requested an urgent response stating the Lough Neagh Fishery Management Plan as it stands, will have a detrimental impact on them in January 2023. (Attached for convivence – published on DAERA website in July 22, and updated in October),

They have asked for urgency in the context of the cost of living crisis and the soaring energy prices.

I would also ask additional clarification questions:

- 1) Was the LNFMP signed off by a Minister? If not, why not?
- 2) Was the LNFMP subject to DAERA Committee Scrutiny? If not, why not?
- 3) What was the level of engagement with the fishing community? How widely was it advertised and promoted?
- 4) Was there a public consultation process where written feedback could be provided? If not, why not?
- 5) Can the results of the ‘full public consultation’ highlighted on page 12 be accessed by the public? If so, could you provide the details

Linda Dillon MLA Sinn Féin Office 7-9 The Square, Coalisland Co. Tyrone. BT71 4LN Tel: 028 8774 8689 Email: coalislandsinnfein@gmail.com

6) What concerns were raised via the consultation process and how were these mitigated?

I appreciate your time in looking into this issue

Is mise le meas,

A handwritten signature in dark ink, appearing to read 'PP Saels', followed by a horizontal line.

Linda Dillon MLA

Linda Dillon MLA
Sinn Féin Office 7-9 The Square, Coalisland
Co. Tyrone. BT71 4LN
Tel: 028 8774 8689
Email: coalislandsinnfein@gmail.com



Lough Neagh Fishery Management Plan



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1. Foreword

The Department of Agriculture, Environment and Rural Affairs (DAERA) has a statutory responsibility for the conservation, protection, development and promotion of salmon and inland fisheries as set out in the Fisheries Act (NI) 1966. The commercial and recreational fishing sectors make an important contribution to the socio economic development of the local economy through employment, income, and exports as well as contributing to the health and well-being of people.

DAERA aims to manage our natural fisheries resources in a sustainable way to add social and economic value. To do this we conserve, protect, develop and promote recreational and commercial fisheries, by developing evidenced based policy, working with partners, educating the public and delivering service excellence to our customers.

Lough Neagh is at present, an underutilised resource; its hypereutrophic state makes it less suitable for the production of the more favoured species such as brown trout, however it is suitable and there is a market for the other coarse fish species present. There is broad support from fisheries stakeholder interests for DAERA to develop a more strategic long term approach to the management of the fish stocks in Lough Neagh and its tributaries in view of the many activities that impact on it from both internal and external sources. For this to be meaningful, it requires a catchment based approach of integrated fisheries management, combining biological aspects along with social and economic considerations.

The aim of the Fishery Management Plan (FMP) is to provide this strategic approach to the sustainable management of the fisheries resources and its habitat whilst also maximising its value to the economy and the environment and ensuring stakeholder input to it. The FMP sets out how DAERA will seek to manage fish stocks and what scientific information is required to fully inform this process. It also highlights many of the key issues / concerns raised by stakeholder in consultation meetings that have taken place to date. There is wide recognition that the Lough Neagh catchment has the potential to play an even more significant role in contributing to the development of the local economy.

DAERA will do this by:

Play a lead role in the sustainable management of fish stocks in the Lough and its tributaries and conserving, protecting, enhancing and restoring fish stocks and their habitat

Using the best available science to inform fishery management and policy decisions

Assisting with the sustainable development of fisheries for both the recreational and commercial fishing sectors

Recognising the economic and social benefits derived from fishing for local communities and Northern Ireland

Engaging with stakeholders in the development of Inland Fisheries' policy and legislation to ensure transparency for any decisions taken

Developing policy and interventions that promote compliance and understanding of fisheries regulations

1.1 FISHERY MANAGEMENT PLAN OBJECTIVES

The aim of the FMP is to provide a strategic approach to the sustainable management of the fisheries resources and its habitat whilst also maximising its value to the economy and the environment and ensuring stakeholder input. Management objectives identified need to be clear and measurable and the approach must be strategic, effective and efficient.

Key Objectives:



With the key priority areas for the Fishery Management Plan as follows:



Fishery Management Plan – The Precautionary Approach (PA)

The precautionary approach / principle should be applied when ecosystem resilience and anthropogenic impact (including mitigation measures) are difficult to predict and hard to decipher from natural changes (Cochrane and Garcia, 2009). The precautionary approach requires the assumption that an action risks harm and should not be undertaken until proven otherwise by scientific research. In practice, implementing a precautionary approach means that the less that is known about a system (i.e. greater uncertainty), the more caution is required and the more conservative, fishery managers should be in relation to fishing effort (Cochrane and Garcia, 2009).

DAERA will apply the precautionary principle in the management of fish stocks on Lough Neagh. As a general principle the exploitation of any fish species on Lough Neagh should be supported by scientific evidence which support those species to be exploited. To avoid population collapse, fishing mortality must be kept to a level which will ensure that stocks are sustained and maintained. This will provide sufficient first time spawning fish being able to contribute at least once to the overall spawning stock for the species. This approach allows a legal and social framework for the fishery. Rules controlling the fishery e.g. licensing, open/closed season and minimum landing sizes are part of the suite of measures that can be applied to ensure sustainable use of the fisheries resource. Data collection and reporting are essential to enable fish stock assessments and to identify trends over time in species. Consideration should also be given to adapting fishing methods to reduce the impacts on non-target species.

2.1 OVERVIEW OF THE FISHERY

Lough Neagh

Lough Neagh is situated in the centre of Northern Ireland (NI) and is the largest freshwater lake in the British Isles. There are 6 major inflowing rivers, all of which are important angling waters along with the Lower Bann River which discharges from the north end of the Lough at Toome. The total catchment area draining into Lough Neagh is 4,450 km², (which amounts to about 43% of NI), plus a small area in the Republic of Ireland (390km²). The principal physical statistics of the lough are listed below:

- Surface Area: 383 km²
- Average depth: 8.9m
- Maximum depth: 30m
- Volume: 3.45 million Megalitres (MI)
- Length of shoreline: approx 125km
- Maximum length: 30.5km (SW-NE)
- Maximum width: 12.1km (W-E)
- Trophic status: Hypertrophic (enriched)
- Major tributaries: Blackwater, Ballinderry, Moyola, Six Mile Water, Main & Upper Bann Rivers
- Minor tributaries: Glenavy & Crumlin Rivers

The Department for Infrastructure Rivers regulates and controls water levels in Lough Neagh within a specified range; that is 12.450 metres to 12.600 metres Ordnance Datum, as defined in the Lough Neagh Levels Scheme (1955) (as amended).

Water levels in the Lough are controlled by means of flood gates at Toome at the head of the Lower Bann River. Further control within the Lower Bann River is

managed by two sets of flood gates. These are located at Portna (near Kilrea), and The Cutts at Coleraine. The channel in the Lower Bann River, downstream of Lough Neagh, tends to impede the rate of outflow from the Lough during periods of heavy rainfall. At such times the floodgates at Toome are fully opened, where possible, in advance of an anticipated rise in water level.

The Fishery

Some recreational angling takes place on Lough Neagh but the vast majority is on the main tributaries that drain into the Lough. Fishing activity on Lough Neagh is dominated by the commercial fishery which targets eels, trout and coarse fish stocks such as pollan, perch, roach and bream. Lough Neagh has had a commercial fishery for centuries which is utilised by local people (McKenna et al., 2008, Donnelly, 1986). The main target species is the European eel. This fishery is controlled by the Lough Neagh Fishermen's Cooperative Society (LNFCS) which issue permits to fish for eel to fishermen annually. LNFCS has managed the eel fishery since 1971 and the majority of practicing fishers' are shareholders. Permission from the fishery owner is also required to fish commercially for coarse fish and Brown Trout stocks on the Lough.

The Lough is fished between May and September for yellow eels; the traditional means being a long line of over one thousand hooks fished overnight. Hook baits include earthworms (*Lumbricus* spp.), fish fry captured in bait nets, pieces of fish flesh, and more recently mealworms (various coleopteran larvae available through the pet food trade). There is also draft net fishing, using an 80-100m seine net with a cod-end deployed from a boat in open water. Emigrating silver eels are caught at two fixed stations on the River Bann. Fixed mesh structures in the flow channel capture downstream migrating eels in to fixed "Coghill" nets lowered into the flow.

Commercial fishing for trout and coarse fish is mainly by gill net and these are fished outside of the closed seasons for the respective species; with current markets, pollan and roach are the most sought after species with annual catches of these species

occasionally exceeding 200 tonnes. There is also demand albeit substantially smaller for brown trout, perch and bream (dealer register data: **Appendix B**). The vast majority of fish caught on Lough Neagh are exported to Europe for sale.

Governance/Policy

Anyone fishing requires a DAERA licence and Table 1 below shows the number and type of commercial licences issued for Lough Neagh by DAERA over the period 2005 - 2021. To buy or sell trout, sea trout, salmon, eels, pollan, and pike a person must be a registered dealer and details of the recorded amount of each species landed annually to the commercial fish dealers by Lough Neagh fishermen can be found in **Appendix B**.

Table 1 Analysis of Lough Neagh Commercial Licence sales 2005-2021

Year	Eel Long line <1200 hooks	Eel Draft	Eel Long line >1200 hooks	Eel weir	Fyke nets	Salmon Draft net	Trout net YARDS	Coarse net YARDS	Bait net
2005	58	38	3	3	72	20	13,400	22,900	34
2006	54	28	2	4	80	18	15000	22,900	25
2007	51	22	3	3	55	15	11,800	21,400	20
2008	62	29	2	3	76	18	11,600	23,500	34
2009	84	32	2	3	120	20	12,100	35,200	44
2010	79	37	2	3	69	16	11,400	46,300	44
2011	93	38	2	3	0	20	10,400	56,700	50
2012	86	45	9	2	0	21	12,600	61,700	70
2013	90	47	7	2	0	24	14,300	75,000	73

2014	81	45	17	2	0	16	17,200	78,500	90
2015	79	41	11	2	0	0	20,800	70,500	68
2016	79	37	6	2	0	0	15,400	61,900	66
2017	71	30	8	2	0	0	18,300	70,700	60
2018	70	28	4	2	0	0	21,600	90,500	53
2019	77	31	4	2	0	0	29,100	92,600	62
2020	50	15	1	2	0	0	28,800	89,100	42
2021	71	21	1	2	0	0	29,700	91,400	57

DAERA's policy with regard to inland fisheries is enshrined within various domestic and international legislation and guidelines and the main ones are listed below:

The Fisheries Act (NI) 1966 – provides for the conservation, protection and development of inland fisheries;

The Fisheries Regulations (NI) 2014 regulates recreational and commercial fishing activity for all fish species bar eels;

The Eel Fishing Regulations (NI) 2011 prescribes methods of fishing, minimum sizes and time for eel fishing;

Council Regulations (EC) No. 110/2007 established measures for the recovery of the stock of European eel, necessitating the implementation of Eel Management Plans for all river basins including Neagh/Bann;

Water Framework Directive (2000/60/EC) to protect the water environment and to achieve “good status” for all waters;

Habitats Directive 1992 defines a common framework for the conservation of wild plants and animals and habitats of Community interest. This protection extends to both pollan and salmon;

North Atlantic Salmon Conservation Organisation (NASCO) whose objectives are to conserve, restore, enhance and rationally manage Atlantic salmon through international co-operation.

Economic, Social and Cultural Importance of the Fishery

Eel fishing has been a major industry on Lough Neagh for centuries (evidence of eel fishing on Lough Neagh during the bronze age has been found) and traditional skills are passed down to each successive generation within families. Many of the traditional methods of eel fishing are still used, e.g. Fishermen still use hand-made straw ropes to help elvers pass up river.

Locally, the Lough Neagh eel fishery is worth approx. £3.2m to the NI rural economy (second only in value to Nephrops or prawns with regards to total fish landings into NI) and supports over 300 families along the Lough shore. It is the largest remaining commercial wild eel fishery in Europe, producing 16% of total EU landings and supplying 3.6% of the entire EU market in 2007. The Lough Neagh eel also has Protected Geographical Indication status recognising and protecting this species as a unique regional food product. In terms of overall value for all fin fish landings in NI, it has held the top position several times in the past five years. No assessment has been made on the value of coarse fish or trout taken in the commercial fishery on Lough Neagh. The pollan has also been awarded the Product Designation of Origin status recognising and protecting this species as a unique regional food product.

Good quality, well-managed fisheries are a valuable asset which can make a significant contribution to social and economic conditions in the immediate area. Local businesses derive economic benefit from the existence of the commercial fishing sector through the manufacture of fishing gear, the repair of boats and provision of fuel etc. DAERA also recognises the potential to generate further socio-economic growth through the development of angling on the Lough recognising that visiting anglers will spend varying amounts of money on accommodation, food and drink, and fishing tackle etc

Fishery Management Plan Process

This Fishery Management Plan has been developed through engagement and dialogue with relevant stakeholders and has been subject to full public consultation. This included distribution of the document to key stakeholders, advertisement in daily newspapers and publication on the Department website. As part of the consultative process we engaged with interested groups and Assembly Committees as appropriate, to ensure that as wide a range of views is reflected in the final analysis. Following collation and consideration of responses and further consultation with selected stakeholders including the Salmon and Inland Fisheries Forum (SIFF), the plan has been finalised. Implementation of agreed proposals will be subject to budgetary cover and the plan will be subject to review every five years. Where legislation is required, this too will be subject to public consultation and the existing Ministerial and NI Assembly approval processes. Habitat Regulation Assessments (HRA) have already been completed for commercial fishing as part of this plan. Any future developments will also be subject to the HRA process to ensure compliance with the legislation and to assess any potential impact on the designated features.

2.2 FISH STOCKS

Biological Synopsis

The Lough Neagh catchment including the Lough, afferent and efferent rivers and tributaries and the Lower Bann provide habitat for many species of fish including the native species; salmon, trout, pollan, eel, sticklebacks, lamprey, flounder, bream and pike (McElarney et al., 2015, LNAC, 2002). The fish community of Lough Neagh has been the subject of a number of historical reviews. Much of the emphasis in both the historical and scientific studies was based on the commercial importance of the European eel (Allen et al., 2006, Rosell et al., 2005) and pollan *Coregonus autumnalis* (Pallas) (Dabrowski, 1981, Harrod, 2001, Wilson, 1979, Wilson and Pitcher, 1984). The Dollaghan is a brown trout variant endemic to the Lough Neagh system, spending most of their life in the Lough and returning to feeder streams only to spawn (Vaughan, 2009, Crozier, 1983). Lough Neagh also supports the largest population of pollan a fish endemic to Ireland (Harrod, 2001).

Although nutrient rich and isothermal throughout the water column (Vaughan, 2009, Harrod, 2001, Wood and Smith, 1993), Lough Neagh supports populations of several species more characteristic of cooler, nutrient depleted systems including pollan and river lamprey *Lampetra fluviatilis* (L.). The fish community of Lough Neagh is currently dominated by perch (*Perca fluviatilis* (L.)), pollan (*Coregonus autumnalis*) and roach (*Rutilus rutilus*) (McElarney et al., 2015). Perch and roach, both non-native species, are considered keystone species in European lakes as they have been implicated in driving changes to ecosystem function (Maguire et al., 2011, Brabrand and Faafeng, 1993). Roach are atypical in the context of European freshwater fish as they are generalist omnivores. They switch from a juvenile diet of zooplankton to a diet dominated by macroinvertebrates as they enter sexual maturity (Persson and Greenberg, 1990). This generalist diet, efficient zooplanktivory, and capacity to rapidly produce abundant populations are all factors in the capacity of roach to succeed in lakes outside of their natural distribution (Rask et al., 2000, Fitzmaurice, 1981), presumably through competitive superiority over native or other resident fishes (Persson, 1991, Bergstrand, 1990, Persson and Greenberg, 1990).

Perch are carnivorous throughout their life cycle, but follow a marked and well reported dietary shift from zooplanktivory, benthivory through to piscivory throughout the course of their development (Svanbäck and Eklöv, 2002, Hjelm et al., 2001).

The pollan is a unique and threatened freshwater fish (Harrison et al., 2012). The island of Ireland has approximately 4,000 lakes larger than five hectares however the distribution of pollan is limited to five lowland lakes, these lakes are Lough Neagh, Lower Lough Erne, Lough Allen, Lough Derg and Lough Ree (Harrison et al., 2012, Harrison et al., 2010, Harrod, 2001) and of these lakes Lough Neagh supports the largest population of this species (McElarney et al., 2014). It is thought that each stock has been isolated from conspecific populations since the last glacial maxima (circa 10,000 years ago) (McCormick, 1998). The presence of pollan in Lough Neagh affords the lake an elevated conservation status.

Stock Assessment

The fish community of Lough Neagh is atypical for a lowland Irish lake (McElarney et al., 2015). The fish community is surveyed annually. Surveys typically find that species distribution varies greatly due to weather conditions and natural seasonal events such as spawning cycles. A total of 7 species are regularly encountered during these surveys; bream, eel, pollan, three spined stickleback, river lamprey, perch and roach. Additional species are occasionally captured in complimentary studies; these include gudgeon, stoneloach, nine spined stickleback, and Atlantic salmon.

Table 1: The fish community of Lough Neagh and origin.

Common Name	Specific Name	N	Origin
Bream	<i>Abramis brama</i> (L.)	53	Introduced
European Eel	<i>Anguilla anguilla</i> (L.)	77	Native

Stone Loach*	<i>Barbatula barbatula</i> (L.)	1	Introduced
	<i>Coregonus autumnalis</i> (Pallas	3,124	
Pollan	1776)		Native
Three spined stickleback	<i>Gasterosteus aculeatus</i> (L.)	948	Native
River Lamprey	<i>Lampetra fluviatilis</i> (L.)	8	Native
Perch	<i>Perca fluviatilis</i> (L.)	5,333	Introduced
Nine spined stickleback*	<i>Pungitius pungitius</i> (L.)	1	Native
Roach	<i>Rutilus rutilus</i> (L.)	5,356	Introduced
Brown Trout	<i>Salmo trutta</i> (L.)	152	Native
Atlantic Salmon*	<i>Salmo salar</i> (L.)	1	Native

* observed from complimentary survey

Survey catches are dominated both in abundance and biomass by different species during different seasons. Perch, pollan and roach are the most numerous species encountered with lesser contributions made by other species (eel, bream, three spined stickleback, brown trout and river lamprey) (Table 5.15 and 5.16).

In addition to the lake survey nine primary salmon rivers (Agivey, Clady, Lower Bann, Ballinderry, Upper Bann, Sixmile and Main) are routinely monitored for stock status and international reporting (ICES and NASCO). This also feeds local DAERA area allocation of any available harvest quota. Adult salmon stocks in primary rivers are assessed based on a hierarchical data system, from the optimum assessment of a calibrated counter on some rivers, through telemetric tracking of Bann salmon to apportion runs to spawning, rivers rod catch information, and at least by extrapolation from juvenile fry densities (Kennedy et al., 2015). Some rivers use more than one of these methods. Depending on summer conditions, in rivers variable numbers of electrofishing sites for fry are achieved year-on year. The data are reported annually in arrears on the DAERA digest of fishery statistics:

<https://www.daera-ni.gov.uk/publications/digest-statistics-salmon-and-inland-fisheries-daera-jurisdiction-2019>

Genetics

A recent study conducted by Queen's University Belfast (Keenan and Prodohl, 2015), genetically screened specimens of Brown Trout ($n = 6200$) from the major Lough Neagh river catchments. This study, despite the known long history of stocking regimes within the catchment, (which one would presume would lead to genetic homogenisation) actually indicated quite significant natural population genetic structuring. The presence of detectable patterns of sub structuring within the Ballinderry River is particularly interesting and the evident degree of population structuring questions the validity, efficiency and resource expenditure of fish stocking in the system.

Keenan and Prodohl (2015) also found that the degree of genetic divergence between and among populations is generally linked to the geographic distance between them. It is proposed that due to the high levels and geographical patterns of population substructuring and the likelihood that these differences are potentially associated with important adaptive traits, movement of individual specimens between river catchments should be limited and/or closely monitored.

Unregulated movement of brown trout individuals within the Lough Neagh system, without consideration for the genetic patterns outlined here, which are linked both to evolutionary history (i.e. colonisation history after the retreat of ice following the last glacial maximum) and local adaptation (i.e. natural selection), could potentially lead to the breakdown of naturally occurring adaptive and spatial differences, thus resulting in the loss of biodiversity unique to the local area.

Another key finding from Keenan and Prodohl (2015) is that there is no genetic evidence to suggest that the Dollaghan trout comprises a distinct genetic lineage. Trout which one would phenotypically classify as Dollaghan are common both in the Sixmile Water and the River Main catchments which are each genetically distinct from each other.

Population genetic structure of the Atlantic salmon (*Salmo salar*) stocks of the River Bann catchment/Lough Neagh basin has also been reported on in several recent studies (Ensing and Crozier, 2010, Ensing et al., 2013, SALSEA-MERGE TEAM, 2012). This data, augmented by unpublished data confirms that the Bann/Lough Neagh Atlantic salmon population is genetically very distinct from other such populations in the UK and Ireland. Whether this uniqueness is a result of a different origin of the founding population after the Pleistocene glaciations, founder effects, or recent population bottlenecks, requires additional study, but it is clear that this population is reproductively isolated from neighbouring rivers such as the Bush and Foyle and forms a unique genetic lineage within the European North Atlantic salmon stock.

Further genetic structure exists within the Bann/Lough Neagh salmon population. Four distinct genetic groups can be identified; a Lower Bann group consisting of tributaries of the Lower Bann (Agivey, Clady, etc.), a northern Lough Neagh group (Rivers Ballinderry, Moyola, Main, and Sixmile Water), with the Blackwater and Upper Bann the third and fourth group respectively.

In order to conserve the unique genetic structure both within the Bann/Lough Neagh salmon population and between this population and adjacent ones any movement of fish within the catchment should be discouraged. Introductions of salmon from outside the Bann/Lough Neagh area would be an even greater threat to the future survival of the Bann/Lough Neagh lineage, and would be a direct violation of the Williamsburgh Declaration (NASCO, 2003) of the North Atlantic Salmon Conservation Organisation, to which the UK is a signatory.

Stocking

Freshwater fish throughout Ireland have been frequently moved and stocked to new waters, and populations manipulated by man either intentionally or inadvertently for centuries (Rosell et al., 2012). Transfer and stocking of fish may be carried out to create new recreational or commercial fisheries, for mitigation or restoration of loss of fish through pollution events or over – exploitation, to enhance angling

opportunities through increasing stock density or by adding a novel species (Rosell et al., 2012).

A major shift is underway in the scientific view of the long term desirability of some stocking practices, capable of at worst, damaging genetic diversity within species (Rosell et al., 2012) and at best having no major long-term significant impact on stock density (Keenan and Prodohl, 2015). This work has started with salmonids, and has demonstrated a degree of local adaptation to environments. Advice flowing from this field of research indicates that supplemental stocking with non-native / local strains, or other hatchery selected fish might sometimes at best achieve nothing in terms of long term contribution to wild stocks and might even cause harm by weakening or taking resource space from those wild stocks.

Until now a salmon and trout stocking programme has taken place in Lough Neagh's seven sub-catchments (Ballinderry, Blackwater, Lower Bann, Crumlin, Main, Moyola, Sixmile Water and Upper Bann) spanning approximately 40 rivers and streams. Over a 25 year period it is estimated that approximately 6 million salmonids (Brown Trout & Salmon) have been stocked into the Lough Neagh catchment. In light of recent genetics studies, future stocking programmes in the Lough Neagh catchment should fully consider the information reported by Keenan and Prodohl (2015), and have precise objectives to prevent biodiversity loss and resources should now be prioritised to habitat restoration.

Traditional or Local Ecological Knowledge

Incorporating traditional ecological and fishers' knowledge is a an approach taken in fisheries research that has a history spanning generations, yet traditionally has failed to become incorporated in fisheries science and management alongside approaches that rely primarily on the knowledge of professional scientists (Hind, 2014). This knowledge is often passed down generation to generation and some is learned at first-hand through personal experiences and therefore provides an insight into long – term ecological trends or fluctuations. Effective and sustainable fishery management

plans can potentially be developed with the aid of traditional ecological knowledge which compliments a scientific research programme. Local fishermen hold a wealth of industrial, fishery, ecological and environmental knowledge that is pivotal to the fishery management plan.

Invasive Species

Non-native invasive species are one of the greatest threats to biodiversity worldwide and this threat is amplified on islands with depauperate flora and fauna such as Ireland. Invasive species often out-compete or prey upon native species resulting in the domination and often bioengineering of the occupied habitat and environment.

The zebra mussel is a freshwater bivalve which attaches itself to hard substrates. It is native to the Ponto-Caspian region and has spread throughout much of central and northern Europe through canal networks over the past two centuries. Zebra mussels are considered a significant threat to aquatic environments and can cause dramatic changes to an ecosystem through both direct and indirect actions. Abiotic impacts of zebra mussel invasion include the fouling of aquatic structures and enhanced water clarity due to the filtering of the water column by the mussels. Biotic impacts can include the suppression of zooplankton populations due to competition and predation. Zebra mussels have also been shown to change fish population structures due to loss of spawning grounds to mussel colonies, and lack of food resources due to the reduction in the zooplankton population. Strayer et al. (1999) predicted that shallow or well-mixed systems, such as that of Lough Neagh (Figure 1), may experience a shift in energy and biomass from pelagic to benthic food webs. The improved water clarity may also cause an increase in macrophyte growth due to increased light transmission through the water column. This increase in water clarity and subsequent decrease in chlorophyll *a* has been reported in many Irish lakes invaded by zebra mussels.

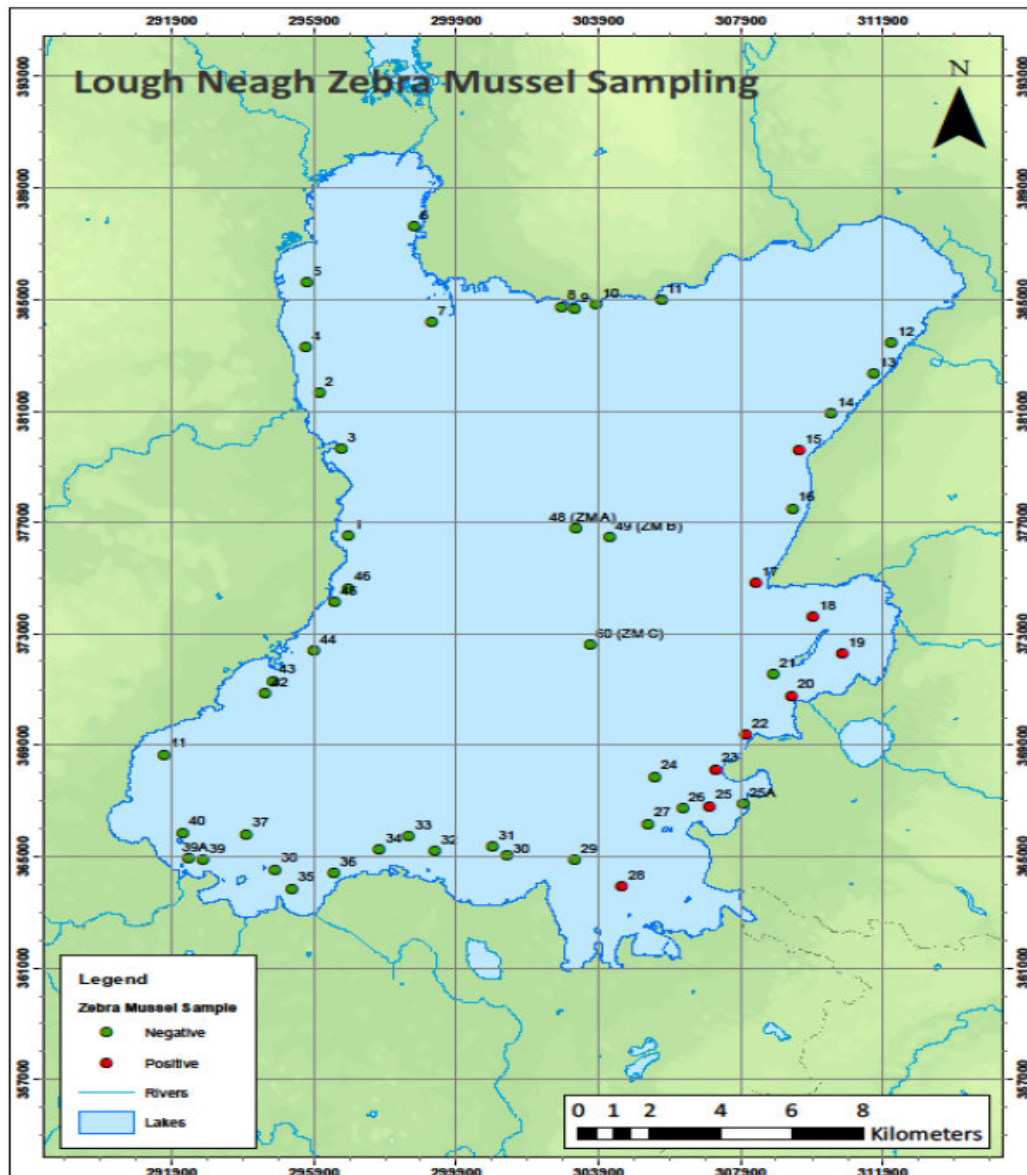


Figure 1 Recorded distribution of Zebra Mussels Lough Neagh April/May 2013 (taken from: Rosell et al. (2013))

2.3 WATER QUALITY

Northern Ireland's water resources are managed and protected using a catchment based approach which includes rivers, lakes and groundwater as well as coastal and marine water bodies. The Water Framework Directive (2000/60/EC) requires the production and implementation of a River Basin Management Plan (RBMP) in six yearly cycles. The River Basin Management Plan takes an integrated approach, identifying those water bodies which can be classified as being at 'good or better' status, as well as setting the objectives and programme of measures for the next six year cycle to help improve those water bodies which are classified as below 'good' status.

The 3rd cycle RBMP period runs from 2021-2027. As part of the development of this next cycle plan the Department must, by 22 December 2019, publish for public consultation a report on 'Significant Water Management Issues' (SWMI) in Northern Ireland. This consultation has been produced to share an overview of the significant water management issues identified across Northern Ireland. It will inform measures required to secure the necessary improvements and to share evidence around where action is required. The link to the consultation is:

<https://www.daera-ni.gov.uk/consultations/planning-third-cycle-river-basin-management-plan-2021-2027-consultation-significant-water-management>

The most recently published status assessments, including Lough Neagh, are in the 2nd cycle Neagh Bann River Basin Management plan which can be viewed at:

<https://www.daera-ni.gov.uk/publications/neagh-bann-river-basin-management-plan-2015-2021> and the associated web mapper <https://apps.daira-ni.gov.uk/RiverBasinViewer/>.

2.4 FISHERY MANAGEMENT ISSUES

Pre-consultation meetings were held at different locations for members of the public during 2014/15 on the first draft of the Fishery Management Plan for Lough Neagh. These meetings were well attended and it was a very useful way to not only find out what the main fishery issues were in the L Neagh catchment but also to discuss possible management options directly at a very early stage in the process. The (then) Department of Culture, Arts and Leisure, also carried out a public consultation exercise on the draft Plan towards the end of 2015. The Salmon and Inland Fisheries forum (SIFF) were subsequently consulted on a revised draft of the plan and further meetings have been held with them and other selected stakeholder groups at various dates since then to “fine tune” some of the more detailed proposals.

The following is a summary of the issues raised that stakeholders considered the Fishery Management Plan needed to consider:

- **Legislation**

1. Some of the legislation for the commercial fishery on Lough Neagh is out of date and does not reflect modern net construction methods or custom and practice;
2. Commercial fishing should be allowed over the weekend period;
3. Restrictions on the length of nets that can be used on Lough Neagh;
4. Clarification of legislation around the use of agents by commercial fishermen;
5. Allow the use of draft nets by more commercial fishermen;
6. Legislation is complex and there is a need to simplify.

- **Governance**

1. Cost of angling licences compared to commercial licences;
2. Need for commercial fishermen to submit catch details;
3. Need to introduce a permit for coarse commercial and recreational fishermen;
4. Improve communication with commercial fishermen;

5. Improve level of angling catch returns;
6. Licence / permit to cover both game and coarse angling.

- **Development**

1. Develop angling and its infrastructure on Lough Neagh;
2. Co-ordinate the promotion and development of angling on the tributaries with the relevant statutory and non-statutory stakeholders;
3. Maximise the economic returns from both the recreational and commercial fishing sectors.

- **Protection**

1. Ensure an effective enforcement programme is in place to protect fish stocks and their habitat;
2. Educate stakeholders to improve compliance with the legislation.

- **Conservation**

1. Net mesh sizes to be reviewed to ensure juvenile contribution to the spawning stock for each species;
2. Allow the use of draft nets by more commercial fishermen;
3. Restrictions be placed on the length of nets that can be used on Lough Neagh;
4. Change minimum landing size and introduce bag limits for recreational trout fisheries;
5. Review and adjust seasons to protect spawning stock;
6. Collect catch per unit effort (CPUE) data on the yellow eel fishery and identify an upper limit on maximum catch annually;
7. Consider allowing methods to reduce juvenile eel mortality through long line fishing;
8. Improve coarse fish stocks on both the Upper and Lower Bann;
9. Improve fisheries habitat, remove fish barriers or improve fish passage at barriers in the tributaries of Lough Neagh;

10. Regulation of sand dredging to protect juvenile fish stocks;
11. Reduce the level of bycatch or discards of non-target species from commercial netting;
12. Stocking.

- **Scientific Data**

1. Require regular scientific monitoring of fish stocks on Lough Neagh & tributaries to provide long term datasets to identify trends in fish populations;
2. Collect catch per unit effort (CPUE) data on the yellow eel fishery and identify an upper limit on maximum catch annually;
3. Require commercial fishermen to submit catch details to improve monitoring and management of fish stocks;
4. Acquire more genetic information on commercial catches of Dollaghan on Lough Neagh.

2.5 FISHERY MANAGEMENT PLAN PROPOSALS

Having considered the issues and listened to stakeholder concerns DAERA propose the following:



1. DAERA to update Lough Neagh net construction legislation to consider the use of modern twines and to review legislation for the established custom and practice of bait net trawling.

Background

Regulations are an important component of fisheries management but they must be understood, accepted and enforced in order to be effective. Nets were traditionally constructed with nylon, however there is a move by net manufacturers to use modern Polyethylene twines. Some like Dyneema (which is a High modulus Polyester Twine) is made up from a number of fibres or filaments fused together in a single strand. These tend to be more expensive to make and come in a range of thicknesses from 1.1mm to 0.02mm. Legislation now needs to be renewed to incorporate consideration of these new twines in net manufacturing.

The use of a bait net to collect small fish for baiting eel long lines, has been long established method used on Lough Neagh. Details for the net are defined in the 2014 Fisheries Regulations (NI) 2014 (S.R. 2014 No. 17), however over a number of

decades methods other than those prescribed in legislation have been used effectively, meaning fishermen are acting illegally.

Proposal

The proposal is to update the legislation to incorporate the use of modern twines in net construction as set out below. There is a need to take a precautionary approach to halt the use of finer twines in the construction of nets going forward, which would have a greater catching capacity than those currently being used. Nylon nets are easiest to measure by the number of ply in them rather than trying to measure a twine diameter as was originally proposed in the draft Lough Neagh FMP. Multifilament braided or plied twines are around 2-3 times the cost of monofilament. Therefore nets composed from monofilament should not be authorised, its also likely that fishermen using the higher cost yarns will not want to get such nets seized and therefore more likely to fish legally rather than illegally.

Nets should therefore be constructed using braided or plied multifilament yarns, each multifilament yarn should be composed of a minimum of 20 strands.

Nets should be a maximum of 50 meshes deep which would equate to 1.5m distance.

Bait netting is currently managed each year by means of a Section 14 authorisation issued by the Department. This arrangement should continue under this authorisation as it allows the Department better control of bait net fishing in light of annual stock assessments. Pollan fry are caught in these nets along with other species, however they are a short lived species and there may be consecutive years when recruitment is low and consideration given as to whether to authorise it or not.

2. DAERA to change the 48 hours weekend closed period from the current 06.00 am on a Saturday to 06.00 am on a Monday, to 12 Noon on a Friday to 12 Noon on a Sunday.

Background

The current legislation prohibits the taking of coarse fish over the weekend period. This was introduced as a conservation measure to reduce fishing effort on stocks present. However fishermen usually finish fishing on a Friday morning as this meets the needs of the markets selling their fish.

Proposal

DAERA will change the 48 hours weekend closed period from the current 06.00 am on a Saturday to 06.00 am on a Monday, to 12 Noon on a Friday to 12 Noon on a Sunday.

3. DAERA to introduce restrictions on the maximum length of nets that can be used for capturing coarse fish on Lough Neagh. This is to be set at a maximum of 1500 yards (1371m) of headline length single/combined netting per licence holder.

Background

The current legislation only provides that the maximum length for a single net for the capture of trout by any licence holder is 1235m. However there is no maximum length specified in legislation for a single net used for the capture of coarse fish, which will also capture other non-target species. This means that fishermen can use any length of net as long as they hold a relevant licence for the yardage used. Discussions to date have indicated that fishermen require approximately 1500 yards of net to catch enough fish to earn a living and this is a condition of the permit issued

by the LNFCs. There is a conservation need to control fishing effort by limiting the maximum length of net that can be used for the capture of coarse fish.

Proposal

DAERA will introduce restrictions on the maximum headline length for a single net or combination of nets for the capture of coarse fish. Legislation will set this at up to 1500 yards – 1371m per licence holder. DAERA will monitor its impact on the fishery. It is envisaged that further adjustment maybe required after a period of assessment.

4. Agents will not be allowed to operate on behalf of licenced commercial fishermen instead only than those approved by DAERA can operate for a temporary period of time on behalf of the licence holder.

Background

The 2014 Fisheries Regulations allows the use of agents by licenced fishers to operate on their behalf. However the detail in legislation is vague and possibly open to mis-interpretation or misuse. There is support to enable fishermen unable to fish temporarily to enable someone else to do so on their behalf.

Proposal

DAERA will remove this section of legislation so as to not allow the use of agents but instead DAERA would, on a case by case basis, consider an application from the licence holder for someone else to operate the licence on their behalf for a temporary period of time. Thus only known authorised substitutes could operate under this arrangement.

5. DAERA to review its policy and consider the increased use of draft or skip nets by more commercial fishermen.

Background

The current legislation restricts the use of draft nets for the taking of salmon and trout to those licenced to do so in any of the 5 years prior to 1st January 1972 or if dependent on such fishing for their livelihood, those who were licenced between January 1968 and 1986. Gill nets (most common type of net used) but are by their nature non selective for species and therefore non-target species also get caught with many unlikely to survive. There is no option currently for fishermen to purchase a draft or skip net licence. The use of draft nets would allow fish to be caught in a less destructive manner with most capable of being released back to the fishery if they are not required or cannot be taken.

Proposal

DAERA will review the policy around the use of draft or skip nets on Lough Neagh. Legislation already permits the use of such nets for species other than trout or salmon and this would allow more fishermen to use this more fish friendly method as unwanted catch can be released unharmed back into the water. Gill nets should not be used at the same time as a draft or skip net by the individual fishermen. AFBI will continue to regularly assess Lough Neagh fish stocks to ensure any change to the harvesting methods are fully sustainable and that there is no detrimental impact on other species.

6. DAERA to consider the introduction of a single licence to allow anglers to fish for both game and coarse fish species with it

Background

The current legislation for fishing can be complex and it may be difficult for those involved to know when they are compliant or in breach of the legislation. This is true for recreational anglers and many visiting tourists who get confused over the requirement to have either a game licence (allowing fishing for trout, sea trout or salmon) or a coarse licence (allowing fishing for other species such as pike, bream, perch, roach etc). An angler with a game rod licence is only entitled to fish with one rod but the angler with a coarse rod licence can use up to 2 rods but only at designated coarse fisheries.

Proposal

DAERA will consider a single DAERA rod licence that will entitle the holder to use up to 2 rods at a coarse fishery and one at a game fishery. A single Department permit is also proposed which will permit an angler to fish at any DAERA game or coarse fishery. This should make it simpler for visitors and tourists to understand and comply with the legislation. This proposal is linked to the review of licence and permit costs (7) and consideration will need to be given the implications of this on the management of game and coarse designated fisheries. Work on this proposal was initiated in 2021.



7. DAERA to review of the cost and types of commercial and angling licences available.

Background

There are concerns that the current recreational angling licence is similar in cost to that for 100yds of a commercial net that can be used to catch fish on Lough Neagh. A significant number of recreational anglers consider that, not only is their licence is too cheap and that its cost should be raised, also the cost of a commercial licence should be raised to reflect the use of this to earn a living and catch fish on a commercial scale. No price increases have been applied to licences in more than a decade and permits have only increased by inflation over this period. Revenue raised through the sales of licences and permits is factored into annual budget allocations and used to finance core IF business activities such as enforcement, habitat improvements, community education and outreach events etc. Commercial fishermen have suggested that licence types should include a number of methods rather than each method having a separate licence.

Proposal

DAERA will carry out a full review of the cost structure for both licences and permits. This will also form part of a wider business review of all licences and statutory permissions granted by DAERA Inland Fisheries. This will also include a review of

licence types with the aim of trying to simplify the licensing regime. Work on this proposal was initiated in 2021.

8. DAERA to regulate so that all commercial fishermen are required to maintain a record of all fish caught and landed.

Background

Fishermen are entitled to sell their own catch however these details are not required to be reported, unless they are sold to a registered dealer. In 2019 around 42% of licensed fishermen do not appear on any of the dealers register and therefore must have sold their own fish with no record available to DAERA. The dealer is required by legislation to maintain a record fish bought or sold for the list of species defined. Not all species (such as perch, roach and bream) are required to be recorded in the dealer's register. This makes the task of managing the fishery much more difficult as the basic requirement is not only to know what stocks levels of each species are present but also how many are harvested each year and by whom, and how hard they are to catch compared to previous years. This enable the annual assessment of stock levels which helps to identify trends in their abundance compared to historic data. Proof that Lough Neagh is managed as a sustainable fishery resource could also benefit with higher market return for fish sold.

Proposal

DAERA will bring forward legislation require all commercial fishermen to record data on their catches and landings daily on paper log books or a digital device. This would include data on the effort required to catch the amount of fish e.g. how many lines with how many hooks or what length of net and for how long. Changes to the legislation to require dealers to record purchases or sales of perch, bream and roach have already been consulted on and agreed by stakeholders and will be effected at the next opportunity.

9. Introduce a permit system for commercial scale fishermen - Completed in 2016.

Background

Currently permits are only issued to fishermen to allow them to capture eels. However no permit is issued in respect of the capture of trout or coarse fish either commercially or by recreational anglers. This is an essential element in the management of a fishery as it is an aid to controlling access and effort which may be required to protect fish stocks. This could be achieved by the issue of permits rather than requiring to change primary legislation to control the number of licences issued for the fishery.

Proposal

DAERA would propose that a permitting system be introduced for both commercial fishermen and anglers in respect of fishing for trout and coarse fish on Lough Neagh. A permit system for scale fishing for commercial fishermen was introduced in 2016. Whilst there is no angling permit system in place there are no objections to anglers fishing on the Lough.

10. DAERA to hold regular meetings with representatives of Lough Neagh commercial fishermen.

Background

The fishermen attending the stakeholder meetings have expressed their dissatisfaction regarding communication with those in charge of fisheries in the past and state that they were never directly consulted over relevant management issues or decisions concerning Lough Neagh that could affect their livelihoods.

Proposal

DAERA will hold regular meetings with commercial fishermen and their representatives and put in place a consultation process for all significant proposals that could affect them.

11. DAERA to consider mechanisms to improve the return rate of annual catch returns by anglers.

Background

Angling catch returns provide very useful data on stock levels of salmonids and other species on a yearly basis which helps to identify trends in stocks. The Standing Scientific Committee for salmon in the DAERA area, uses this rod catch data to help assess stocks levels in rivers and make an assessment on whether to recommend to DAERA that such rivers could be re-opened for the harvesting of salmon by anglers. Anyone holding a rod licence is legally required to make a catch return for any salmon or sea trout caught (even if released) throughout the fishing year. Despite this legal requirement the number of returns made has been declining and currently less than 2% of anglers made a return.

Proposal

DAERA will use its digital licensing system to identify and contact anglers that have not submitted an angling catch return. DAERA would make them aware they have not submitted an angling catch return and that enforcement action could follow if they fail to do so. Consideration should also be given to using new technologies such as an App to record catch details. It's important that there is a link between the Licences, Permits and Enforcement (LPE) system and any catch return process so individual licence holders can be identified as having submitted a catch return or not. In addition education around the use made of the catch return would help anglers to

appreciate how valuable they are and how they can contribute to reopening their fishery for the harvesting of salmon.



12. DAERA to assist with the development and promotion of angling on Lough Neagh and its tributaries.

Background

For reasons that are unclear, recreational angling on Lough Neagh has not been a significant presence; however the reverse is the case for the major tributaries that flow into the Lough where fishing for both game and coarse fish takes place. There are no formal arrangements in place for visitors fishing on Lough Neagh to purchase a permit to fish on the Lough for either coarse or game species but day tickets or permits are available for angling club stretches on many of the tributaries. There are many active angling clubs that play a key role in managing, maintaining and improving access to their fisheries and carrying out enhancement works in many tributaries to try and boost stocks present. It is clear that use of the fisheries resource by recreational anglers could play a significant role, not only in increasing the socio and economic benefits to rural areas, but also improving the health and well-being of those who participate. The Price, Waterhouse, Coopers report titled 'The Social and Economic Impact to the North of Ireland, and areas within the Loughs Agency, of Recreational Fisheries, Angling and Angling Resources' (<https://www.daera-ni.gov.uk/publications/social-and-economic-impact-angling-and-angling-resources-final-report>) indicated that "potential exists to increase the net economic value of angling". The key question is "what is the potential for angling on

Lough Neagh?” An internal report ‘Lough Neagh Angling Study’ commissioned by the then Department of Culture, Arts and Leisure (DCAL), confirms that there is great potential for angling but in common with other reports it does highlight the need to develop coarse fishing areas along the shore and to co-ordinate the promotion and marketing of this to both local and visiting anglers.

Proposal

DAERA will, along with other key stakeholders, seek to develop and promote recreational angling on Lough Neagh to maximise the social and economic benefit from this activity. Some preparatory work has already been carried out in existing reports such as ‘Lough Neagh Partnership Lough Neagh Strategy’ ,(<https://www.loughneaghpartnership.org/wp-content/uploads/2017/10/FINAL-LOUGH-NEAGH-MANAGEMENT-STRATEGY.pdf>) or the Lough Neagh co-operation project (<http://www.outdoorrecreationni.com/projects/lough-neagh-feasibility-study>) but this now requires co-ordination between interested parties to advance many of the key targets and objectives therein.

13. DAERA to work in partnership with stakeholders to maximise the economic returns from both the recreational and commercial fishing sectors.

Background

The socio economic importance of inland fisheries is in the value it contributes to the local social and economic welfare, which is primarily based in the rural areas. Both the recreational and commercial fisheries have the potential to increase the benefits derived, providing the fisheries are managed in a sustainable way and the fisheries resource is used in a way that maximises its value to the local economy. Many stakeholders consider that much of this potential is untapped due the lack of co-ordination along with poor marketing of services and goods.

Proposal

DAERA will seek to work with the fishery owners and other appropriate bodies to help to maximise the value of the fishing resource in the Lough Neagh catchment. Key to this will be assessing the opportunities to exploit the fish stocks present in a sustainable way and also to maximise the income generated.



14. DAERA to ensure an effective enforcement programme is in place to protect fish stocks and their habitat which will include guidance and support for Private Water Bailiffs.

Background

DAERA is responsible for the protection of salmon and inland fish stocks in the DAERA area. This is a key role in ensuring that fish are taken only when they are legally allowed to be, so to ensure that stocks are kept at a sustainable level. There are a small team of full time DAERA Fisheries Protection staff involved in enforcement as their main role. There are also approximately 200 Private Water Bailiffs (PWBs) who carry out this enforcement role to protect fish stocks present from illegal activity in their own waters.

Proposal

DAERA will carry out an enforcement programme of intelligence led patrols to protect fish stocks and their habitat throughout the DAERA area and will publish reports on the key enforcement activities on a regular basis. It will provide guidance and support for the PWBs in protecting their own fisheries and where appropriate will take forward prosecution cases based on their evidence. There is regular contact between PWBs and DAERA staff who provide advice and assistance with enforcement issues as required.

15. DAERA to promote the education of stakeholders to improve compliance with the legislation.

Background

It is clear that in some instances where an offence is detected, that the defendant is unaware of the legislation. Whilst this is not in itself a defence, it does highlight the complexity around fisheries rules affecting both commercial and recreational fishermen which makes it difficult to ensure compliance. Clearly where voluntary compliance is not achieved, a variety of sanctions can be used including warning letter, prosecution, to compel compliance.

Proposal

DAERA will seek to promote compliance with legislation and provide more education for both commercial and recreational anglers. This will be carried out through a wide variety of formats and opportunities. This is in compliance with the DAERA enforcement policy, which can be found at:

www.daera-ni.gov.uk/publications/environment-marine-and-fisheries-group-enforcement-policy



16. Net mesh sizes should be amended to ensure sufficient juvenile survive to contribute to the spawning stock for each species as follows:

Pollan/perch – 29.5 – 32.5 mm knot to knot

Roach – to use existing approved net mesh sizes

Background

Net mesh sizes are set to ensure that when fish are not all taken out of the fishery before they have a chance to contribute to the spawning stock. This can be a complex issue given the different sizes of fish species let alone fish at different ages. Thus overlap can exist, where a mesh size may catch fish above a size that ensure they get to spawn for a species but may catch other juveniles of another species that has not had a chance to spawn. Mesh size can also impact on the size of fish caught as a bycatch. Ideally mesh size should be set so that any such negative impacts on fish stocks are kept to a minimum and this is also linked to the discussion on net twine thickness as well (1). Currently there is no mesh size specified in legislation for the capture of roach and therefore there are concerns that the nets used may also catch other fish species.

Proposal

DAERA will change permitted mesh sizes as follows:

**Pollan / Perch - the mesh size would be set at 29.5 – 32.5mm from knot to knot.
Roach fishing with only approved net mesh sizes already defined in the regulations.**

It is envisaged that such changes could be phased in over a period of time to allow fishermen to make use of existing nets already purchased by fishermen. No changes are planned for the pike / trout / bream net mesh sizes.

17. A minimum landing size of 35.5cm to be introduced for angling caught trout on Lough Neagh.

A minimum landing size of 25.4 cm for brown trout would be introduced for its tributaries and all other rivers and lakes in the DAERA area. A new daily bag limit of 4 brown trout per angler for Lough Neagh and all other rivers and lakes in the DAERA area to be introduced and only one of which can be above 35.5cm in length.

Background

The current minimum size for commercial trout on Lough Neagh is 35.5cm but there is no legally minimum size limit for trout caught there by anglers. There is no minimum landing size or bag limit for angling caught trout on Lough Neagh tributaries or many of the other rivers and lakes in the DAERA area. The minimum landing size is used to ensure that any fish caught below the size where it may not have spawned will be returned to the water and to discourage the targeting of these juvenile fish. Scientific evidence indicates that many fish above 30cm may yet not

have spawned as they grow very fast in the rich lake waters and therefore these fish need protection to enable them to contribute to the spawning stock. It also important that as a conservation measure that the number of fish allowed to be retained by anglers is also restricted so that sufficient adult fish remain in the system to produce the next generations.

Proposal

DAERA will introduce a minimum landing size of 35.5cm for brown trout for angling brown trout catches on Lough Neagh. A minimum landing size of 25.4cm for brown trout caught will be introduced on its tributaries and all other rivers and lakes in the DAERA area. A bag limit for anglers of 4 brown trout per day per licence holder will also be introduced to apply to all waters in the DAERA area and only one of which can be above 35.5cm.

18. DAERA to adjust the close seasons to protect spawning / gravid stock as follows:

Commercial trout fishing closed season to be changed from 20 August – end of February to 1st August – last day of February;

Pollan - consider changing season

Roach – to have no closed season

(other close seasons to be reviewed following further scientific analysis).

Background

Closed seasons are one of many tools used in fisheries management to protect and manage fish stocks when they congregate to spawn. The vulnerability lies not only that they may be caught more easily and in larger numbers, but also the negative impact this can have on future generations if insufficient numbers are able to reproduce.

Proposal

DAERA will amend the trout season as outlined above as a conservation measure to further protect gravid or spawning fish and remove the closed season for roach.

Roach are regarded as an introduced species and are competing for space / food. In doing so they are restricting the stock size of other key species such as Pollan, Perch & Eels. Therefore to reduce the overall stock size, the closed season currently in place for coarse fish should not apply to Roach. The aim is to reduce the number of gravid trout caught in the commercial fishery. These fish are of poorer food quality and less suitable for human consumption.

There was a proposal to adjust the current pollan season, however there are concerns about this given that water temperature is being affected by climate change this has not been accepted by the Department. The trigger for pollan spawning is circa 4° C and therefore water temperature could perhaps be a better trigger for closing and opening of the season. Some more scientific analysis needs to be carried out to analyse trends in water temperature on Lough Neagh to consider if this could be put into legislation. Water temperature ranges could be factored into any change of legislation to enable variation to the pollan season in any given year depending on the prevailing environmental conditions.

19. Catch per unit effort (CPUE) data to be collected annually from commercial yellow eel fishery to help identify an upper limit on annual maximum catch and meet escapement targets.

– Completed

Background

Catches of eels both from the yellow and silver eel fishery are collected, collated and monitored each year. Whilst this information is important to help manage the fishery it would be very useful to have data on fishing effort i.e. how many lines or hooks and for how long are required to catch an amount of eels. This would provide information over time to assess if it is more difficult to catch eels compared to historical trends. This information is collected on other fisheries and allows comparisons to be made on different stocks.

There is currently no upper limit on the amount of yellow eels that can be taken from Lough Neagh and those that are not caught will turn silver and head to sea to spawn after a period of years. Yellow eel catch is a good indicator of future silver eel numbers and therefore it is important to try and understand the relationship as the catch from the yellow eel fishery ultimately influences the escapement from the catchment.

Proposal

DAERA will collect CPUE data from the eel fishery and that a maximum amount of catch of yellow eels will be calculated to ensure a high probability of meeting the required EU escapement target for the catchment, with adjustments made to catches if required. This work on producing a stock model for eel with future predicted catches was completed in 2018/19.

20. DAERA to carry out further research into alternative methods of baiting long-lines allowed and increase the hook size allowed to reduce juvenile eel mortality in the fishery. – Completed

Background

Fishermen use different bait to catch eels using longlines. Some research has been carried out on these different baits and it has highlighted that they, along with different hook sizes have different impacts on the number of juvenile eels (<30cm) caught in the yellow eel fishery. This can impact on future eels stocks as there are a number of juvenile mortalities associated with their capture using longlines.

Proposal

DAERA will change the legislation from using a size 4 to a size 3 hook for catching eels & consider alternative baits. The use of a size 3 hook is already a condition of the permit. Extensive research has already been carried out with the LNFCS through AFBI on other possible baits to reduce the number of juveniles caught and ultimately the number of associated mortalities. This is linked to the proposal to allow bait net fishing. The research work has since been progressed by AFBI since the consultation and was completed in 2016.

21. DAERA to carry out further research to assess coarse fish stocks on both the Upper and Lower Bann, Blackwater River and Lough Beg.

Background

There is limited scientific information on coarse fish stocks in Lough Neagh catchment and on the important tributaries such the Upper and Lower Bann rivers, Blackwater River and Lough Beg. Anecdotal evidence from anglers would indicate

that coarse fish stock levels are not at the level they had been in preceding years and this is borne out by low numbers of visiting and local anglers who would once have been regulars to these area. There is already evidence that significant “wash out” flood events take place that carry large numbers of coarse fish downstream to the Lower Bann. There is a need to understand better the ecology of the Lough and Upper Bann and how stocks are interconnected with the Lough.

Proposal

DAERA will commission and encourage further research to assess coarse fish stocks in these rivers to identify the causes that may be limiting fish stocks present and to consider what conservation measures may be taken to improve the stock levels.

22. DAERA to work in partnership with stakeholders to improve fisheries habitat and to remove or improve fish passage at barriers identified in the tributaries of Lough Neagh.

Background

Habitat, water quality and free passage for fish movement are key elements for the maintenance of healthy fish stocks in rivers. It is clear from the discussions with stakeholders and assessment work being carried out to date, that there are areas of habitat that could be improved to increase fish stock production especially for salmonids and that there are barriers that prevent or make it difficult for fish moving to move upstream or downstream. To improve fish stocks throughout the catchment these issues need to be addressed and this can only be done by working with all the stakeholders involved.

Proposal

DAERA will progress work on the identification and assessment of barriers in rivers. The focus will initially be on the primary salmon rivers as set out in the Northern Ireland NASCO Implementation plan for 2019 – 2024. DAERA will hold regular meetings with key agencies and stakeholders to plan and prioritise actions to improve habitat and fish passage throughout the catchment.

23. DAERA to regulate sand dredging to protect juvenile fish stocks. – Completed

Background

Sand extraction has taken place on Lough Neagh for a considerable period of time but it is however a finite resource and there are concerns that the current areas for extraction could be impacting on important juvenile fish production shallow areas. Once sand has been removed from these areas the bed of the lough is left full of holes making it impossible for fishermen to trawl for bait in the area.

Proposal

DAERA will provide input into the planning process to protect fish stocks in Lough Neagh. The Department for Infrastructure approved planning permission for sand dredging in October 2020.

24. DAERA to introduce measures to effectively manage / reduce the level of by catch or discards of non target species from commercial netting.

Background

Gill nets (most common used type of net used) are by their nature non selective for species and therefore non-target species also get caught, with many unlikely to survive. The current legislation requires that, where fish caught that may not be taken, due to the fact that they are not the legal size or that it is the closed season for them, they are returned to the water immediately and cannot be landed. Closed seasons are important to ensure that fish species are protected and not deliberately targeted during their spawning period when they tend to congregate in larger numbers. Mesh size is key to this issue also as it dictates the size of fish caught. This dilemma is also present in the sea fishing industry currently and the new EU landing obligation requires that all catches have to be kept on board, landed and counted against the quotas but undersized fish cannot be marketed for human consumption purposes.

The need to remove undersize or fish that cannot be taken due to closed seasons present difficulties for fishermen to carry out on water and especially if the weather is poor. They have requested that DAERA should provide advice as to how they will interpret the legislation to make it clear what flexibility will be given on this issue.

Proposal

DAERA will commission further scientific research to help address this issue such as the type of gear fished or to determine if the prevention of fishing in areas of the lough at spawning time or known juvenile production areas could help reduce catching unwanted species or fish sizes. The conservation measures already

outlined such as length of nets, mesh size increases or the use of draft nets will help to reduce mortality for fish that cannot be retained by fishermen. Consideration will also be given to the sea fisheries scheme in place to apply any lessons learned with that approach to the Lough Neagh Fishery.

DAERA will also provide information to fishermen as to how they will interpret the current legislation. The immediate return to the water of brown trout that cannot be taken would be a priority action.

25. DAERA to review its fish stocking policy.

Background

The placing of additional fish into rivers and lakes has long been used in fisheries, most often with the specific intention to increase or boost fish stocks present. There is a concern that stocking could actually be in the best case scenario a waste of effort or in the worst case scenario, possibly harmful to locally adapted fish populations present. Clearly there may be cases where a population is extinct and the only way to reintroduce the species is by stocking fish from elsewhere. With the advance of genetic techniques scientists are now able to differentiate stocks at a much lower local level than previously possible and the differences that are present in populations are likely to help them adapt to their specific environment. These differences are important to help fish adapt to their local environment and scientific advice is that this local diversity should be maintained to allow the species to adapt to environmental conditions now and in the future. There is currently no policy in place regarding fish stocking in the DAERA area. One of the recommendations in the recent report by Queens University on Dollaghan genetics was that future stocking programmes in Lough Neagh should fully consider the information from the genetics study, and have clear and well defined objectives to prevent biodiversity loss. Other,

less impacting approaches for assisting local trout populations including; habitat and water quality improvement, should also be considered.

Proposal

DAERA will develop a stocking policy based on the best scientific advice available. Such a policy should then be subject to public consultation to allow stakeholder input to the process and should link up with Loughs Agency and Inland Fisheries Ireland to create a joined up approach on this issue on the Island of Ireland.



26. DAERA to commission regular scientific monitoring of fish stocks on Lough Neagh & tributaries to provide long term datasets and identify trends in fish populations.

Background

The aim of fisheries Management can vary but in general should be to maintain the system in a biologically and economically productive state so that it can benefit society e.g. in the form of jobs, food, earnings and recreation etc. The question of how many of a species there are and the state of stocks in comparison to historical levels are fundamental questions for any fishery. The use of fish stocks assessments, and in particular regular assessments to identify trends over a period of time, are therefore essential requirements for the sustainable management of fish stocks. Whilst frequent assessments have been carried out in the main tributaries of Lough Neagh, for salmonids and significant data exists for eels, there are significant gaps in the knowledge for other species and areas which do not allow long term trends in species to be identified. There is also a need to integrate data from both the lough and the tributaries which will help to develop a stock relationship for Dollaghan. This scientific approach provides a formal and consistent means of evaluating management alternatives with respect to outcomes and ensures uncertainties are described and evaluated, during the decision making process.

Proposal

DAERA will commission regular assessment of fish stocks in Lough Neagh, with a full lake survey for all species every three years and a pollan larvae survey conducted annually. Index sites on the tributaries will be surveyed for juvenile salmonids annually and data collected on adult and juvenile eels also. In between surveys, data from the dealers registers and catch log books can be analysed. The collection and collation of catch data for both commercial and recreational fisheries in the catchment is an essential element of this scientific assessment and proposals have already been included to cover these issues.

27. DAERA to commission more research on commercial and recreational catches of Brown Trout on the Lough Neagh Catchment

Background

The Lough Neagh Dollaghan genetics report http://www.DAERAni.gov.uk/DAERA_-_lough_neagh_brown_trout_genetics_report-2.pdf provides evidence of the existence of significant levels of population genetic structuring among brown trout populations inhabiting the main catchment rivers of Lough Neagh. Over 6200 trout samples were analysed, however the number of samples derived from the commercial fishery is still relatively small. The report recommends additional samples should be taken from the commercial fishery, systematically covering the whole fishing season, to obtain more reliable estimates regarding the source of trout taken by them. There is other important research information required for the management of trout stocks in the future, to protect weak stocks and in identifying important rearing areas in the lough.

Proposal

DAERA will commission further research to help identify the river source of fish caught in the commercial fishery and to manage trout at a sustainable stock levels in the Lough and for the spawning tributaries.

Glossary Terms

Abundance: Number of individuals in a stock or a population.

Age Composition: Proportion of individuals of different ages in a stock or in the catches.

Anadromous: An anadromous species, such as salmon, spends most of its life at sea but returns to fresh water grounds to spawn in the river it comes from.

Bait net: Net used to catch juvenile fish to use as bait for long lines to catch eels

Biomass: total weight of all individuals in a stock or a population.

By-catch: The unintentional catch of one species when the target is another.

Catch per Unit Effort (CPUE): The amount caught for a given fishing effort. Ex: tonnes of shrimp per tow, kilograms of fish per hundred longline hooks.

Licences: Regulations for participation in the general commercial fishery.

Discards: Portion of a catch thrown back into the water after they are caught in fishing gear.

Ecosystem-Based Management: Taking into account species interactions and the interdependencies between species and their habitats when making resource management decisions.

Escapement: Reference to salmon - the number of fish escaping the fishery and reaching the spawning grounds. For eels refers to the number of silver eels leaving the catchment to migrate to sea to spawn.

Fishing Effort: Quantity of effort using a given fishing gear over a given period of time.

Fishing Mortality: Death caused by fishing, often symbolized by the mathematical symbol F .

Fixed Gear: A type of fishing gear that is set in a stationary position. These include traps, weirs, gillnets, longlines and handlines.

Gillnet: Fishing gear: netting with weights on the bottom and floats at the top used to catch fish. Gillnets can be set at different depths and are anchored to the lake bed.

Hypereutrophic: A nutrient rich system.

Landings: Quantity of a species caught and landed.

Licences: Issued by Government for participation in the general recreational or commercial fishing.

Long lining: Using long lines with a series of baited hooks to catch eels.

Maximum Sustainable Yield (MSY): Largest average catch that can continuously be taken from a stock.

Mesh Size: Size of the mesh of a net. Different fisheries have different minimum mesh size regulation.

Minimum Landing Size: is the smallest fish measurement at which it is legal to retain or keep a fish. For fish usually measured from the tip of the snout to the fork of the tail.

Mobile Gear: A type of fishing gear that is drawn through the water by a vessel to entrap fish. These include otter trawls and Danish/Scottish Seines.

Natural Mortality: Mortality due to natural causes, symbolized by the mathematical symbol M .

Otolith: A hard calcium carbonate structure located posterior of the brain in bony fish. Otoliths are used to determine the age of fish: annual rings can be observed and counted. Daily increments are visible as well on larval otoliths.

Permit: Permission issued by the fishery owner to allow someone to catch fish in their fishery

Population: Group of individuals of the same species, forming a breeding unit, and sharing a habitat.

Precautionary Approach: Set of agreed cost-effective measures and actions, including future courses of action, which ensures prudent foresight, reduces or avoids risk to the resource, the environment, and the people, to the extent possible, taking explicitly into account existing uncertainties and the potential consequences of being wrong.

Purse Seine: Large net used to encircle fish from a boat called a "seiner" and equipped with a wire rope on the bottom to draw the net together. A small boat, called "skiff", participates in manoeuvring the net.

Quota: Portion of the total allowable catch that a unit such as vessel class, country, etc. is permitted to take from a stock in a given period of time.

Recruitment: Amount of individuals becoming part of the exploitable stock e.g. that can be caught in a fishery.

Research Survey: Survey on a research vessel, allowing scientists to obtain information on the abundance and distribution of various species and/or collect oceanographic data. Ex: bottom trawl survey, plankton survey, hydroacoustic survey, etc.

Silver eel fishery: An interceptor fishery for migratory eels

Spawner: Sexually mature individual.

Spawning Stock: Sexually mature individuals in a stock.

Stock: Describes a population of individuals of one species found in a particular area, and is used as a unit for fisheries management. Ex: NAFO area 4R herring.

Stock Assessment: Scientific evaluation of the status of a species belonging to a same stock within a particular area in a given time period.

Total Allowable Catch (TAC): The amount of catch that may be taken from a stock.

Traditional Ecological Knowledge (TEK): A cumulative body of knowledge and beliefs, handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment.

Tonne: Metric tonne, which is 1000kg or 2204.6lbs.

Trawl: Fishing gear: cone-shaped net towed in the water by a boat called a "trawler".

Validation: The verification, by an observer, of the weight of fish landed.

Year-class: Individuals of a particular size class. Also called "cohort".

Yellow eel fishery: A fishery for immature / resident eels

Appendix A

Fish Community Structure

The fish community as sampled in recent years is atypical for a lowland Irish lake. The lake is surveyed at key index sites annually in autumn. A total of seven species are regularly encountered; bream, eel, pollan, three spined stickleback, river lamprey, perch and roach. Four additional species are occasionally captured in complimentary parallel studies; these are stoneloach, nine spined stickleback, tench and Atlantic salmon **Table 2**.

Table 2: The fish community of Lough Neagh and origin.

Common Name	Specific Name	N	Origin
Bream	<i>Abramis brama</i> (L.)	53	Introduced
European Eel	<i>Anguilla anguilla</i> (L.)	77	Native
Stone Loach*	<i>Barbatula barbatula</i> (L.)	1	Introduced
Pollan	<i>Coregonus autumnalis</i> (Pallas 1776)	3,124	Native
Three spined stickleback	<i>Gasterosteus aculeatus</i> (L.)	948	Native
River Lamprey	<i>Lampetra fluviatilis</i> (L.)	8	Native
Perch	<i>Perca fluviatilis</i> (L.)	5,333	Introduced
Nine spined stickleback*	<i>Pungitus pungitus</i> (L.)	1	Native
Roach	<i>Rutilus rutilus</i> (L.)	5,356	Introduced
Brown Trout	<i>Salmo trutta</i> (L.)	152	Native
Atlantic Salmon*	<i>Salmo salar</i> (L.)	1	Native

* Observed from complimentary survey

Survey catches were dominated both in abundance (Table 5.13) and biomass (Table 5.14) by different species during different seasons. Perch, pollan and roach were the most numerous species encountered with lesser contributions made by other species (eel, bream, three spined stickleback, rudd, roach x bream hybrid, brown trout and river lamprey) (Table 5.13 and 5.16).

Table 5.13 Variation in mean ($\pm$ SD) abundance of fishes captured per m² of lake area using draft nets in Lough Neagh.

Species	Summer 2011	Autumn 2011	Summer 2012	Autumn 2012
Three-spine Stickleback	0.000063 $\pm$ 0.000	0.000715 $\pm$ 0.001	0.008526 $\pm$ 0.056	0.014518 $\pm$ 0.029
Bream	0.000147 $\pm$ 0.001	0.000457 $\pm$ 0.001	0.000163 $\pm$ 0.000	0.000603 $\pm$ 0.001
Brown Trout	0.001279 $\pm$ 0.002	0.000886 $\pm$ 0.001	0.000745 $\pm$ 0.001	0.000734 $\pm$ 0.001
European Eel	0.001384 $\pm$ 0.003	0.000143 $\pm$ 0.000	0.000140 $\pm$ 0.000	0.000000 $\pm$ 0.000
Gudgeon	0.000356 $\pm$ 0.001	0.001544 $\pm$ 0.003	0.000373 $\pm$ 0.001	0.000419 $\pm$ 0.001
Perch	0.014403 $\pm$ 0.012	0.063922 $\pm$ 0.080	0.025157 $\pm$ 0.017	0.034853 $\pm$ 0.041
Pollan	0.008155 $\pm$ 0.008	0.009949 $\pm$ 0.009	0.029164 $\pm$ 0.024	0.029743 $\pm$ 0.019
River Lamprey	0.000021 $\pm$ 0.000	0.000086 $\pm$ 0.000	0.000093 $\pm$ 0.000	0.000000 $\pm$ 0.000
Roach	0.000377 $\pm$ 0.001	0.016152 $\pm$ 0.044	0.019147 $\pm$ 0.074	0.103538 $\pm$ 0.168
Roach x Bream Hybrid	0.000000 $\pm$ 0.000	0.000172 $\pm$ 0.001	0.000116 $\pm$ 0.000	0.000183 $\pm$ 0.000
Rudd	0.000000 $\pm$ 0.000	0.000000 $\pm$ 0.000	0.000000 $\pm$ 0.000	0.000131 $\pm$ 0.001

Table 5.14 Variation in mean ($\pm$ SD) biomass (kg) of fishes captured per m² of lake area using draft nets in Lough Neagh.

Species	Summer 2011	Autumn 2011	Summer 2012	Autumn 2012
Three-spine				
Stickleback	0.000040 $\pm$ 0.000	0.000843 $\pm$ 0.002	0.005183 $\pm$ 0.033	0.016372 $\pm$ 0.035
Bream	0.188661 $\pm$ 0.973	0.055423 $\pm$ 0.192	0.068875 $\pm$ 0.245	0.138670 $\pm$ 0.388
Brown Trout	0.196846 $\pm$ 0.277	0.232816 $\pm$ 0.375	0.241800 $\pm$ 0.391	0.307509 $\pm$ 0.428
European Eel	0.266367 $\pm$ 0.503	0.026699 $\pm$ 0.136	0.021411 $\pm$ 0.082	0.000000 $\pm$ 0.000
Gudgeon	0.008672 $\pm$ 0.017	0.030539 $\pm$ 0.064	0.006581 $\pm$ 0.018	0.009635 $\pm$ 0.018
Perch	0.291858 $\pm$ 0.246	1.210773 $\pm$ 1.381	0.631056 $\pm$ 0.472	0.883694 $\pm$ 0.893
Pollan	0.405778 $\pm$ 0.464	0.620278 $\pm$ 0.636	1.950870 $\pm$ 2.075	1.924174 $\pm$ 1.543
River Lamprey	0.000187 $\pm$ 0.001	0.005283 $\pm$ 0.023	0.005430 $\pm$ 0.021	0.000000 $\pm$ 0.000
Roach	0.009327 $\pm$ 0.039	0.567707 $\pm$ 1.922	0.073532 $\pm$ 0.149	0.884841 $\pm$ 1.641
Roach x Bream Hybrid	0.000000 $\pm$ 0.000	0.002735 $\pm$ 0.011	0.003108 $\pm$ 0.014	0.006012 $\pm$ 0.017

Rudd 0.000000 ± 0.000 0.000000 ± 0.000 0.000000 ± 0.000 0.009049 ± 0.063

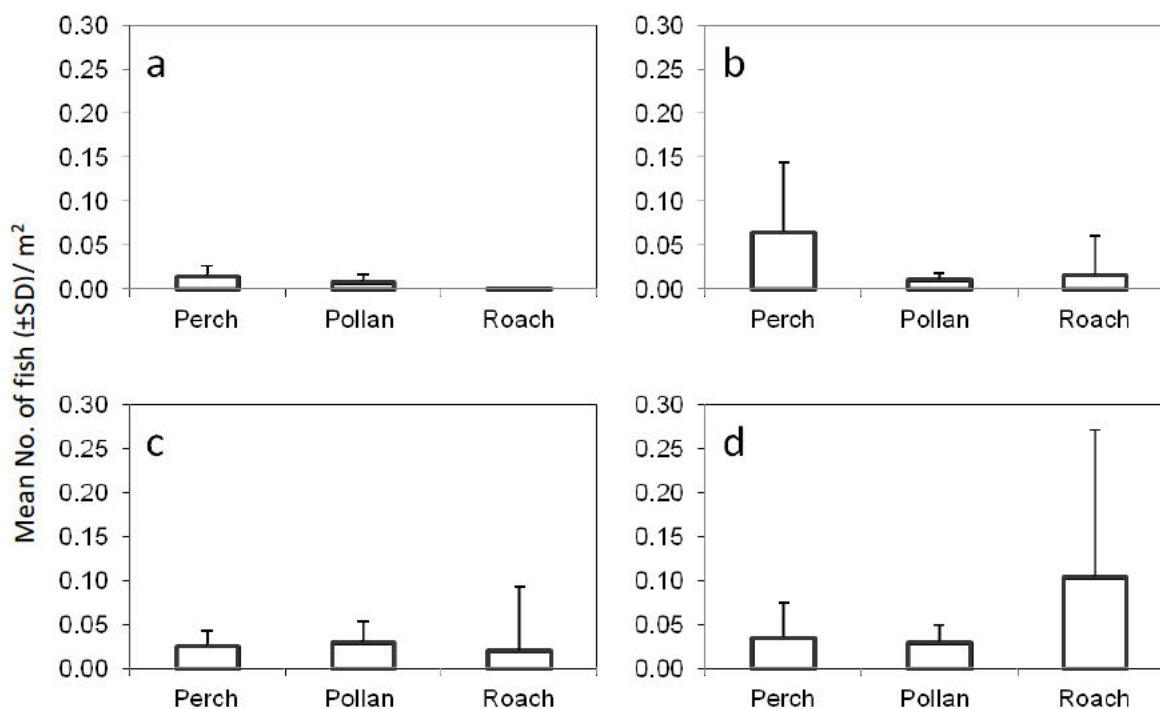


Figure 5.16 Catch per unit effort of dominant species in draft nets a=summer 2011, b=autumn 2011, c=summer 2012, d=autumn 2012

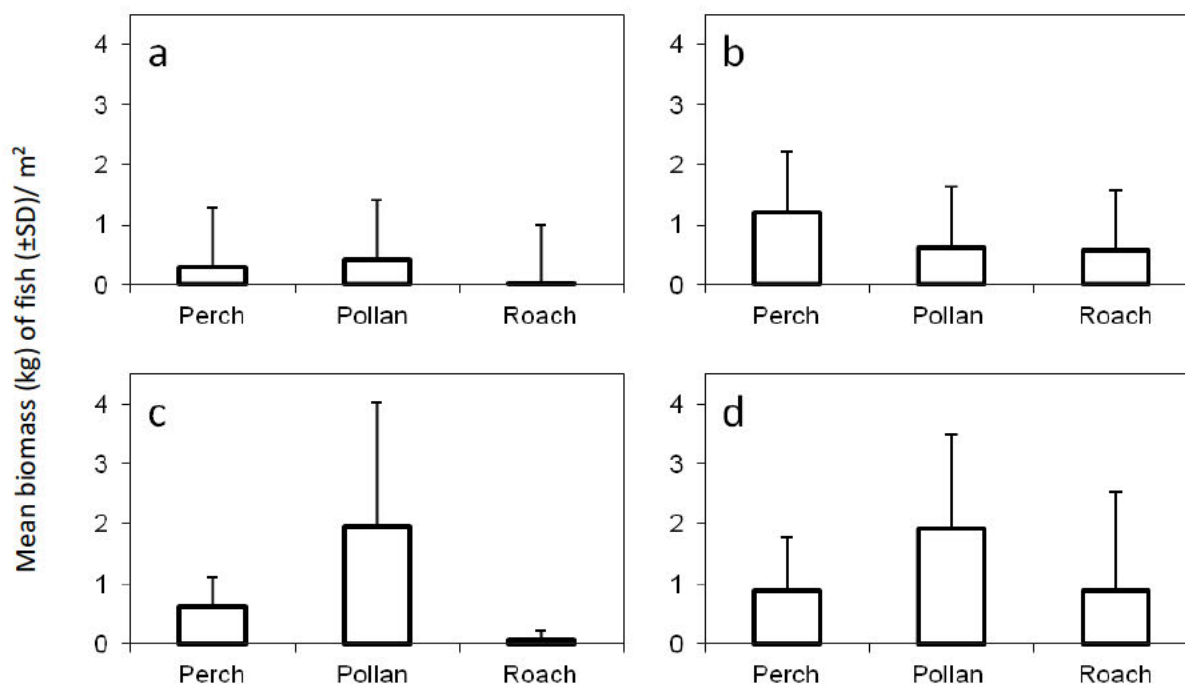


Figure 5.17 Biomass (kg) per unit effort of dominant species in draft nets a=summer 2011, b=autumn 2011, c=summer 2012, d=autumn 2012

Summer 2011 Survey

This survey yielded in excess of 1,000 samples ($N = 1,249$) from Lough Neagh. Throughout this period the fish community of Lough Neagh comprised of nine species and was dominated in both abundance and biomass primarily by perch ($N = 687$) and pollan ($N = 389$) (Figure 5.16a and Figure 5.17a). Three spined stickleback ($N = 3$), bream ($N = 7$), brown trout ($N = 61$), European eel ($N = 66$), gudgeon ($N = 17$), river lamprey ($N = 1$) and roach ($N = 18$) were also all encountered in lesser abundances (Table 5.13), and biomass' (Table 5.14). It must be noted that the reduced number and biomass of roach during this season was most likely due to their aggregated spawning behaviour (Wedekind, 1997) in river mouths and feeder streams.

Autumn 2011 Survey

During this survey in excess of 3,000 fish samples ($N = 3,249$) were removed from Lough Neagh. Perch ($N = 2,236$) was the dominant species both by number and biomass during this period. Pollan ($N = 348$) and roach ($N = 565$) were also quite abundant (Figure 5.16b and Figure 5.17b). Three spined stickleback ($N = 25$), bream ($N = 16$), brown trout ($N = 31$), European eel ($N = 5$), gudgeon ($N =$

53), river lamprey (N = 3) and roach x bream hybrid (N = 6) were also encountered in lesser abundance (Table 5.13) and biomass (Table 5.14).

Summer 2012 Survey

This survey yielded in excess of 3,000 samples (N = 3,590) from Lough Neagh. Pollan (N = 1,252) was marginally the dominant species by abundance and also largely the dominant species by biomass during this period. Perch (N = 1,080) and roach (N = 822) contributed significantly to the overall catch (Figure 5.16c and Figure 5.17c). Three spined stickleback (N = 366), bream (N = 7), Brown Trout (N = 32), European eel (N = 6), gudgeon (N = 16), river lamprey (N = 4), and roach x bream hybrid (N = 5) were also encountered in lesser abundance (Table 5.13) and biomass (Table 5.14).

Autumn 2012 Survey

During this survey in excess of 7,000 samples (N = 7,049) were removed from Lough Neagh. Roach (N = 3,951) and pollan (N = 1,135) were the dominant species by abundance and biomass respectively during this period (Figure 5.16d and Figure 5.17d). Perch (N = 1,330) also contributed significantly to the overall catch. Three spined stickleback (N = 554), bream (N = 23), Brown Trout (N = 28), gudgeon (N = 16), roach x bream hybrid (N = 7) and rudd (N = 5) were also encountered in lesser abundance (Table 5.13), and biomass (Table 5.14). No European eels or river lampreys were captured during this survey.

Fish growth - Perch

Growth patterns in perch were similar across all sampling terms, indicating temporal stability in growth rates during the study period and c. 4 years prior to study (Figure 5.18 and Table 5.15). Back calculated lengths at age from the current study were compared with those from the last work concerning growth of Lough Neagh perch; Montgomery (1990). Lengths at ages 1 and 2 were similar, however, divergence occurs from age 3, with fish in the current study seeming to have a depressed growth rate compared to those in Montgomery's work. The growth of Lough Neagh perch in the current study was compared with that of the other large lake in Northern Ireland, Lower Lough Erne (Figure 5.19). Neagh perch exhibited similar growth to Erne fish (post zebra mussel) up to age 2. Slow growth of Erne perch in year 1 (pre zebra mussel), compared to Neagh, may be attributed to competition with roach. Thereafter growth rate is substantially slower in Neagh, with fish being

shorter lived and reaching a smaller size than in Erne. Maximum observed age of Lough Neagh perch is six, compared to 14 in Lower Lough Erne.

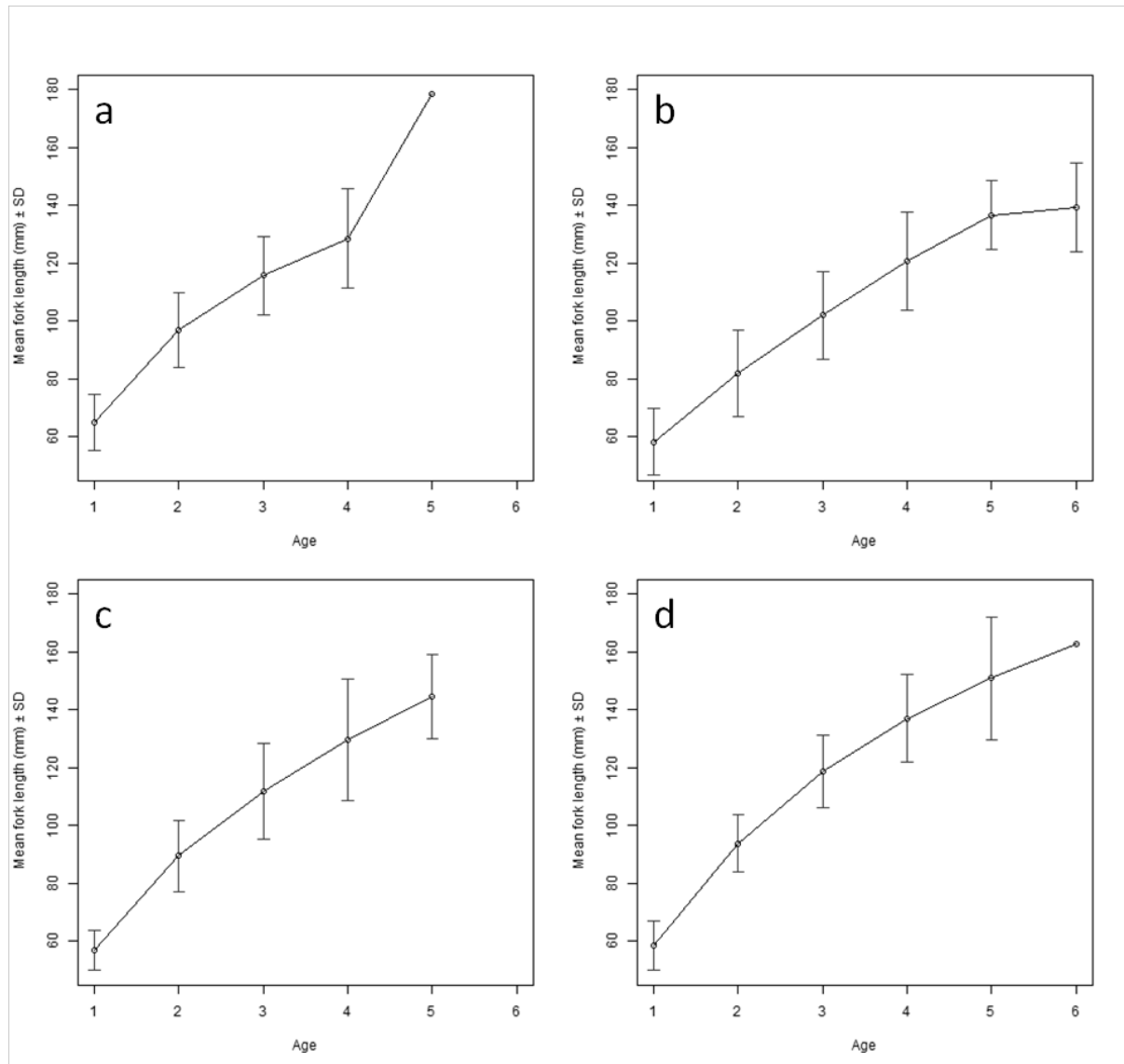


Figure 5.18 Perch mean back-calculated length at age a=summer 2011, b=autumn 2011, c=summer 2012, d=autumn 2012.

Table 5.15 Mean fork length (mm) $\pm$ SD attained at age by Lough Neagh perch

	1	2	3	4	5	6
Summer 2011	64.9 $\pm$ 9.7	97 $\pm$ 12.9	115.9 $\pm$ 13.5	128.6 $\pm$ 17.0	178.5	
Autumn 2011	58.2 $\pm$ 11.5	81.9 $\pm$ 14.9	102.1 $\pm$ 15.1	120.7 $\pm$ 17	136.7 $\pm$ 11.9	139.4 $\pm$ 15.2
Summer 2012	56.9 $\pm$ 6.9	89.5 $\pm$ 12.2	112 $\pm$ 16.5	129.7 $\pm$ 20.9	144.7 $\pm$ 14.6	
Autumn 2012	58.7 $\pm$ 8.5	93.9 $\pm$ 9.9	118.9 $\pm$ 12.5	137 $\pm$ 15.2	150.9 $\pm$ 21.1	162.8

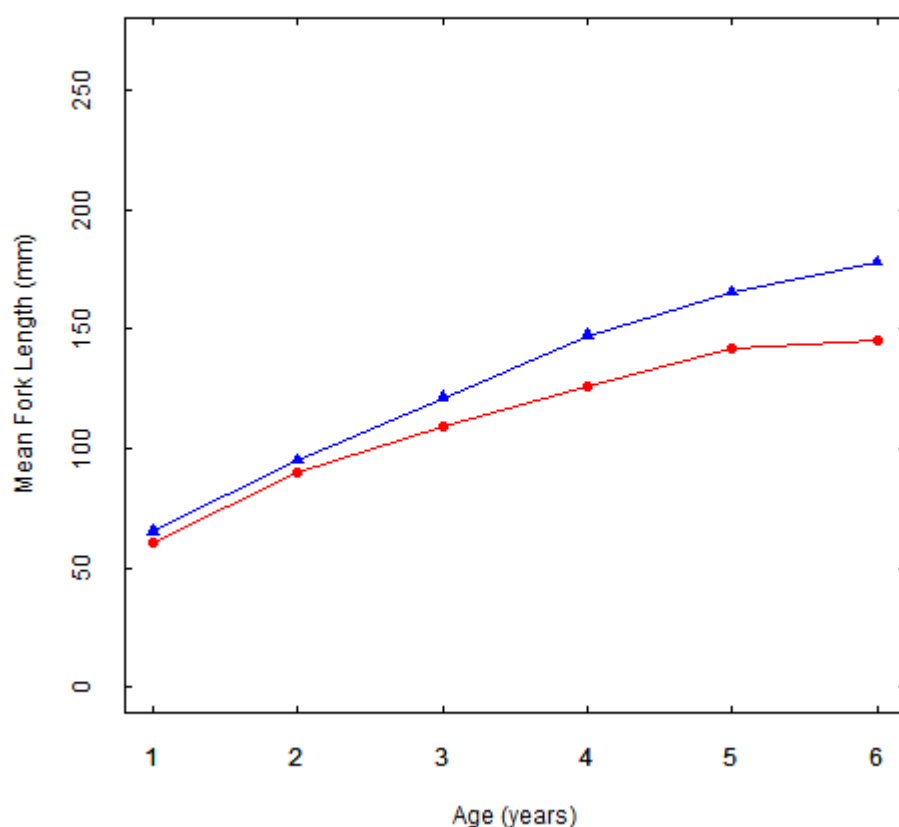


Figure 5.19 Perch mean back calculated length at age red●-current project, blue▲- Montgomery (1990)

Fish growth - Pollan

Growth of pollan was similar during all sampling periods, with little variation over the duration of the study (Figure 5.20 and Table 5.16). Lough Neagh pollan appear to be short lived, with no fish older than 3 years of age observed.

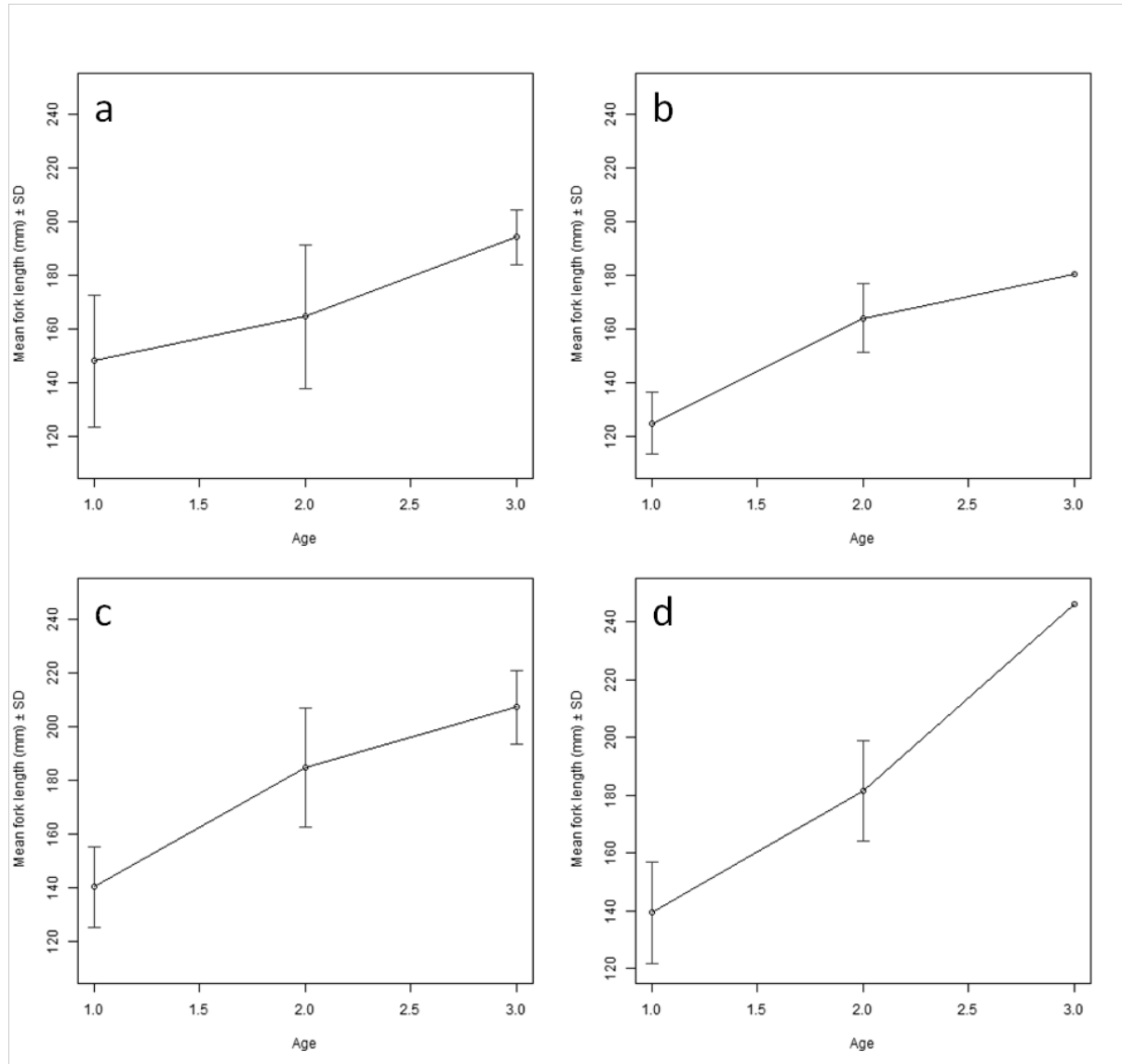


Figure 5.20 Pollan mean back-calculated length at age a=summer 2011, b=autumn 2011, c=summer 2012, d=autumn 2012

Table 5.16 Mean fork length (mm) $\pm$ SD attained at age by Lough Neagh pollan

	1	2	3
Summer 2011	148.2 $\pm$ 24.5	164.7 $\pm$ 26.7	194.3 $\pm$ 10
Autumn 2011	125.1 $\pm$ 11.6	164.2 $\pm$ 12.8	180.4
Summer 2012	140.3 $\pm$ 15	184.8 $\pm$ 22	207.4 $\pm$ 13.7
Autumn 2012	139.3 $\pm$ 17.5	181.5 $\pm$ 17.3	246.2

Back calculated growth rates from the current study were compared with those observed by Wilson (1979), Broughton (1972), and Harrod Harrod (2001) (Figure 5.21). Whilst the earlier studies observed pollan of up to 5 or 6 years of age, the current study only observed fish to 3 years of age. Mean fork length was similar between all studies at year 1, but the current study found a reduced rate of growth in the years thereafter. It is difficult to elucidate why pollan growth has changed so dramatically.

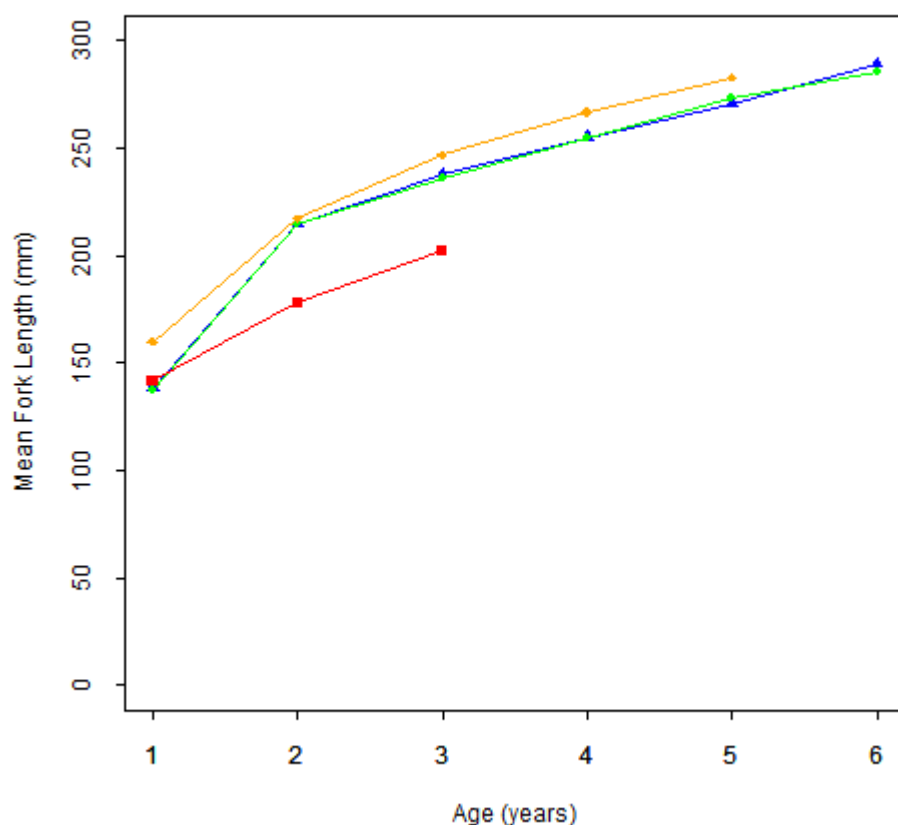


Figure 5.21 Pollan mean back-calculated length at age; red■- Lough Neagh (present study), green●- Broughton (1972), blue▲- Harrod (2001), orange◆- Wilson (1979)

Fish Growth - Roach

The growth rate of roach was similar throughout the study period (Figure 5.22 and Table 5.17). Apparent declines in growth after year 5 in autumn 2011 are deceptive, and are a function of a low sample size of fish in these year classes. A growth curve for summer 2011 could not be produced due to the small number of roach captured during that sampling period.

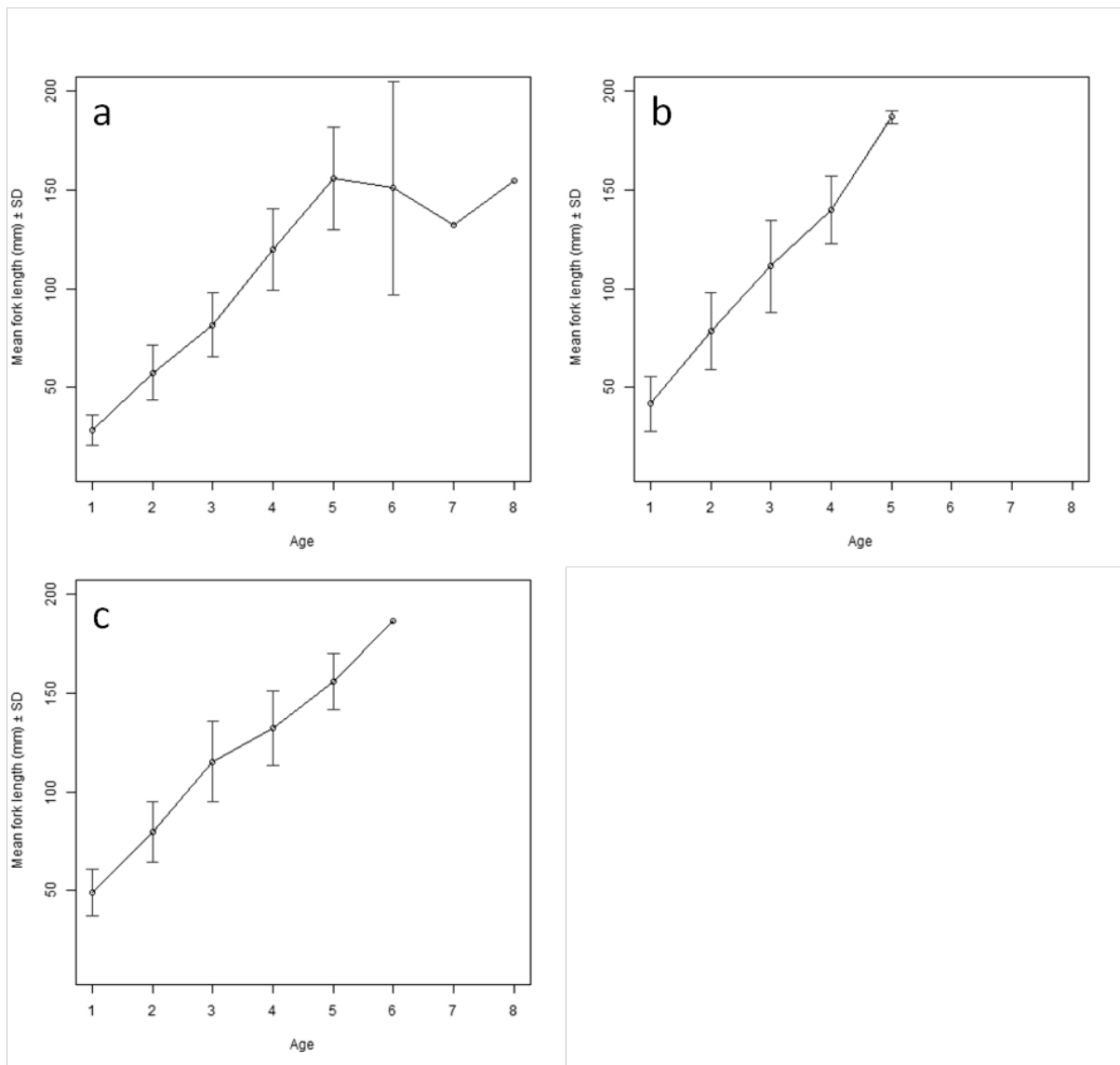


Figure 5.22 Roach mean back-calculated length at age a=autumn 2011, b=summer 2012, c=autumn 2012

Table 5.17 Mean fork length (mm) $\pm$ SD attained at age by Lough Neagh roach

Age	Autumn 2011	Summer 2012	Autumn 2012
1	28.4 $\pm$ 7.6	41.8 $\pm$ 13.6	49.1 $\pm$ 11.9
2	57.4 $\pm$ 13.9	78.5 $\pm$ 19.5	79.7 $\pm$ 15.3
3	81.7 $\pm$ 16.2	111.4 $\pm$ 23.4	115.5 $\pm$ 20.5
4	119.8 $\pm$ 20.6	140.1 $\pm$ 17.2	132.1 $\pm$ 18.9
5	155.8 $\pm$ 26	187.2 $\pm$ 3.3	156.2 $\pm$ 14.2
6	150.9 $\pm$ 54		186.8 $\pm$.9
7	132.2		
8	154.6		

The growth of Lough Neagh roach calculated in the current study was compared with historic data (Figure 5.23). Todd Todd (1983) and Tobin (1990) reported slightly greater mean lengths at all ages, but with a similar rate of growth. The apparent dip in growth at age 7 in the current study is likely to be a result of a small sample size of fish in this year class, rather than a true reflection of growth rate.

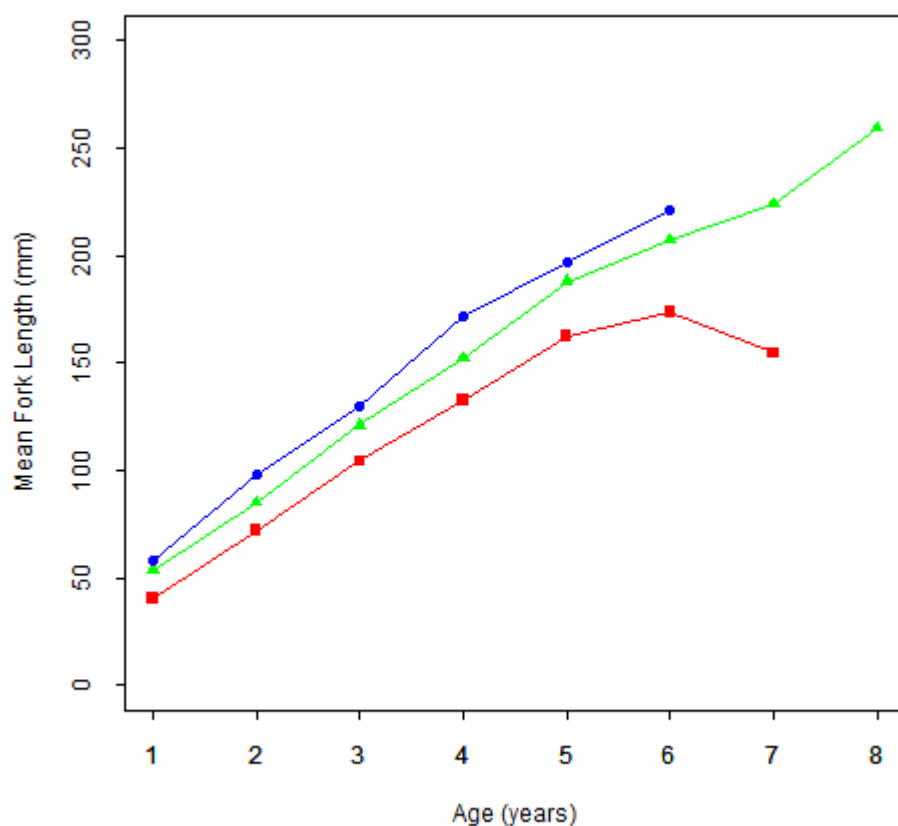


Figure 5.23 Lough Neagh roach mean back-calculated length at age red■- Current study, blue●- Todd (1983), green▲- Tobin (1990)

Explaining declining growth rates of Lough Neagh fish

Whilst growth rates of fishes can be accurately quantified, identifying factors impacting growth rate is more difficult, often because more than one factor is at work (Morrongiello et al., 2014, Minto et al., 2008). The growth rates of the most abundant species in Lough Neagh observed in this study were all reduced in comparison to those found historically. Cross-species decline suggests a common cause, or combination of causes. Lough Neagh is under a constant state of flux regarding productivity (Wood, 1993, Bunting et al., 2007). Tomankova et al. (2014), described a c. 70 % decline in macroinvertebrate biomass in Lough Neagh between 1998 and 2010, this coincides with the reduction in chlorophyll *a* concentration observed in the DOLMANT study. Tomankova et al. (2014) observed declines in chironomid larvae; sampling methods used in their study underestimated the biomass of motile macroinvertebrates. However, Griffiths et al. (in review) observed a 96 % decline in mean abundances of *Mysis salemaai* between 1993 and 2012. Both of these macroinvertebrate taxa are important food sources for pollan, perch and roach in Lough Neagh (Rooney and Montgomery, 2013, Tobin, 1990, Harrod, 2001), indicating that reduction in prey availability could be limiting growth rates.

Apart from declines in productivity, commercial exploitation has been shown to create life history changes in fish species, due to size selective mortality of fishing gear, and changes in fish density (Ricker, 1975). Landings of non-anguillid species are poorly recorded on Lough Neagh and recording of catch of some species (e.g. perch) is not legislated for. This means that it is difficult to quantify changes in exploitation, or its impacts upon fish density, accurately. However, there has been a recent increase in the sale of coarse fish net licences, suggesting increased fishing effort. It is unlikely that exploitation alone can explain changes in growth rate, as population density and growth rate have been shown to have an inverse relationship (Jensen, 1995), yet growth rate has declined in the face of increased fishing effort.

Fish Sampling Gear Comparison

Measurement of fish body-size distribution is frequently used as a management tool to assess the status of fisheries (Clement et al., 2014). While species composition is informative there is growing

interest in using size distributions to evaluate aquatic food webs in lacustrine environments (Petchey and Belgrano, 2010, Emmrich et al., 2011). Gear selection is a crucial issue in evaluating species composition and size structure (Appelberg et al., 1995, Ceni and Vieira, 2013, Clement et al., 2014). Gears often differ in effectiveness and often have biases relating to fish size, species and behaviour (Murphy et al., 1996, Shoup et al., 2003).

Standard lake fish surveys in NI/ROI have to date employed a combined approach of gill netting supplemented with fyke nets as per CEN (2005) recommendations. However the fish survey of Lough Neagh posed several challenges; its large size, the prohibition of of fyke net use, and its productivity due to its high trophic status. For these reasons a new methodology had to be developed to assess Lough Neagh's fishery status. Two surveys were run concurrently; these were a gill net survey using CEN (2005) compliant nets and a draft (seine) net survey using a standard Lough Neagh commercial fisherman's draft net (see Methods Section for more detail).

A total of 7,368 fish, representing seven species; brown trout (Figure 5.24), gudgeon (Figure 5.25), perch (Figure 5.26), pollan (Figure 5.27), roach (Figure 5.28), three spined stickleback (Figure 5.29) and bream (Figure 5.30) were captured using both gear types. Overall, gill nets captured fewer fish than draft nets. Length frequency data distributions were compared statistically between each gear type for each species independently using raw unbinned fork length data with a 2-sample Kolmogorov-Smirnov test following Clement et al. (2014).

For brown trout and bream gill nets failed to capture a sufficient sample size. Our results showed no significant differences in the length frequency distributions of gudgeon and pollan. Major significant differences in length frequency arose with perch and roach and a lesser but significant difference was found in three spined stickleback catches.

Statistical differences in the length frequency distribution of perch may be a result of the draft net catching a reduced number of 0+ fish when compared to gill net catches. In most waterbodies the under representation of 0+ perch in a fish survey would perhaps not be of great concern however in Lough Neagh juvenile perch are occasionally exploited and used as bait for the commercial eel fishery and in this instance monitoring of the 0+ cohort is useful for lake managers. To achieve this, future draft net surveys could be supplemented with several 5.5 mm monofilament gill nets.

A significant statistical difference was also found when comparing the length frequency distributions of roach captured in gill nets and draft nets. The draft net yielded a far greater sample size ($N = 3,951$) when compared to the gill net ($N = 128$). In this instance the gill net under represented the 0+ cohort and the draft net provided a more representative sample.

Our analyses also found a significant difference between three spined stickleback length frequency comparisons between gear types. The gill net survey yielded a reduced sample size ($N = 44$) as opposed to the draft net survey ($N = 554$). Gill nets also missed all three spined stickleback with a fork length ranging from 55 to 63 mm which contributed greatly in draft net catches ($N = 71$).

Because gear efficiencies often differ based on physical habitat and target species characteristics (e.g. size, morphology and behaviour), the extent to which gears complement one another or indeed become redundant is highly variable depending on specific local conditions and underpin the importance of careful and conservative interpretations of data. The question of which methods / techniques will yield the most accurate results has plagued and will continue to plague fishery managers (Appelberg et al., 1995, Ceni and Vieira, 2013, Clement et al., 2014, McKenna et al., 2013, Stallings et al., 2014). This problem is amplified by a movement from assessing the status of single species to whole assemblage and community fish stock assessments as per the EU WFD (EU, 2000). This study found that data gathered from draft net surveys was generally more useful than data from the gill net surveys. This coupled with the added benefits of draft net sampling (limited gear loss, instant results and low mortality of fish) makes it a more appropriate method for future accurate fish stock assessments of Lough Neagh.

Table 5.18 Results of size distribution comparison between gill and draft net techniques (Kolmogorov – Smirnov)

Species	Common Name	D	p-value	Significance Level
<i>Gobio gobio</i>	Gudgeon	0.389	0.0992	
<i>Perca fluviatilis</i>	Perch	0.424	<0.0001	***
<i>Coregonus autumnalis</i>	Pollan	0.128	0.2256	
<i>Rutilus rutilus</i>	Roach	0.692	<0.0001	***
<i>Gasterosteus aculeatus</i>	three spined Stickleback	0.245	0.0194	*

* = $P < 0.05$, *** = $P < 0.001$

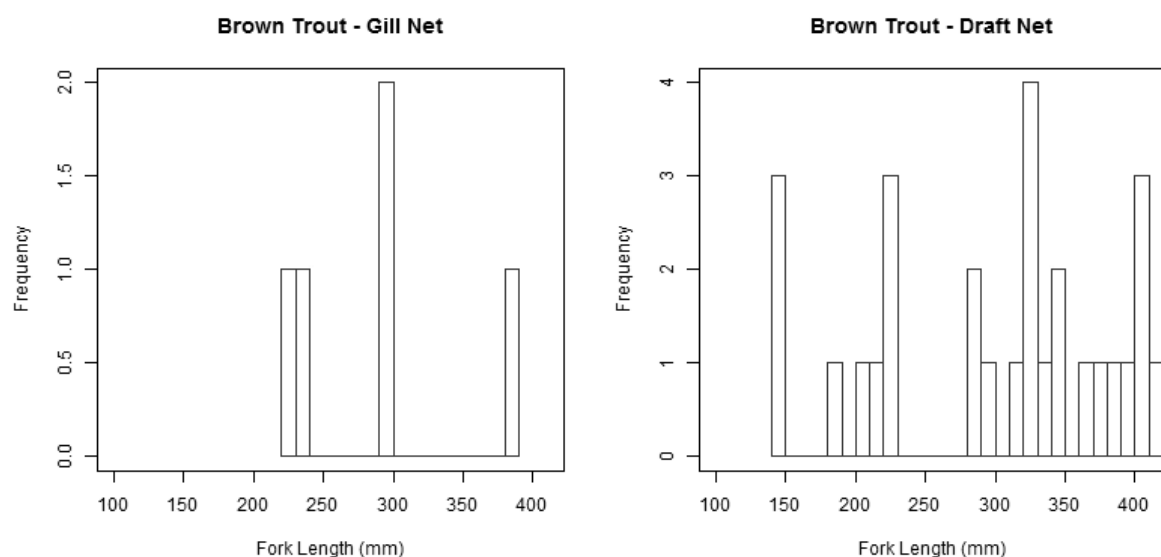


Figure 5.24 Length - Frequency distribution of brown trout captured in gill nets (left) and draft nets (right).

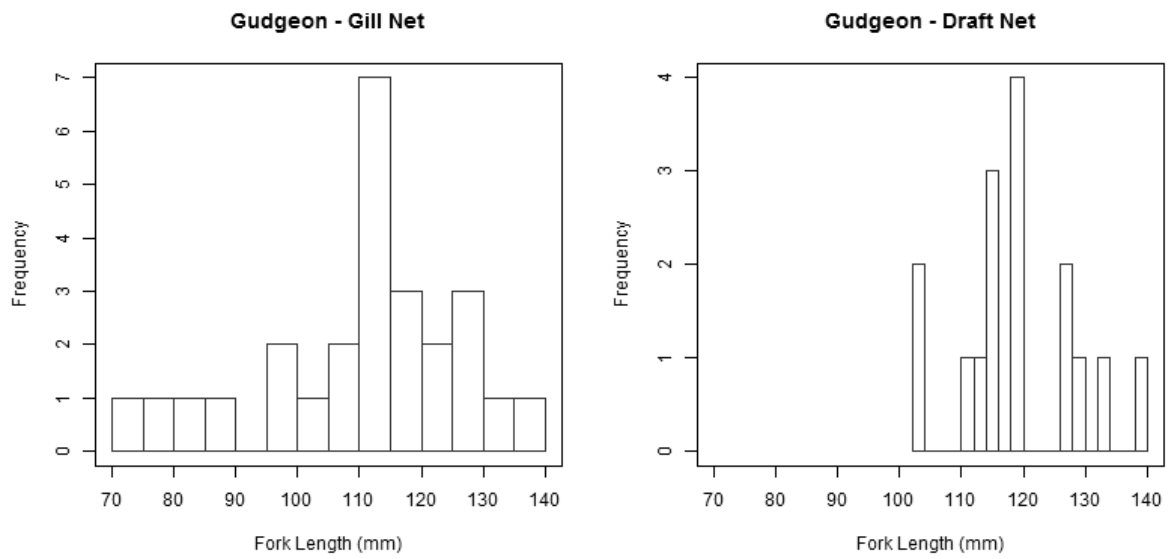


Figure 5.25 Length - Frequency distribution of gudgeon captured in gill nets (left) and draft nets (right).

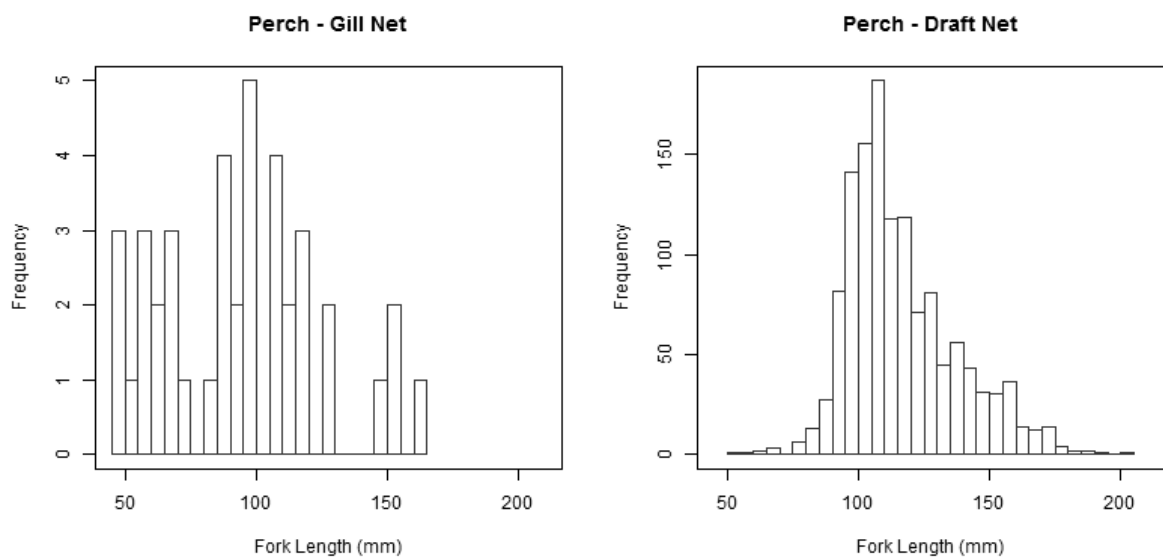


Figure 5.26 Length - Frequency distribution of perch captured in gill nets (left) and draft nets (right).

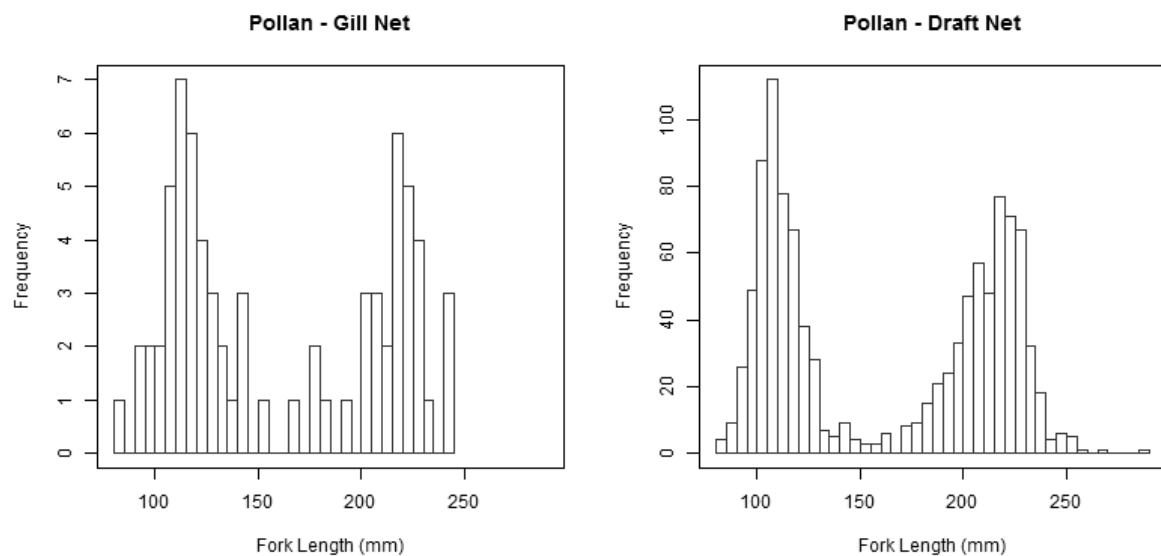


Figure 5.27 Length - Frequency distribution of pollan captured in gill nets (left) and draft nets (right).

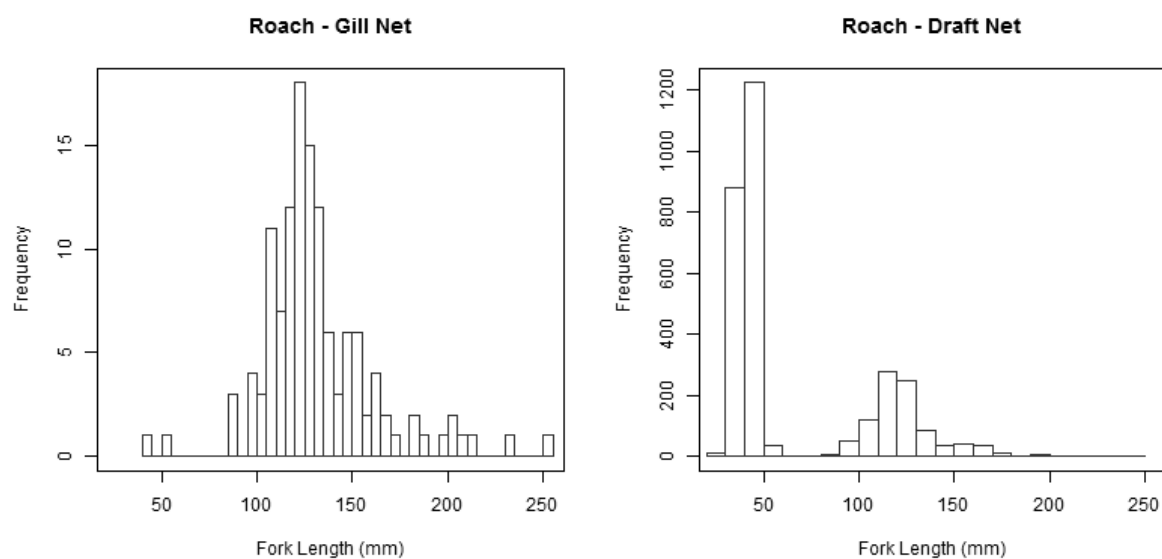


Figure 5.28 Length - Frequency distribution of roach captured in gill nets (left) and draft nets (right).

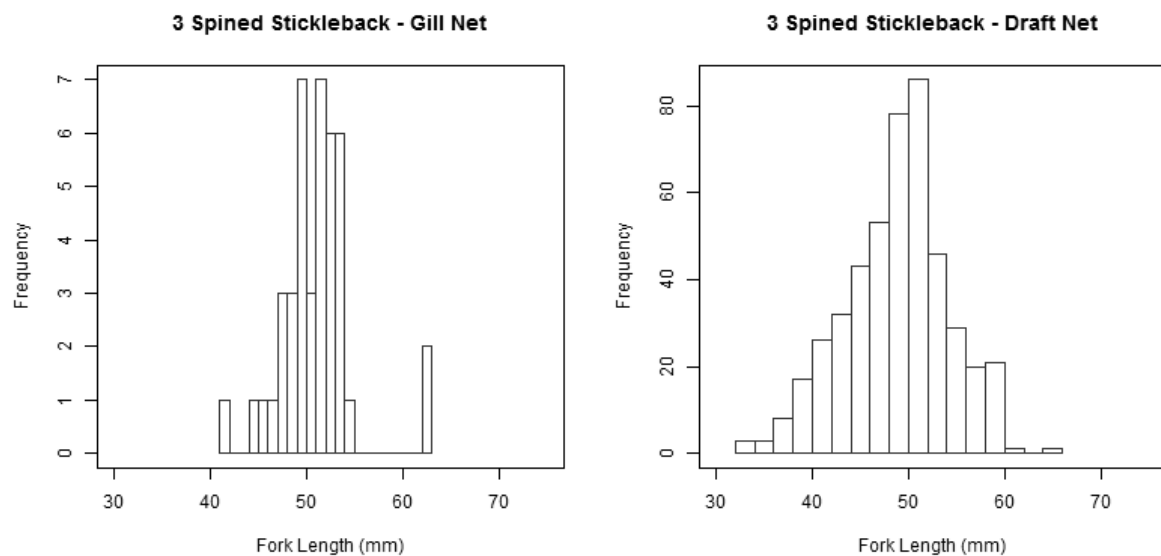


Figure 5.29 Length - Frequency distribution of three spined stickleback captured in gill nets (left) and draft nets (right).

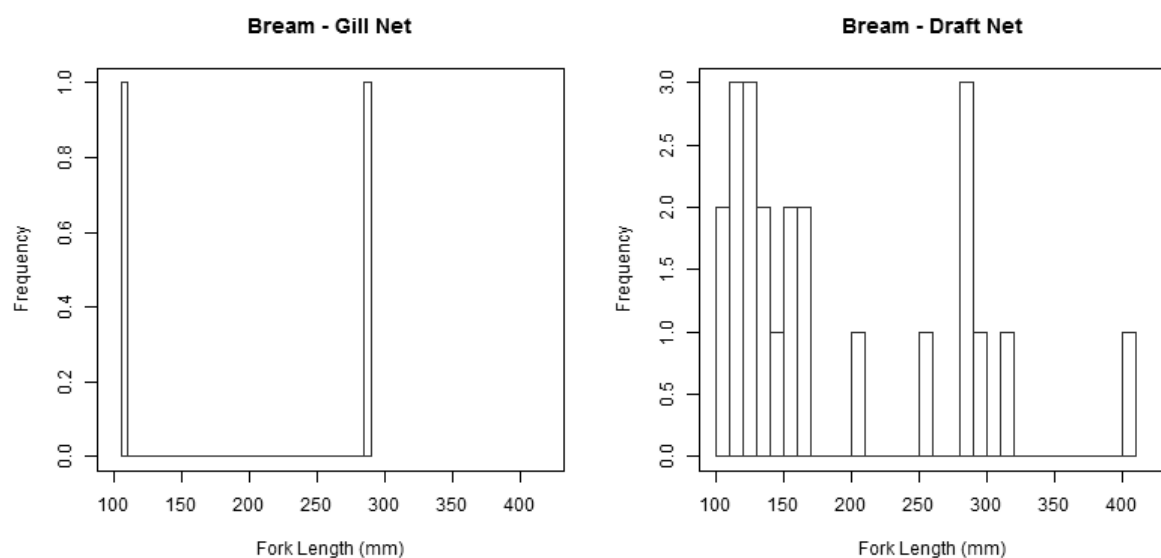


Figure 5.30 Length - Frequency distribution of bream captured in gill nets (left) and draft nets (right).

Studies of Lough Neagh pollan larvae

Cohort strength of fish is often determined in the first months of life (Nelson, 1968), and may be examined by investigating success of early life stages (Mooij, 1996, Anderson, 1998, Karjalainen et al., 2000).

Recruitment is a major factor in determining pollan abundance (Wilson, 1983). This is a function of the short-lived (max. 3yrs in current study) and fast growing nature of pollan. As such, this study of pollan larval abundance during the years 2011-2014, the first completed since 1977 (Dabrowski, 1981), is an important tool for predicting future pollan population size.

Data collected in the Ballyronan Bay area was analysed, c. 30 days post hatching. This area has been noted as especially important to juvenile pollan 1977 (Dabrowski, 1981). Observed pollan larvae densities varied between years (Figure 5.31). From the results of Kruskal-Wallis analysis (Table 5.19) (chi-squared = 17.6642, df = 3, p = 0.0005) we can conclude that 2011 produced particularly low larval densities, with 2013 and 2014 producing greater densities, and 2012 between the two extremes.

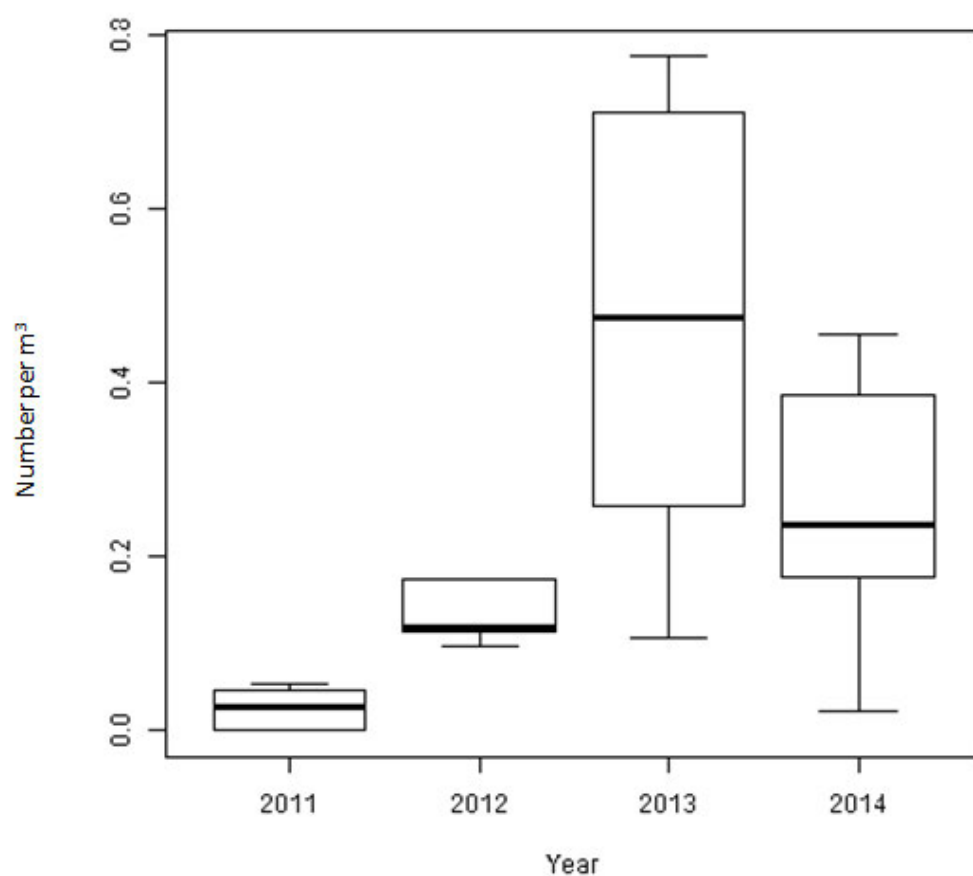


Figure 5.31 Density/ m^3 of c. 30 day old pollan larvae in Ballyronan Bay

Table 5.19 Results of Kruskal-Wallis comparisons

Comparison	Observed difference	Critical difference	Statistical difference
2011-2012	10.22	12.38	False
2011-2013	19.51	13.24	True
2011-2014	15.11	12.38	True
2012-2013	9.29	13.24	False
2012-2014	4.89	12.38	False
2013-2014	4.40	13.24	False

Larval density results (Figure 5.31) were verified by studying the length frequency histograms of pollan captured in our draft netting survey (Figure 5.32) during summer. The graphs exhibit a tri-modal distribution, with each mode representing a year class of pollan. The first mode represents fish born in the spring of that year (age 0+), the second fish born the previous spring (age 1+), and so on. Population structure varied significantly between years (two sample Komogorov-Smirnov: $D = 0.3$, $p < 0.001$).

The small numbers of 0+ fish in the length frequency histogram for summer 2011 support the use of the low observed larval densities in the spring of that year as an accurate measurement of recruitment. We can track that cohort through to the small mode of 1+ fish in the summer 2012 histogram.

This means that, since the size of each mode reflects cohort strength, and since we can infer recruitment levels from the pollan larvae survey, we can follow the performance of a year class right from initial recruitment to death. That is, larval density data from our work can be a predictor of future pollan population size, including numbers of marketable size pollan (>200mm), an important tool for conservation and adaptive fishery management. This is a requisite for a fishery of a species of variable cohort strength, reliant upon only one year class.

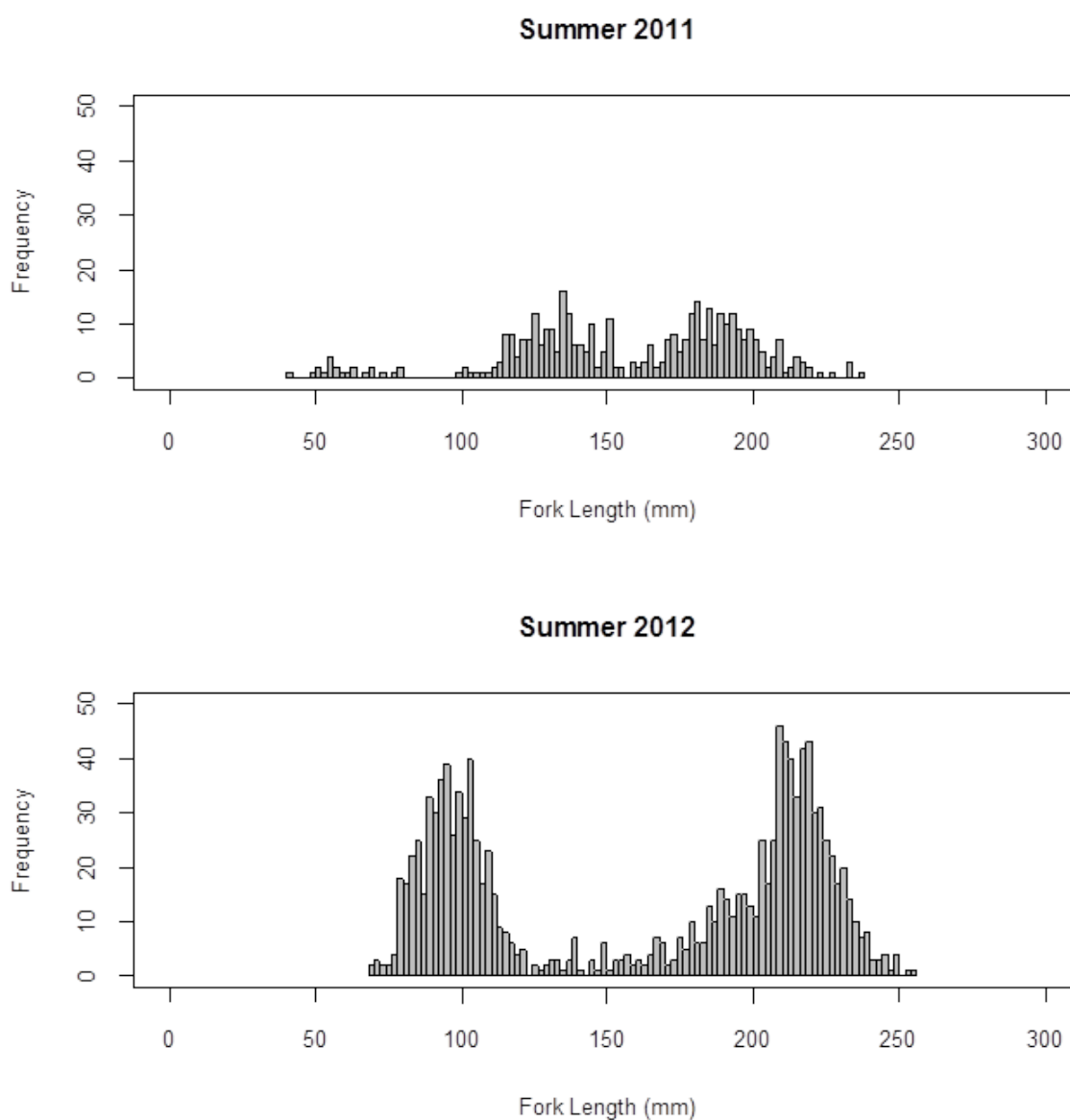


Figure 5.32 Length frequency histograms of pollan captured during draft netting survey

Ecological Classification of Lough Neagh

An ecological assessment of Lough Neagh's fish community was assessed using the established Fish in Lakes Tool (FIL2)(Allen and Rosell, 2010, Kelly et al., 2012, Kelly et al., 2013) for each of the four draft net surveys and gill net surveys of Lough Neagh. The Lough Neagh water body was designated as a Type four waterbody due to an alkalinity of $>67 \text{ mg L}^{-1} \text{ CaCO}_3$ and a maximum depth exceeding 17 m as stipulated by (Kelly et al., 2012). To assess the ecological status using FIL2, five metrics (Table 5.20) were pre-calculated (Table 5.21 and 5.22) for each survey.

Table 5.20 List of the five metrics used in the FIL2 ecological classification tool for type four Irish lakes.

Fish metric	Explanation
TOTAL_BPUE	Sum of mean BPUE (biomass (g) of fish per linear metre of net – gill nets and fyke nets) for each fish species
NAT_BPUE	Sum of mean BPUE of native (*group 1) fish species
PERCH_BIO	% composition of perch based on BPUE (PERCH BPUE/TOTAL BPUE*100)
MAX_L_DOM_BIO	Maximum length of dominant (based on BPUE excl. eels and adult salmon) species
LITH_IND	% individuals (excl. eels and adult salmon) that are lithophilic (as per FAME consortium (2004) classification)

*Group 1 (Natives): Brown trout, sea trout, salmon, Arctic char, Pollan, European eel, Killarney shad, Three-spine stickleback, nine-spine stickleback, brook lamprey, river lamprey, sea lamprey and flounder (Kelly et al., 2012).

Table 5.21 FIL2 results for draft net surveys of Lough Neagh.

Table 3.11.1.1.1. Results for adult fish surveys of Eogan Weighn							EQR	EQR	
Lake Name	TOTAL_BPUE	NAT_BPUE	PERCH_BIO	MAX_L_DOM_BIO	LITH_IND	EQR	Lower 95% C.I.	Upper 95% C.I.	EQR Classification
Summer									
2011	1.101	0.869	26.5	23.7	5.2	0.92	0.733	0.978	High
Autumn									
2011	2.774	0.889	44.1	20.4	0.9	0.92	0.741	0.976	High
Summer									
2012	3.016	2.225	31	25.6	0.9	0.91	0.721	0.974	High
Autumn									
2012	4.18	2.248	21.1	28.6	0.4	0.9	0.693	0.973	High

Table 5.22 FIL2 results for gill net surveys of Lough Neagh.

Lake Name	TOTAL_BPUE	NAT_BPUE	PERCH_BIO	MAX_L_DOM_BIO	LITH_IND	EQR	EQR	EQR	EQR Classification
							Lower	Upper	
							95% C.I.	95% C.I.	
Summer									
2011	11.561	0.037	99.7	18.9	0	0.87	0.52	0.976	High
Autumn									
2011	55.269	0.875	87.2	20.3	0	0.66	0.33	0.882	Good
Summer									
2012	22.539	2.711	53	21.1	0.4	0.85	0.665	0.945	High
Autumn									
2012	24.519	10.501	4.6	25.1	1.6	0.87	0.632	0.962	High

Across all 8 surveys the ecological status of the Lough Neagh fish community (ecological quality ratio (EQR)) was deemed high (N = 7) or good (N = 1). Draft net survey results consistently produced a small but significantly higher EQR than gill net surveys (Wilcoxon rank sum test: $W = 16$, $p = 0.03$) (Figure 5.33), this was predominantly due to eels (a native species) being underestimated in gill net catches.

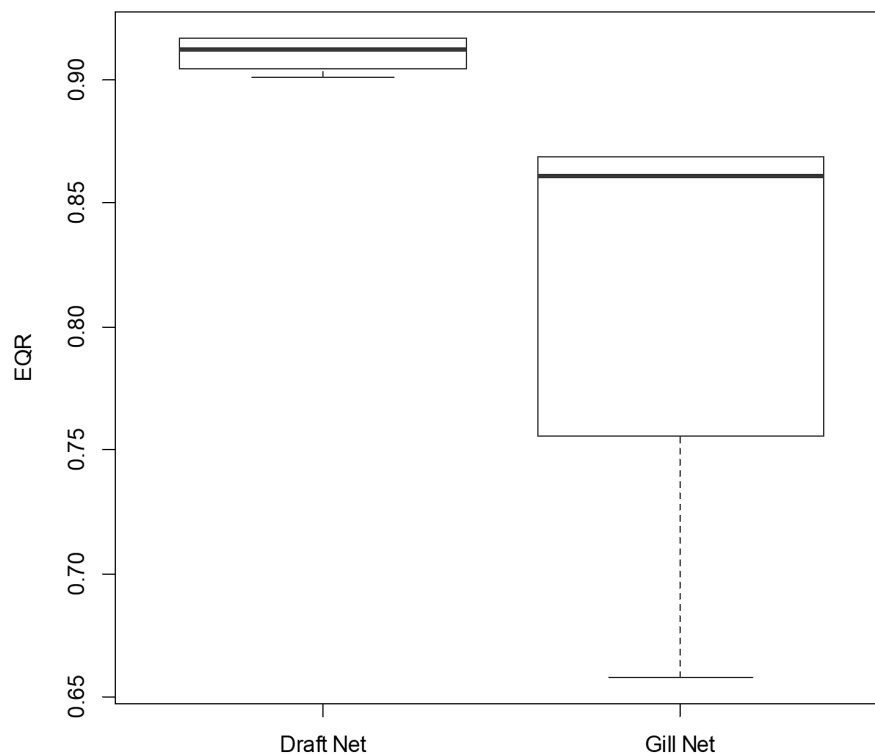


Figure 5.33 Boxplot of ecological quality ratio (EQR) by net type

Appendix B

Table 3: Summary table detailing declared biomass landed from L Neagh as per DAERA Licenced Fish Dealers register data

Year	Bream	Pike	Pollan	Trout	Perch	Salmon	Roach
1996	1802.9	2889.6	0	0	0	0	0
1997	2239.6	1043.6	175014.5	3946.1	9442	0	0
1998	0	0	225460.6	145.9	0	0	0
1999	0	0	105191.4	0	0	0	0
2000	0	0	355010.2	1785.4	0	0	0
2001	0	0	348004.1	0	0	0	0
2002	0	0	136679.4	0	0	0	0
2003	0	0	97382.3	1379.8	0	148.7	0
2004	889.8	2166	164847.5	333.5	0	66.4	0
2005	1143	1028.9	83904.6	3102	0	0	40889
2006	3219.5	21260.6	120497	3437.5	0	0	79066.1
2007	0	696.1	60527.3	2557.3	0	0	5600.7
2008	3105.2	1643.1	59853.9	1644.5	3136.9	0	67979.4
2009	20921.4	2357.6	192496.4	7857.104	990.6	0	202669.4
2010	11328.4	5525.9	229167.4	3759.6	419.1	33.4	64954.7
2011	1206.5	7160	32288.1	337.1	31.8	0	2882.9
2012	658.26	5298.86	223834.1	8140.15	2985.1	27.63	52517.43
2013	8804.28	10401.89	298066.2	11710.67	60970.21	4.4	209117.3
2014	958.85	0	26653.85	7903.56	2048.41	0	20986.29

Note there is currently no legal requirement to record sales of perch, roach or bream by Registered dealers.

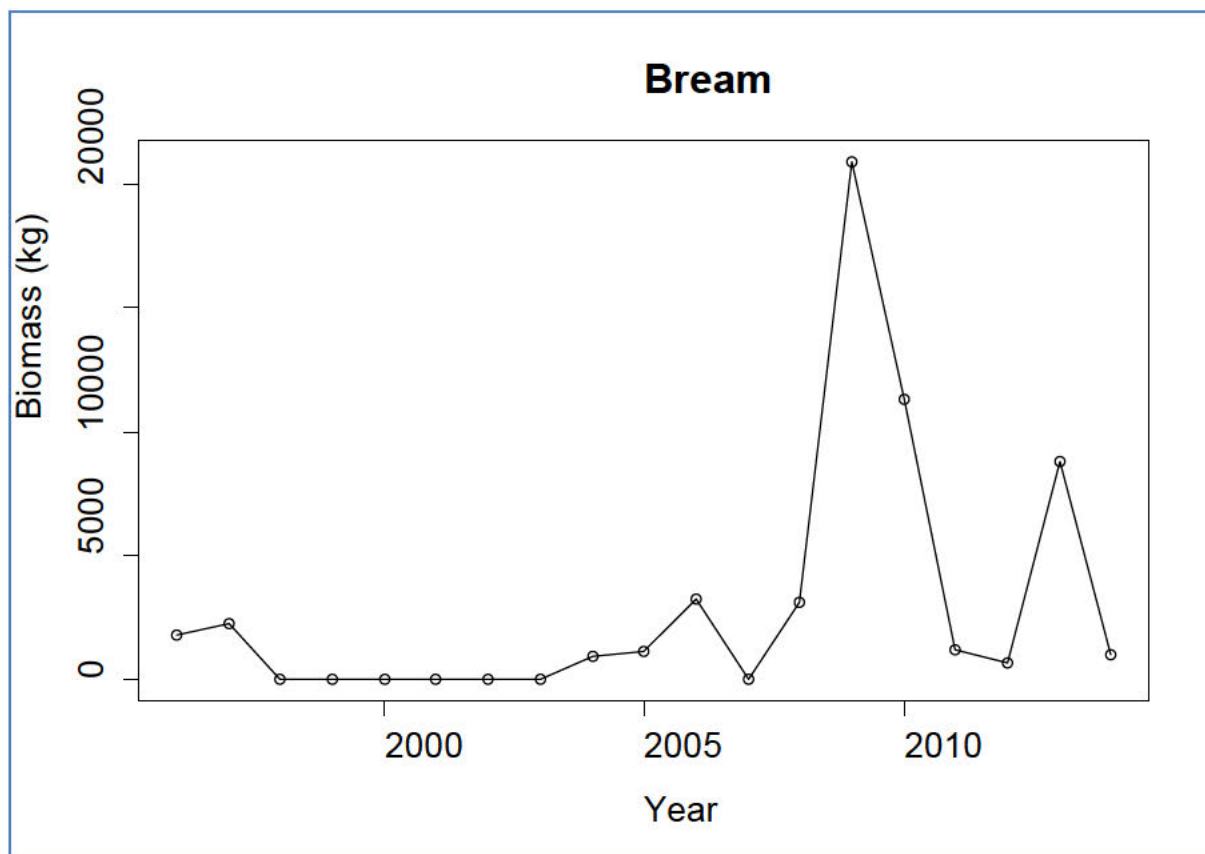


Figure 2: Bream purchased by DAERA Licenced Registered Fish dealers 1996 - 2014

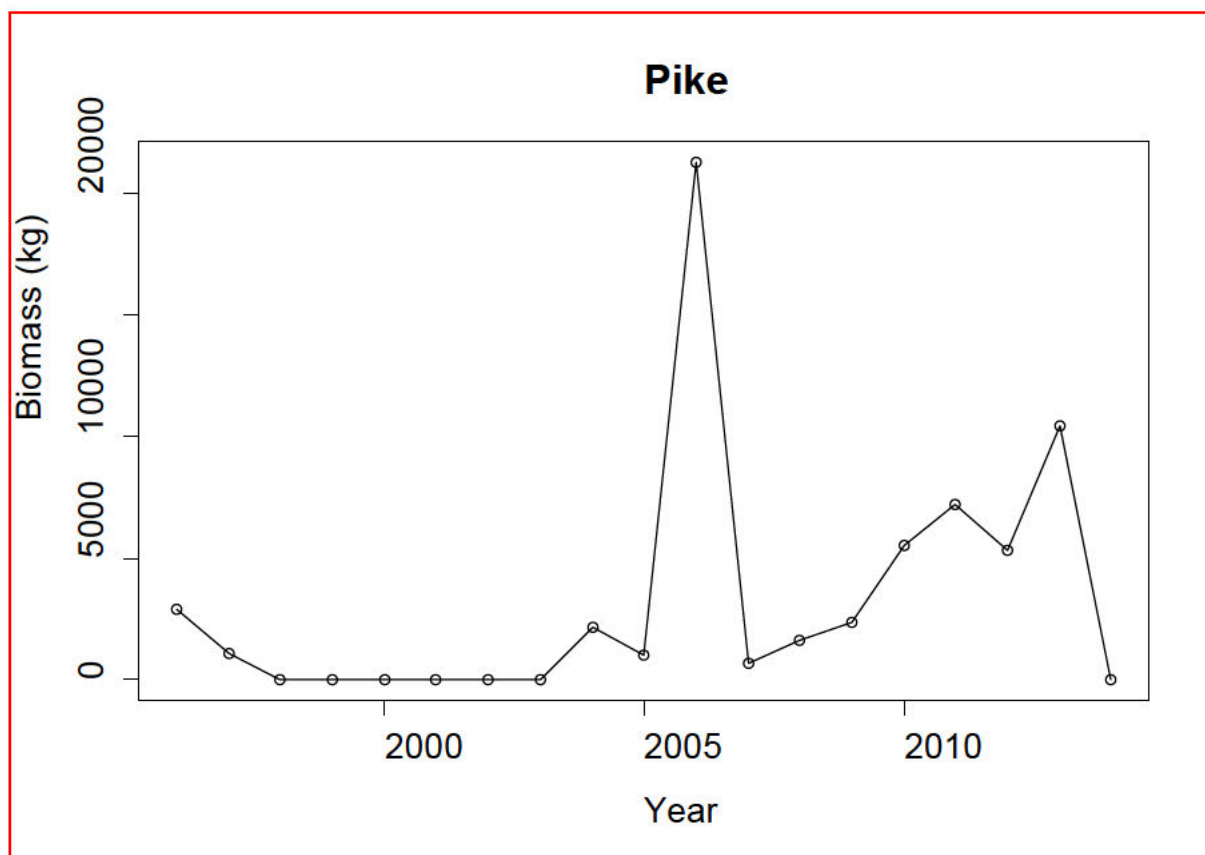


Figure 3: Pike purchased by DAERA Licenced Registered Fish dealers 1996 – 2014 *includes pike captured by commercial fishers' on Lough Erne

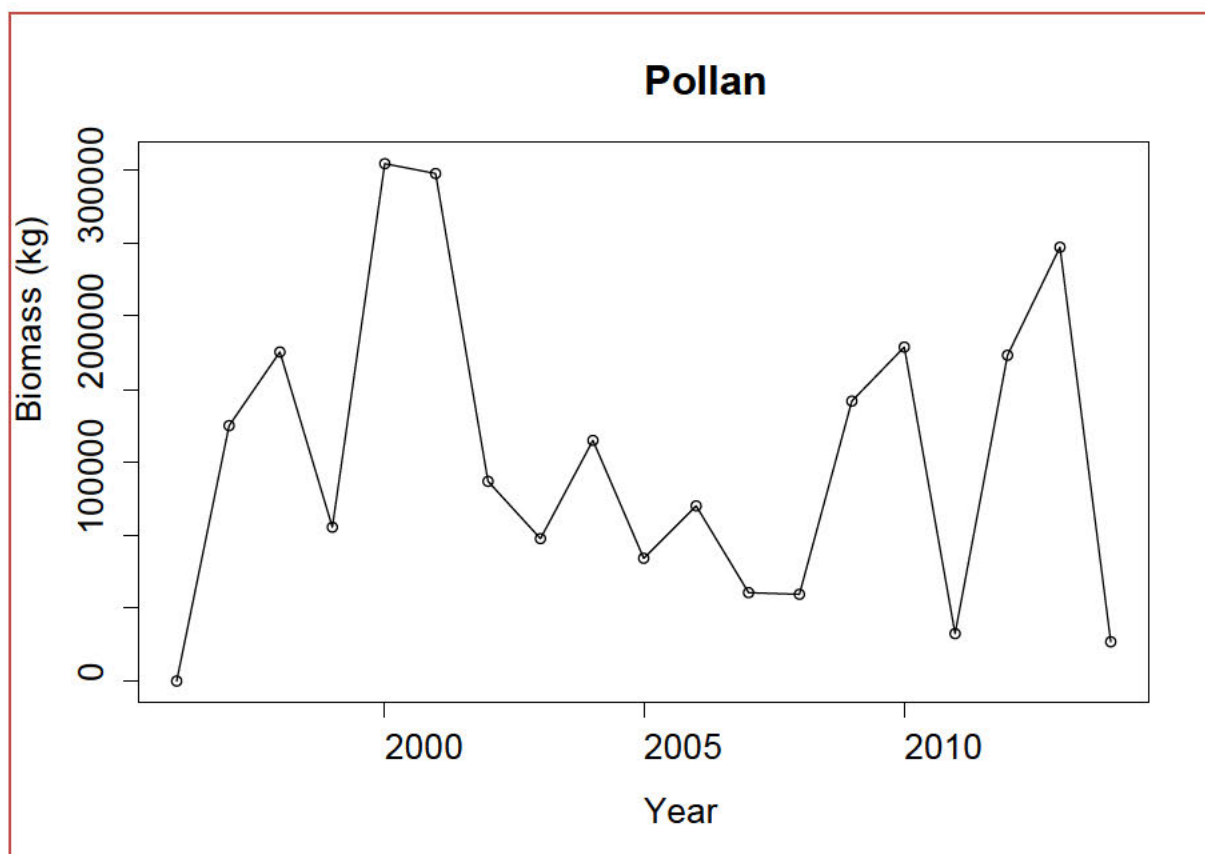


Figure 4: Pollan purchased by DAERA Licenced Registered Fish dealers 1996 - 2014:

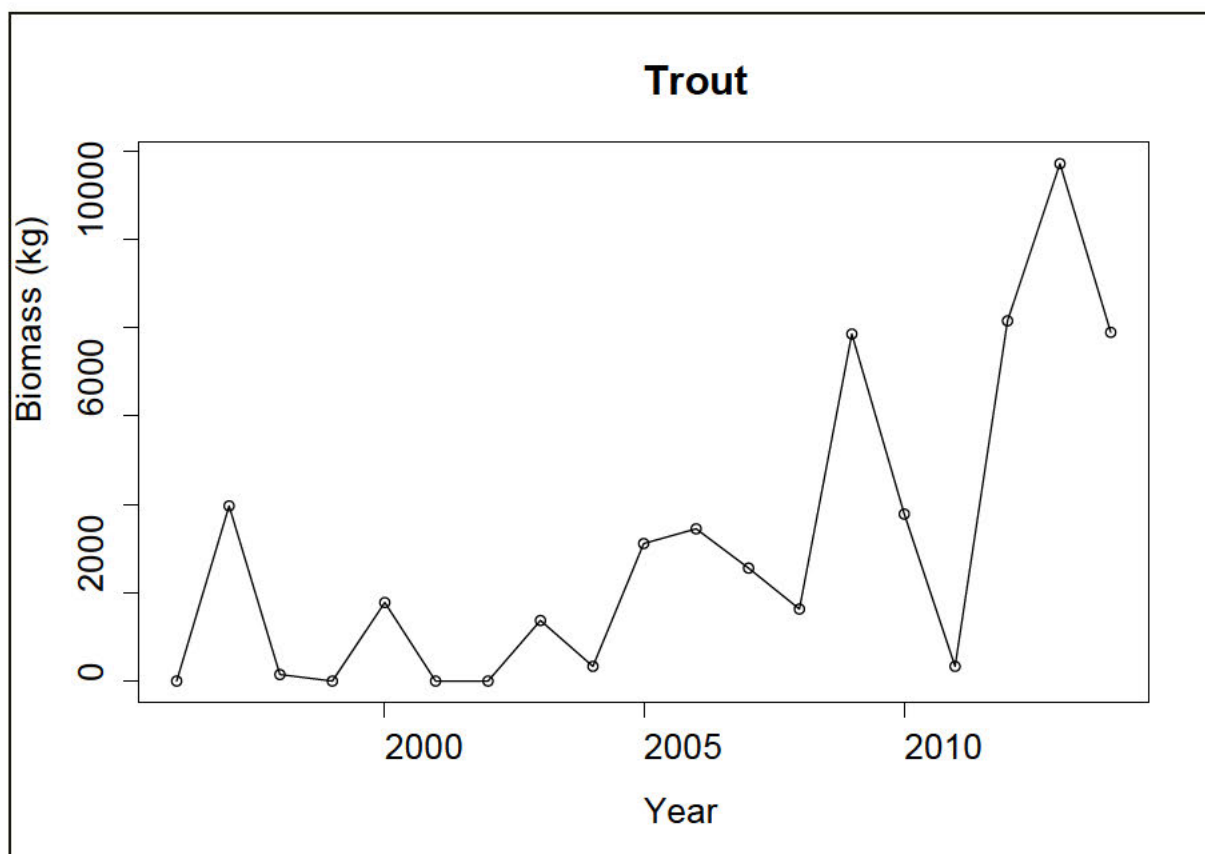


Figure 5: Trout purchased by DAERA Licenced Registered Fish dealers 1996 - 2014

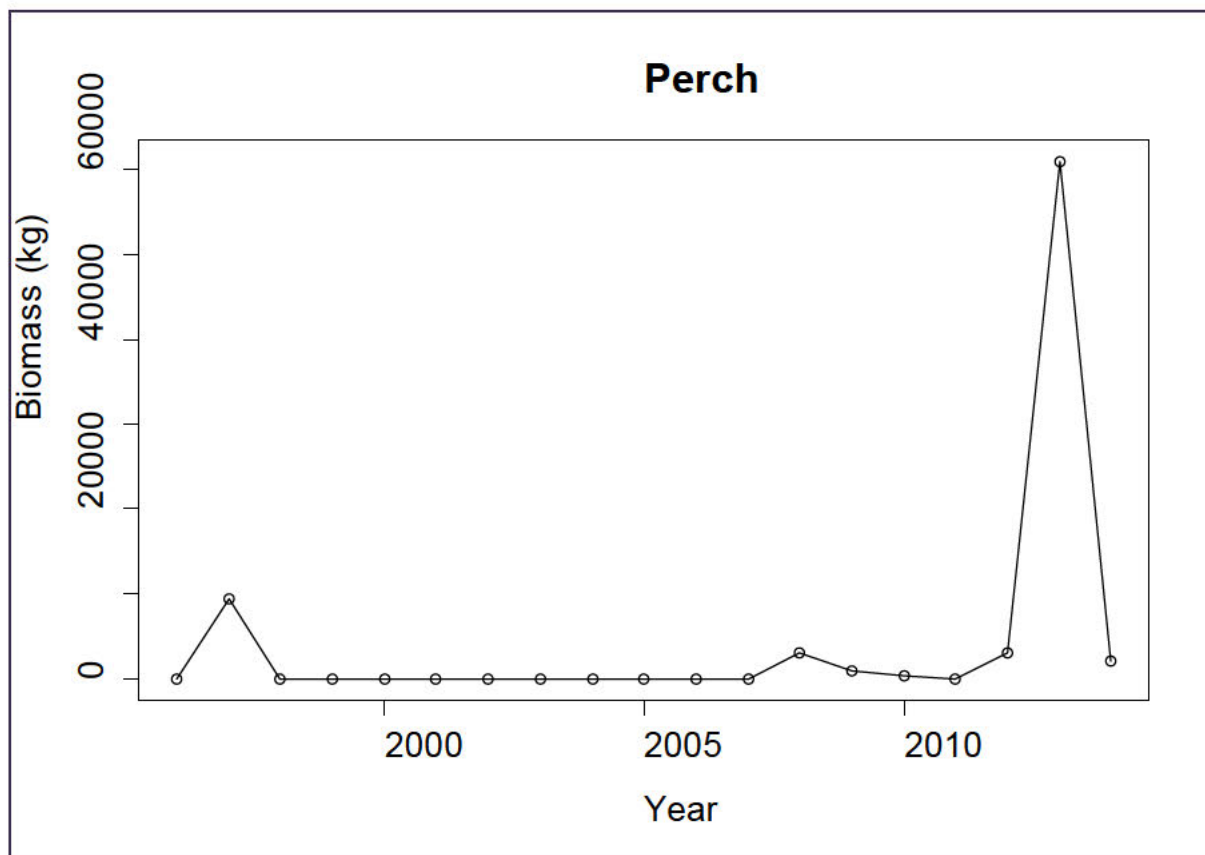


Figure 6: Perch purchased by DAERA Licenced Registered Fish dealers 1996 - 2014

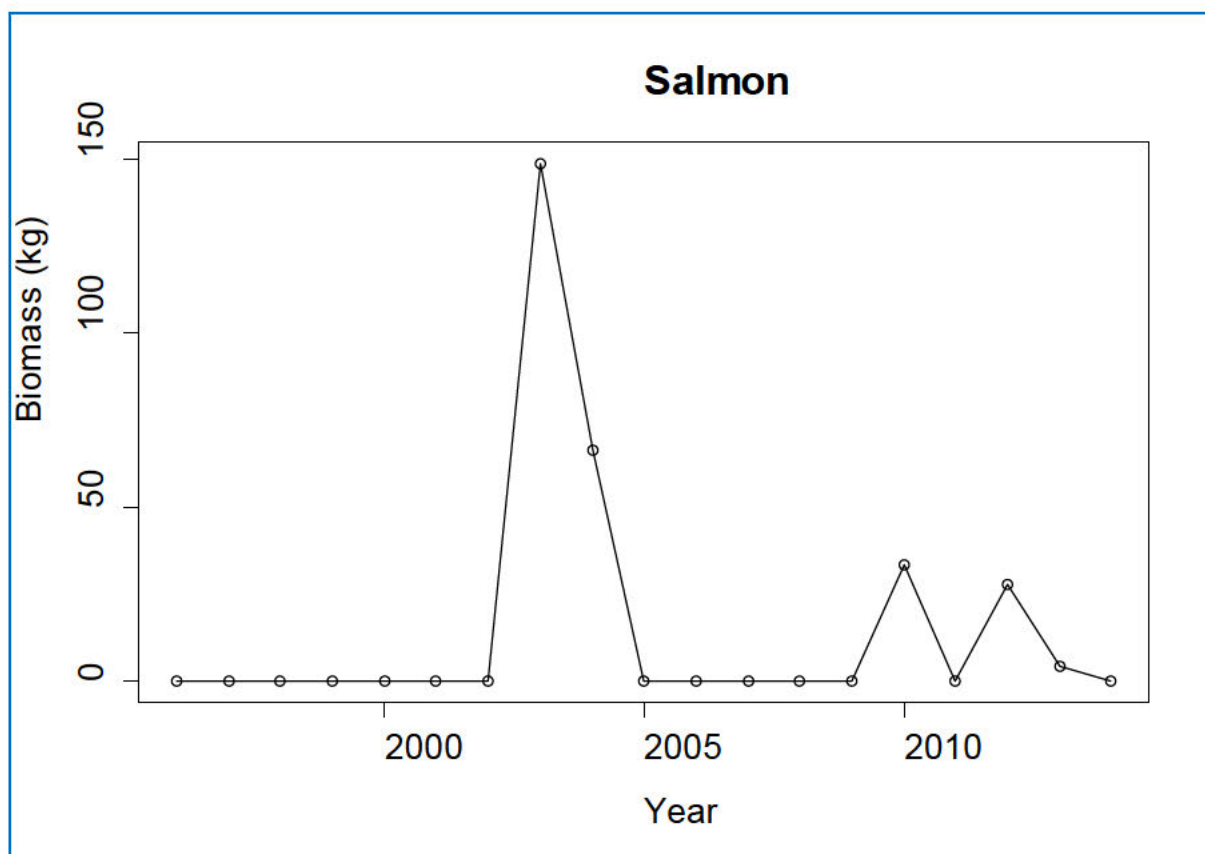


Figure 7: Salmon purchased by DAERA Licenced Registered Fish dealers 1996 - 2014

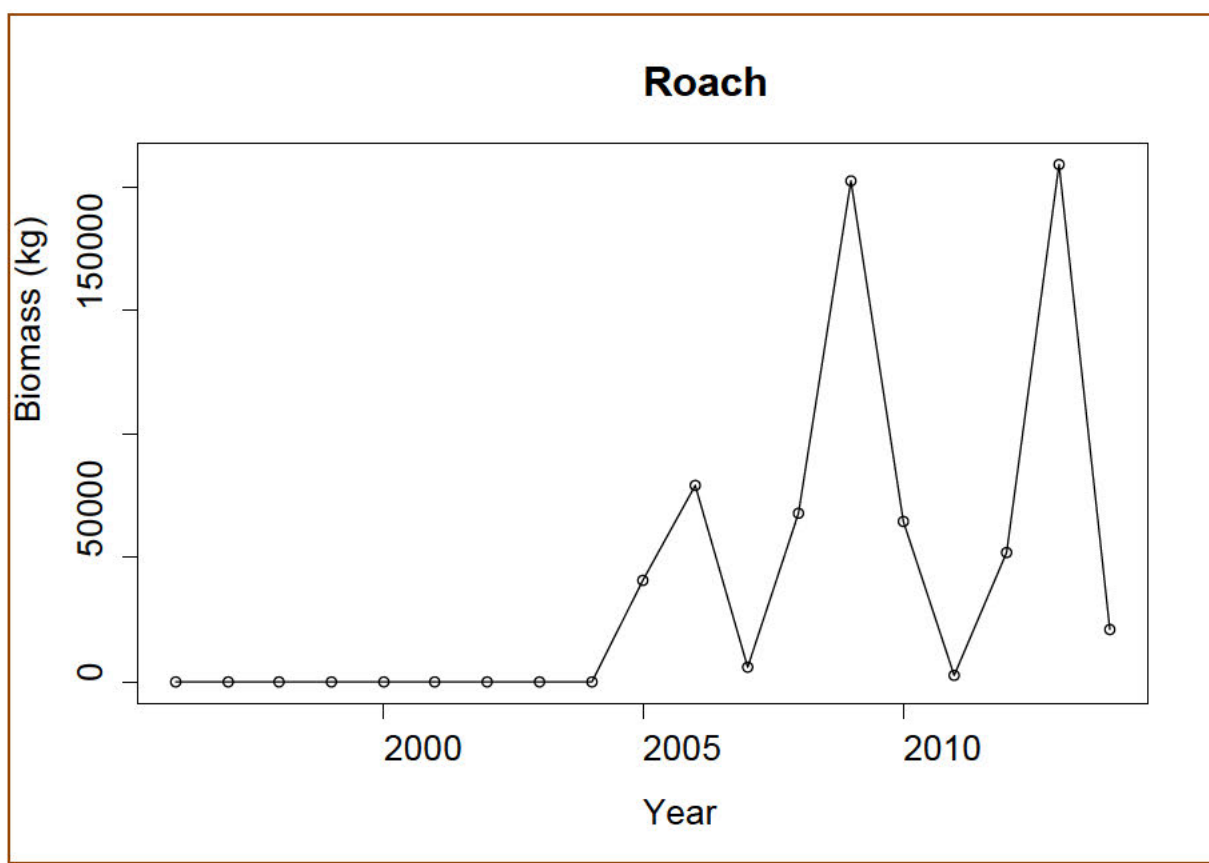


Figure 8: Roach purchased by DAERA Licenced Registered Fish dealers 1996 - 2014

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Stakeholder Engagement on Lough Neagh Fishery Management Plan

Date	Stakeholder Group	Venue
18 June 2014	Commercial Fishermen and Fish Dealers	Toomebridge
24 th June 2014	Angling Groups	ECOS Centre
15 th December 2014	Lough Neagh Fishermens Co-operative Society	Toomebridge
15 th December 2014	Lough Neagh Fishermen's Association	Ballyronan
4 th February 2015	Angling Groups	Movanagher
21 st February 2015	Salmon and Inland Fisheries Forum	Portadown

**Lough Neagh Fishery Management Plan – Constituent Concerns and questions
November 2022**

1. *Pg 8 – ‘Permission from the fishery owner is also required to fish commercially for coarse fish and Brown Trout stocks on the Lough.’*

Concern - Details of ‘Fishery Ownership’ are undetermined - court case is ongoing. Therefore, how can this be included in a Departmental management plan?

2. *Pg12 – ‘This Fishery Management Plan has been developed through engagement and dialogue with relevant stakeholders and has been subject to full public consultation.’*

Concern - This is incorrect. Local fishermen and some merchants were not informed when these public consultations were taking place. Dispute the level of detail, if any, of discussions that actually took place re the management plan.

3. *Pg28 – ‘4. Agents will not be allowed to operate on behalf of licenced commercial fishermen instead only than those approved by DAERA can operate for a temporary period of time on behalf of the licence holder.’*

Concern - How can this work if the license holder, unexpectedly, takes sick and is unable to lift their nets. Surely, someone should be allowed to temporarily step in to help.

4. *Pg41 – ‘16. Net mesh sizes should be amended to ensure sufficient juvenile survive to contribute to the spawning stock for each species as follows: Pollan/perch – 29.5 – 32.5 mm knot to knot Roach – to use existing approved net mesh sizes.’*

Concern - This places massive strain on both fishermen and merchants as the possibility of earning a living with these new restrictions will leave it virtually impossible to do so. Especially during this current cost of living crisis and recession not to mention the effect it would also have on the economy.

5. *Pg 43 - 18. DAERA to adjust the close seasons to protect spawning / gravid stock as follows: Commercial trout fishing closed season to be changed from 20 August – end of February to 1st August – last day of February; Pollan - consider changing season Roach – to have no closed season (other close seasons to be reviewed following further scientific analysis).’*

Concern - Focussing mainly on the point of ‘no close season on roach’, contradicts the argument of conservation. It is only natural that all species of fish are safely protected during spawning season to ensure the future of that species is safeguarded.

Constituent questions:

- 1) Why do DAERA want to work with a private organisation 'Lough Neagh Fisherman' Co-Operative' who must abide by DAERA rules anyway?
- 2) Why do they not want competition within the scale fish market? Competition is good for everybody.

From the Permanent Secretary
Katrina Godfrey

Our reference: SCORR/0129/2022

Linda Dillon MLA

coalislandsinnfein@gmail.com

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Room 636
Dundonald House
Upper Newtownards Road
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Belfast BT4 3SB
Telephone: 028 9052 4608
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Date: 23 December 2022

Dear Linda

LOUGH NEAGH FISHERY MANAGEMENT PLAN

Thank you for your letter of 30 November 2022 sharing the concerns raised by your constituents in relation to the Lough Neagh Fishery Management Plan (LNFMP) and seeking clarity on a number of issues.

In response to the concerns raised with you, I do want to assure you that DAERA works with a wide variety of stakeholders in relation to its role in the conservation, protection, development and promotion of salmon and inland fisheries. The Lough Neagh Fishermen's Co-operative Society is one of those stakeholders with which we engage. I can also confirm that DAERA issues dealers licences for any business that want to buy or sell certain freshwater species and that have complied with the regulations regarding applying for such a licence. However, the Department does not regulate those businesses in any other way, nor does it seek to influence how they operate.

In response to your questions, I can confirm that the LNFMP was indeed approved by the DAERA Minister towards the end of March 2022. While a draft LNFMP was sent to the relevant Assembly Committee back in 2015, it seems that the AERA Committee was not briefed prior to or immediately following the finalisation of the plan.

You have asked about engagement with the fishing community on the plan and I can advise that a public consultation on the draft plan was carried out between 10 September and 4 December 2015. The draft was shared with over 100 stakeholders including the Lough Neagh Fishermen's Co-Operative Society (LNFCS), Lough Neagh Fishermen's Association (LNFA), the Culture, Arts and Leisure (CAL) Assembly Committee and the Lough Neagh Partnership. The consultation was advertised on the DCAL website, Ability NI, the Fermanagh Herald, the Mid-Ulster Mail, the Irish News, the Newsletter and the Belfast Telegraph. An associated press release also circulated. The consultation did provide an opportunity for written feedback.

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Relay Service by dialling 18001 + telephone number.

I understand that there were also a series of stakeholder meetings before the plan was drafted (these included meetings with the LNFA and the LNFCS and following the public consultation (again these included with the LNFA and the LNFCS). Re-focused consultations with stakeholders (through their representatives on the Salmon and Inland Fisheries Forum (SIFF) including representatives from the Lough Neagh fishery) took place between June and September 2020.

You also asked about access to the feedback report that was published following consultation. Following the restructuring of departments, it seems that the feedback report is not as easily accessible as I might have expected. If you can bear with us for a little bit longer, I will do all I can to furnish you with a copy and to ensure it is accessible for others.

In relation to question 6, consultation has taken place throughout the development of the Plan, and this has included direct engagement with fishermen. All comments have been considered and where appropriate DAERA has amended the proposals.

The Department has also agreed to hold a public event in 2023 to go through the Lough Neagh Fishery Management plan with fishermen and to consider more feedback.

I hope that this response is helpful in addressing the queries you and your constituents have raised.

Yours sincerely



KATRINA GODFREY

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From: DAERA MFD Coordination

Sent: 30 April 2026 10:01

To: DAERA Private Office; DAERA PermSec; DAERA EMFG Coordination; [REDACTED] DAERA Angling Correspondence

Subject: TOF-0137-2026 : (Case Ref: RS03783) - LICENSING AND FISHING RIGHTS ON LOUGH NEAGH

Attachments: TOF-0137-2026 (Case Ref RS03783) - [REDACTED] - 30 April 2026.pdf

Folks

Copy of response issued today.

Regards

[REDACTED]

From: DAERA MFD Coordination

Sent: 30 April 2026 09:59

To: 'robin.swann.mp@parliament.uk' <robin.swann.mp@parliament.uk>

Subject: TOF-0137-2026 : (Case Ref: RS03783) - LICENSING AND FISHING RIGHTS ON LOUGH NEAGH

Good morning

Please see attached correspondence from [REDACTED]

Kind regards

[REDACTED]

[REDACTED]

Environment, Marine & Fisheries Group

Your reference RS03783
Our reference TOF-0137-2026



Department of
**Agriculture, Environment
and Rural Affairs**

An Roinn

**Talmhaíochta, Comhshaoil
agus Gnóthaí Tuaithe**

Department o'

**Fairmin, Environment
an' Kintra Matthers**

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30 April 2026

Dear Mr ██████████

LICENSING AND FISHING RIGHTS ON LOUGH NEAGH

Thank you for your correspondence dated 22 April 2026 raising concerns regarding angling activity from the shoreline of Lough Neagh. The Minister has read your correspondence and passed it to me ██████████ responsible for inland fisheries, to respond.

Anyone fishing on inland waters in the DAERA jurisdiction area of Northern Ireland is required to hold a valid DAERA fishing rod licence. This requirement applies regardless of whether waters are public or privately owned. In addition to holding a valid DAERA fishing rod licence, anglers are responsible for ensuring they have any necessary permission from the owner of a private fishery before fishing.

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Lough Neagh is located within the DAERA jurisdiction area of Northern Ireland; however, the Department does not determine or enforce private fishing rights on the Lough.

Any queries regarding fishing rights of the Lough Neagh Fishermen's Co-operative Society on Lough Neagh should be addressed to them.

Yours sincerely

A black rectangular box redacting a signature.A black rectangular box redacting a name.A black rectangular box redacting a title.

MARINE & FISHERIES DIVISION

If you are deaf or have a hearing difficulty you can contact the Department via the Next Generation Text Relay Service by dialling 18001 + telephone number.

**From the Office of the
Minister of Agriculture,
Environment and Rural Affairs**



Department of
**Agriculture, Environment
and Rural Affairs**

An Roinn

**Talmhaíochta, Comhshaoil
agus Gnóthaí Tuaithe**

Depairtment o'

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Month 2026
AQW 45242/22-27

**To ask the Minister of Agriculture, Environment and Rural Affairs to detail
who owns the leisure fishing rights to Lough Neagh**

The ownership of recreational or leisure angling rights on Lough Neagh is subject to private claims, and it is not for my Department to determine or adjudicate those claims.

**ANDREW MUIR MLA
Minister of Agriculture, Environment and Rural Affairs**

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BACKGROUND NOTE.....AQW 45242/22-27

1. Recreational or leisure angling (scale fishing) rights on Lough Neagh are subject to private claims, the ownership and extent of which have not been determined by the Department and remain legally unresolved.
2. The Department has previously received documentation from parties asserting fishing rights; however, receipt of such information does not amount to a determination or endorsement of ownership.
3. In March 2026, SUB-0230-2026 advised that recreational angling was not permitted on Lough Neagh for the 2026 season based on a position taken by a private claimant, not a Departmental decision on rights.
4. In April 2026, to a response to an EIR request (DAERA/26-228), the Department confirmed it was aware of asserted fishing rights claims but withheld documentation due to ongoing and potential court proceedings.
5. The Department's role is limited to fisheries licensing and statutory regulation; it does not adjudicate, enforce or resolve private disputes regarding fishing or angling rights, which are matters for the courts.

FOR ANSWER ON: 06/05/2026

Drafted by: [REDACTED] 05/05/2026

Cleared by Dep Head of Division/Branch [REDACTED], 05/05/2026

If you are deaf or have a hearing difficulty you can contact the Department via the Next Generation Text Relay Service by dialling 18001 + telephone number.

Contact Number: [REDACTED]

[REDACTED] distribution List:

[REDACTED]

If you are deaf or have a hearing difficulty you can contact the Department via the Next Generation Text Relay Service by dialling 18001 + telephone number.

From: DAERA Private Office
Sent: 18 June 2026 12:09
To: Carla Lockhart MP
Subject: RE: (Case Ref: CL33604) Angling - Lough Neagh (DAERA Ref: COR-0407-2026)
Attachments: Letter from Minister Muir MLA.pdf

[REDACTED] [REDACTED]

Hello

Please find attached response from Minister Muir MLA to your correspondence below.

Please note a hard copy will not follow in the post.

Kind regards

[REDACTED]

[REDACTED] Private Office | Department of Agriculture, Environment and Rural Affairs | Clare House | 303
Airport Road West | Belfast | BT3 9ED
[REDACTED]) | private.office@daera-ni.gov.uk | Web: www.daera-ni.gov.uk

From: Carla Lockhart MP <carlalockhartmp.office@parliament.uk>
Sent: 08 June 2026 11:25
To: DAERA Private Office <Private.Office@daera-ni.gov.uk>
Subject: (Case Ref: CL33604) Angling - Lough Neagh

Dear Minister, Re: Angling ❖ Lough Neagh I have received the following query from one of my constituents, I would greatly appreciate if you could advise: ❖Would you please make enquiries on my behalf

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Dear Minister,

Re: Angling ❖ Lough Neagh

I have received the following query from one of my constituents, I would greatly appreciate if you could advise:

❖ Would you please make enquiries on my behalf as to the current situation with pleasure angling on Lough Neagh.

I have been fishing there for some time, but all angling has been stopped by the Co op, who claim they own all fishing rights, both commercial and leisure. Up until this year DEARA advised that all that was required was a rod licence and Game fishing permit to fish the Lough. We have been threatened with boat and tackle confiscation and legal action if we go fishing. It seems to me one of the greatest potential recreational resources in NI is closed to locals and visitors. On top of all the more widely advertised problems with Lough Neagh this also needs to be highlighted.❖

Many thanks,
Carla

Carla Lockhart MP
Member of Parliament for Upper Bann

Lurgan Office: 31-33 Queen Street, Lurgan, Co. Armagh, BT66 8BQ
Portadown Office: Office 5, Datos Park, 20 Armagh Road, Portadown, BT62 3DP

Office: 02838 310088
Mobile: 07833 198008

FACEBOOK: Carla Condell Lockhart or Carla Lockhart MP
TWITTER: @carlalockhart

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**From the Office of the
Minister of Agriculture,
Environment and Rural Affairs**

Carla Lockhart MP
carlalockhartmp.office@parliament.uk



DAERA Private Office
First Floor, Clare House
303 Airport Road West
Sydenham Intake
Belfast, BT3 9ED
Telephone: 028 9052 4140
Email: private.office@daera-ni.gov.uk

Our Ref: COR-0407-2026
Date: 18 June 2026

Dear Carla

ANGLING - LOUGH NEAGH (CASE REF: CL33604)

Thank you for your correspondence dated 8 June regarding concerns raised by your constituent about access to recreational angling on Lough Neagh.

A DAERA rod licence (Season / Juvenile / Concessionary) is a legal requirement under the Fisheries Act (NI) 1966 for all anglers aged 12 and over regardless of where they fish in the DAERA jurisdiction.

The ownership of recreational or leisure angling rights on Lough Neagh is understood to operate as a private fishery and it is not part of the Department's Public Angling Estate.

All anglers must have both a valid DAERA rod licence and the permission of the fishery owner, typically in the form of a permit or day ticket. A DAERA Game Fishing Permit does not provide access to private fisheries such as Lough Neagh.

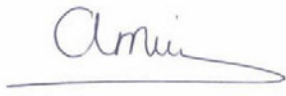
The Department is aware that access arrangements on Lough Neagh have recently become more restricted by those asserting ownership of the fishing rights. This has created uncertainty for anglers who may previously have accessed the Lough. While DAERA is responsible for licensing and regulation, it does not have the authority to grant access or to intervene in matters relating to private fishing rights.

If you are deaf or have a hearing difficulty you can contact the Department via the Next Generation Text Relay Service by dialling 18001 + telephone number.

INVESTORS IN PEOPLE®
We invest in people Standard

I hope this clarifies the position.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'A. Muir', with a long horizontal flourish extending to the right.

ANDREW MUIR MLA
Minister of Agriculture, Environment and Rural Affairs

From: DAERA Angling Correspondence
Sent: 29 April 2026 10:38
To: [REDACTED]
Subject: RE: Permit

Good morning, [REDACTED]

Thank you for your query.

DAERA does not hold or lease the fishing rights to Lough Neagh. The matter of fishing rights on Lough Neagh should be addressed to any claimant of those fishing rights; the Department does not grant or withhold permission to fish at a private fishery.

Kind regards,

DAERA Inland Fisheries  Correspondence Team.

Marine and Fisheries Division
Environment, Marine and Fisheries Group
DAERA-NI

From: [REDACTED]
Sent: 28 April 2026 14:40
To: DAERA Angling Correspondence <anglingcorrespondence@daera-ni.gov.uk>
Subject:

Hi I am enquiring as to owns the leasure fishing rights to lough neagh so I can purchase a permit. From [REDACTED]

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From: DAERA Angling Correspondence
Sent: 24 April 2026 17:14
To: [REDACTED]
[REDACTED] Fishing lough Neagh

Categories: FINAL - CLOSED

Hello [REDACTED]
Thank you for your email.

To confirm, DAERA does not hold or lease the fishing rights to Lough Neagh. The matter of scale fishing rights on Lough Neagh should be addressed to any claimant of those fishing rights; the Department does not grant or withhold permission to fish at a private fishery.

With regards to the availability of permitting for recreational angling, this would be for the owner of the fishing rights to decide availability, and on many waters, permits are not available. The Department is aware of the concerns raised by anglers.

The Department recognises the positive impact of angling in Northern Ireland and the wider benefits that this brings to the local economy, supporting clubs and angling competitions such as the Erne Pike Classic. The Department also manages and stocks the Public Angling Estate (PAE), maintaining and developing facilities for anglers at 89 sites across the country. Details can be found on the below link:

DAERA Public Angling Estate (Angling) | Department of Agriculture, Environment and Rural Affairs

Regards,

DAERA Inland Fisheries  Correspondence Team.

Marine and Fisheries Division
Environment, Marine and Fisheries Group
DAERA-NI

From: [REDACTED]
Sent: 23 April 2026 15:08
To: DAERA Angling Correspondence <anglingcorrespondence@daera-ni.gov.uk>
Subject: Re: Re: Fishing lough Neagh

Hi, do you not think it's a bit questionable that the governing body for fishing in Northern Ireland is not able to provide such information on biggest freshwater lough in the UK? Online information i

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[REDACTED]
Hi, do you not think it's a bit questionable that the governing body for fishing in Northern Ireland is not able to provide such information on biggest freshwater lough in the UK?

Online information is conflicting, a majority says lough neagh co-operative only own commercial fishing rights and not recreational fishing rights.

With no clear guidance online or signage at slipways around the lough how can one know if he is lawful to fish.

I have reached out to lough neagh co-operative with a very blunt screenshot of a old newspaper article. But very vague and unclear whether they legitimately have these rights.

If indeed they do have these rights why are they not being offered by way of permit to the public. Is it people before profit?

Would you not agree that such a major part of Northern Ireland that touches all counties should be open to the public for fishing. I'm sure I don't have to tell Daera the tourism that angling can generate as one of the most participated sports in the world.

So has Daera got no guidance at all for fishing lough neagh? Does daera not feel this is a major issue which needs addressed?

Regards [REDACTED]

On Thu, 23 Apr 2026, 14:11 DAERA Angling Correspondence,
<anglingcorrespondence@daera-ni.gov.uk> wrote:
Hello [REDACTED]

Thank you for your email.

The Department does not maintain a record of fishing rights across the DAERA fisheries jurisdiction and does not hold or lease the fishing rights to Lough Neagh. The matter of scale fishing rights on Lough Neagh should be addressed to any claimant of those fishing rights.

Regards,

DAERA Inland Fisheries ♦ Correspondence Team.
Marine and Fisheries Division
Environment, Marine and Fisheries Group
DAERA-NI

From: [REDACTED]
Sent: 22 April 2026 12:59
To: DAERA Angling Correspondence <anglingcorrespondence@daera-ni.gov.uk>
Subject: CM: Re: Fishing lough Neagh

Hi, thank you for your reply. Can you advise who owns the recreational fishing rights to lough neagh and how a permit can be obtained? Regards [REDACTED]
On Wed, 22 Apr 2026, 12:41 DAERA Angling Correspondence <anglingcorrespondence@daera-ni.gov.uk> wrote:
Hello [REDACTED]
Hi, thank you for your reply.

Can you advise who owns the recreational fishing rights to lough neagh and how a permit can be obtained?

Regards [REDACTED]

On Wed, 22 Apr 2026, 12:41 DAERA Angling Correspondence, <anglingcorrespondence@daera-ni.gov.uk> wrote:
Hello [REDACTED]

Thank you for your email.

Fishing from boats is permitted on Lough Neagh and a DAERA rod licence would be required alongside a permit or day ticket from the fishery owner. The Department does not hold or lease the fishing rights to Lough Neagh, and permission to fish should be sought from the fishery owner.

Regards,

DAERA Inland Fisheries ♦ Correspondence Team.

Marine and Fisheries Division
Environment, Marine and Fisheries Group
DAERA-NI

From: [REDACTED]
Sent: 16 April 2026 22:19
To: DAERA Angling Correspondence <anglingcorrespondence@daera-ni.gov.uk>
Subject: Fishing lough Neagh

Dear Daera, Could you please clarify whether recreational trout fly fishing from a boat is permissible within Lough Neagh, specifically in conjunction with the DAERA rod license? Regards, [REDACTED]

Dear Daera,

Could you please clarify whether recreational trout fly fishing from a boat is permissible within Lough Neagh, specifically in conjunction with the DAERA rod license?

Regards [REDACTED]

[REDACTED]

**Environment Marine & Fisheries
Group**
Marine & Fisheries Division

Our reference: **DAERA/26-228**



Department of
**Agriculture, Environment
and Rural Affairs**

An Roinn

**Talmhaíochta, Comhshaoil
agus Gnóthaí Tuaithe**

Department of

**Fairmin, Environment
an' Kintra Matthers**

www.daera-ni.gov.uk



Marine & Fisheries Division

Clare House
303 Airport Road West
Sydenham Intake
Belfast BT3 9ED

Tel: 0300 200 7860

Email: anglingcorrespondence@daera-ni.gov.uk



14 April 2026

Dear Mr 

Environmental Information Regulations 2004 – Recreational Angling on Lough Neagh

I refer to your request for information received by the Department on 30 March 2026. I can advise that the Department has completed its search and can confirm that it holds some of the information you requested and where possible the information has been provided, see below.

You had sought

1. **Have the Lough Neagh Fishermen's Co-Operative Society any private water bailiffs currently registered with DAERA/NI Courts.**

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2. What powers have such Private Water Bailiffs been granted by DAERA and NI Courts with regard to recreational anglers fly fishing, catch and release, on Lough Neagh.
3. Did the Fishermen's Co-Operative Society provide proof of their rights to recreational angling/fly fishing on Lough Neagh. If yes I would request a copy of the documentation provided by Lough Neagh Fishermen's Co-Operative Society as proof of their rights to recreational angling on Lough Neagh.
4. Does a DAERA rod license entitle recreational fly fishing anglers to fish, catch and release, on Lough Neagh

Responses

Question 1

Yes Lough Neagh Fishermen's Co-Operative Society do have private water bailiffs currently registered with DAERA / NI Courts

Question 2

General powers for "an authorised person" are given under Section 172 of the Fisheries Act (NI) 1996. Those powers are as follows:

Private Water Bailiff (PWB)'s does not have the powers to enter or cross private lands without consent unless for the purpose of preventing or detecting the commission of an offence. PWB's also to ensure their warrant is valid for the time of any detections take place.

172 General powers of authorised persons. N. Ireland

(1) An authorised person may, for the purposes of the protection of the fisheries, at any time—

- (a) enter and pass through or along [or remain on] the banks or borders of any lakes or rivers or of the tributaries thereof.
- (b) with boats or otherwise, enter upon any such lakes or rivers.
- (c) enter upon and examine all weirs, sluices, mill dams, fish passes, mill races and watercourses communicating with such lakes or rivers, and pass along the same.
- (d) stop, enter and search any boat which has been or is engaged or is about to engage in fishing.
- (e) examine all standing, floating or other nets whatsoever.
- (f) examine all fish and all fishing engines found in any place which by this Act he is authorised to enter, and for that purpose open any package found in such place and containing or suspected of containing any fish or fishing engine.

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- (g) seize any unlawful fishing engine or any lawful fishing engine which is being unlawfully used.
 - (h) seize any fish in the possession of a person found or suspected of committing an offence under any statutory provision relating to fisheries or any fish which have been or are suspected of having been unlawfully captured.
 - (i) seize any other thing whatsoever by means of, or in relation to, which an offence under any provision of this Act has been or is suspected of having been committed.
 - (j) do all such other acts and things as he is authorised to do under this Act.
- To Note “suspected” means suspected on reasonable grounds”
 - Nothing in this section shall be construed as authorising any person to enter any enclosed garden or any dwelling house or the curtilages thereof except where the ordinary road or passage to any weir, dam, or dyke traverses such garden or curtilage.”

Question 3

The Lough Neagh Fishermen’s Co-Operative Society have submitted evidence of their rights to manage recreational angling/fly fishing on Lough Neagh to DAERA..

The Department has decided not to release a copy of the documentation provided by Lough Neagh Fishermen’s Co-Operative Society as proof of their rights to recreational angling on Lough Neagh, under Regulation 12 (5) (b) the course of justice and inquiries exception. The Department is aware of impending High Court proceedings on the issue of ownership of the fishing rights regarding scale and coarse fish on Lough Neagh. A Public Interest Test attached under Annex 1 supports this decision.

Question 4

A DAERA rod licence (Season / Juvenile / Concessionary) is a legal requirement under the Fisheries Act (NI) 1966 for all anglers aged 12 and over regardless of where they fish in the DAERA jurisdiction.

Section 40 of the 1966 Fisheries Act states that “A fishing licence shall operate in accordance with the terms of the [F9 regulations](#)] under which it is issued and of the licence but shall not be construed—

- (a) as conferring on any person using any fishing engine any right of fishing in any place, being a right which he does not otherwise possess; or
- (b) as affecting the rights of any person other than the licence-holder or, in the case of a licence to which section 39 does not apply, the person using the fishing engine; or
- (c) as making legal any fishing engine that would otherwise be illegal, or as implying any recognition of the legality of any fishing engine; or

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- (d) as rendering lawful anything which is unlawful by virtue of any enactment other than this Part.

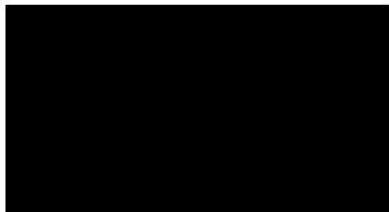
All anglers must have the fishery owner's permission to fish in the form of a permit or day ticket, and this applies to recreational angling on Lough Neagh.

If you require any clarification, believe that any part of your request has been overlooked, misunderstood or misinterpreted, please contact me in the first instance to see if it is a matter that can be resolved.

If you are unhappy with the manner in which your request for information has been handled or the decision to release/withhold information, you have the right to request a formal review by the Department. If you wish to do so, please contact The Review Section either by e-mailing daera.informationmanager@daera-ni.gov.uk or by post at The Department of Agriculture, Environment and Rural Affairs, Data Protection & Information Management Branch, Floor 2, Jubilee House, 111 Ballykelly Road, Ballykelly, Limavady BT49 9HP, within two months from the date of this letter.

If after such an internal review you are still unhappy with the response, you have the right to appeal to the Information Commissioner at Wycliffe House, Water Lane, Wilmslow, CHESHIRE SK9 5AF, who will undertake an independent review of the Department's decision.

Yours sincerely,



DAERA Inland Fisheries

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ANNEX I

Public Interest Test – EIR

Reference Number – DAERA/26 - 228

Requested Information being withheld

Copy of the documentation provided by Lough Neagh Fishermen's Co-Operative Society as proof of their rights to recreational angling on Lough Neagh.

Exemption / Exception under consideration

Regulation 12(5)(b) The course of justice and inquiries exception

Reasons why the public interest would favour disclosure:

- Regulation 12(2) requires DAERA to apply a presumption in favour of disclosure.
- DAERA is committed to conducting its business in a manner that is as open and transparent as possible.

Reasons why the public interest would favour withholding:

- The issue of ownership of fishing rights which is one of the questions asked and the subject of court proceedings in the High Court in Northern Ireland between the requester and a third party
- The release of information submitted in confidence could prejudice their clients right to a fair hearing. Hearing dates have yet to be set and agreed.
- The disclosure of information outside the High Court process and procedures has the potential to interfere with the administration of justice.
- Disclosing the information would adversely affect the future confidentiality of a public authority's proceedings as the information sought provides commercial confidential information submitted in confidence.

Conclusion

The Department has decided that, on balance, the information requested should not be disclosed.



**DAERA Inland Fisheries
Marine and Fisheries Division**