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Northern Ireland's marine and freshwater fish stock health

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This paper provides an overview of the status, management, and key pressures, affecting Northern Ireland's marine and freshwater fish stocks.

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Key Points

- This paper provides an overview of stock health of freshwater and marine fisheries, including a brief outline of relevant fisheries management, legislation, and potential future threats to stocks.
- Most commercially important marine fish stocks in the Irish Sea are in poor condition, including cod, haddock, plaice, herring and mackerel, with only limited improvement in species such as whiting and sole.
- Northern Ireland's economically important shellfish stocks (e.g., nephrops, brown crab, lobster, scallops) show mixed and often declining trends or insufficient data, increasing management uncertainty.
- Freshwater stocks show mixed health: Atlantic salmon continue long-term decline; sea trout trends vary regionally; brown trout are generally stable but declining in some catchments; European eel remains critically endangered with severely reduced natural recruitment.
- Coarse fish communities in major loughs appear broadly healthy with perch increasing and bream declining.
- Across marine and freshwater systems, climate change, water-quality decline, invasive species, and harmful algal blooms pose increasing risk to stock resilience and fisheries sustainability.
- Significant data gaps and enforcement limitations particularly for inshore shellfish and smaller freshwater systems may constrain effective ecosystem-based management.

Glossary

Bycatch: Fish or other marine species unintentionally caught while fishing for a target species.

Catch and Release (C&R): A management measure requiring fish to be returned alive to the water after capture, used to protect depleted or vulnerable stocks.

Ecosystem-Based Management: An approach to fisheries management that considers species interactions, habitats, environmental pressures and human activity, rather than managing single stocks in isolation.

ICES (International Council for the Exploration of the Sea): The international scientific body that assesses marine fish stocks and provides advice on sustainable catch levels.

Marine Protected Area (MPA): A designated marine zone protected by law to conserve habitats, species or ecological processes, where fishing activity may be restricted.

Maximum Sustainable Yield (MSY): The maximum level of catch that can be taken from a fish stock over the long term without reducing its ability to replenish.

Precautionary Principle: A management approach requiring action to prevent environmental or stock damage where scientific uncertainty exists.

Quota: The share of a Total Allowable Catch allocated to a fishing authority, organisation or vessel.

Spawning Stock Biomass (SSB): The total weight of mature fish in a stock capable of reproduction; a key indicator of stock health and recovery potential.

Total Allowable Catch (TAC): The maximum amount of a fish stock that can be legally caught in a given year, set using scientific advice.

Executive Summary

This paper provides an overview of stock health of freshwater and marine fisheries, including a brief outline of relevant fisheries management, legislation, and potential future threats to stocks.

Northern Ireland's marine and freshwater fish stocks face significant challenges. Most commercially important species in the Irish Sea are assessed as being in poor stock condition, including cod, haddock, plaice, herring, and mackerel. While only a small number (such as sole and whiting) show signs of recovery. Shellfish particularly nephrops, form the economic backbone of the Northern Ireland fleet but are subject to declining stock trends. While inshore shellfish stocks have more limited assessment data and vulnerability to environmental pressures. Marine management is undergoing transition as DAERA prepares a new Fisheries and Water Environment Bill. This aims to modernise fisheries governance, implement the UK Fisheries Act 2020, and introduce ecosystem-based management alongside new Fisheries Management Plans.

Freshwater fisheries are dominated by recreational angling and small commercial operations on Lough Neagh and Lough Erne, which both show mixed stock status. Atlantic salmon remain in long-term decline with most rivers only allowing catch and release. Sea trout display regionally divergent trends, while brown trout are generally stable but declining in some eastern catchments. The critically endangered European eel continues to experience severely reduced natural recruitment, with stocking difficulties exacerbated by constraints under the Windsor Framework. Finally coarse fish communities in major loughs are undergoing shifts but remain generally stable and self-sustaining.

Contents

1 Rationale

Marine and freshwater stocks are generally assessed separately due to the differences between the two environments. Sea stocks are generally large and connected populations that are regularly commercially and scientifically sampled, with regular stock assessment by an international body. While freshwaters comprise many distinct populations in different lakes, streams, and rivers which are often disconnected. Many of these streams are under very different local pressures, e.g. pollution etc and infrequently assessed or only visited by recreational anglers making a full assessment of freshwater stocks difficult. Nevertheless, this paper aims to provide an up-to-date picture of fish stocks health and management in Northern Ireland.

2 Sea Fisheries

The Northern Ireland fishing sector employs 2,059 people of which 1,593 are full time and 466 are part time.[1] The Northern Ireland fishing fleet primarily focuses on fishing in the Irish Sea and North Channel. It comprises 103 licensed boats >10m and 172 licensed boats <10m. [2, 3]

The vessels target a range of species that fall into three groups:

Demersal fish: these generally inhabit or feed at the bottom of the sea, key species include cod and haddock.

Pelagic fish: inhabit the water column in open waters; key species include mackerel and herring.

Shellfish: include various species of molluscs (scallops, whelks) and crustaceans (crabs, nephrops, and lobsters).

[1] Statistical Review of Northern Ireland Agriculture, DAERA, 2024

[2] Vessel lists over 10 metres - GOV.UK

[3] Vessel lists 10 metres and under - GOV.UK.

In 2024 Northern Ireland vessels landed 50,821 tons of fish and shellfish worth £63.1 million with shellfish accounting for 48.7% of value. The remaining value comprised 49.6% pelagic species and 1.6% demersal species. [4]

These fisheries span the inshore zones (within 12 nautical miles of the coastline, which is managed solely by DAERA) and the offshore zone (12 nautical miles and more away from the coastline, which is a shared responsibility with other parts of the UK under UK-wide legislation).

2.1 Legislative Framework

The UK Fisheries Act 2020 provides the modern fisheries management framework through eight fisheries objectives, a Joint Fisheries Statement (JFS), fisheries management plans, and a range of fisheries management powers. [5] This Act requires DAERA and other fishing policy authorities to publish fisheries management plans (FMPs) for fisheries within their jurisdiction.

FMPs are evidence-based action plans, developed in collaboration with the fishing sector and other stakeholders. Their purpose is to deliver sustainable fisheries for current and future generations. DAERA is currently developing the FMPs for Northern Ireland's Fisheries, and these fisheries will be the focus of this section: [6]

Irish Sea Pelagic FMP: DAERA is the coordinating authority working with joint authorities (i) the Department of Environment, Food and Rural Affairs (England) and (ii) the Welsh Government. This FMP includes herring and mackerel.

Irish Sea Demersal FMP: DAERA is the coordinating authority working with joint authorities (i) the Department of Environment, Food and Rural Affairs (UK, whose jurisdiction in this regard relates to England) and (ii) the Welsh

[4] Fisheries and Water Environment Bill Consultation Document, DAERA, 2025

[5] Fisheries Act 2020

[6] List of fisheries management plans, DEFRA, 2024

Government. This FMP includes plaice, cod, haddock, sole, whiting, and nephrops.

Northern Ireland Inshore FMP: DAERA is the sole authority. This FMP includes edible (brown) crab, velvet crab, lobster, king scallop and queen scallop.

2.2 Upcoming Changes

DAERA relies heavily on the Fisheries Act (Northern Ireland) 1966 as a key piece of primary legislation which guides the work in relation to fishing and aquaculture. [7] DAERA states that the 1966 Act focuses on the protection of fisheries, without fully considering the wider ecosystem, species interactions, environmental changes or other stressors. [8] Thus, it is not fully aligned with the ecosystem-based approach and the principles of sustainable development. [9] DAERA is therefore looking to present a new Fisheries and Water Environment Bill to the Assembly to modernise and give effect to Northern Ireland's fisheries policies so that these are consistent with the fisheries management framework provided by the UK Fisheries Act 2020. The Bill proposals were subject to public consultation in the latter part of 2025 and DAERA is seeking to introduce the Bill in the remaining time of this Assembly mandate. [10,11]

2.3 Why and how do we manage stocks?

Management of fisheries in the UK, including Northern Ireland, uses the precautionary principle. This means that where scientific uncertainty exists, managers err on the side of caution and act to prevent harm to fish stocks and the wider ecosystem. This principle is embedded in the UK Fisheries Act 2020,

[7] Fisheries Act (Northern Ireland) 1966

[8] Fisheries and Water Environment Bill Consultation Document, DAERA, 2025

[9] List of fisheries management plans, DEFRA, 2024

[10] Fisheries and Water Environment Bill Consultation Document, DAERA, 2025

[11] Fisheries and Water Environment Bill Combined Consultation Responses, DAERA 2026

which requires administrations to prioritise sustainability and ecosystem protection when setting management measures. [12]

A fish stock is a group of fish of the same species that live in the same geographic area and mix enough to breed with each other when mature. These are generally managed to secure the long-term sustainable harvest of fish from the stock. This approach thereby reduces the risk of stock collapse whereby too many fish are taken, reducing the reproductive capacity of the stock, preventing the stock from rebuilding its numbers. To prevent this fish stocks are generally managed and maintained through quota, marine protected areas (MPAs), and gear/fishing restrictions.

2.3.1 Quota

Quota controls how many individuals of a stock can be caught in a given year. Each fish stock is allocated a total allowable catch (TAC), based on scientific advice from the International Council for the Exploration of the Sea (ICES), though set TAC and ICES advice do not always align. ICES assesses stock abundance, catch data, reproduction, natural mortality from ICES rectangles to estimate the maximum sustainable yield for a stock. This is the most fish that can be taken from the population without reducing the size of the population in the long term; this advice is passed to governments which then set TAC for the year. For shared stocks such as the Irish Sea, see Figure 1, TAC and how it is split is negotiated between the UK and the EU under the UK–EU Trade and Cooperation Agreement (TCA). [13] The Secretary of State then determines the fish quota available to UK vessels and how it is divided between the four UK Fisheries Administrations (i.e. Northern Ireland, Scotland, England and Wales). DAERA then distributes the Northern Ireland quota among producer organizations and non-sector vessels.

[12] Fisheries Act 2020

[13] Trade and Cooperation Agreement between UK and EU – CP 426, 2021

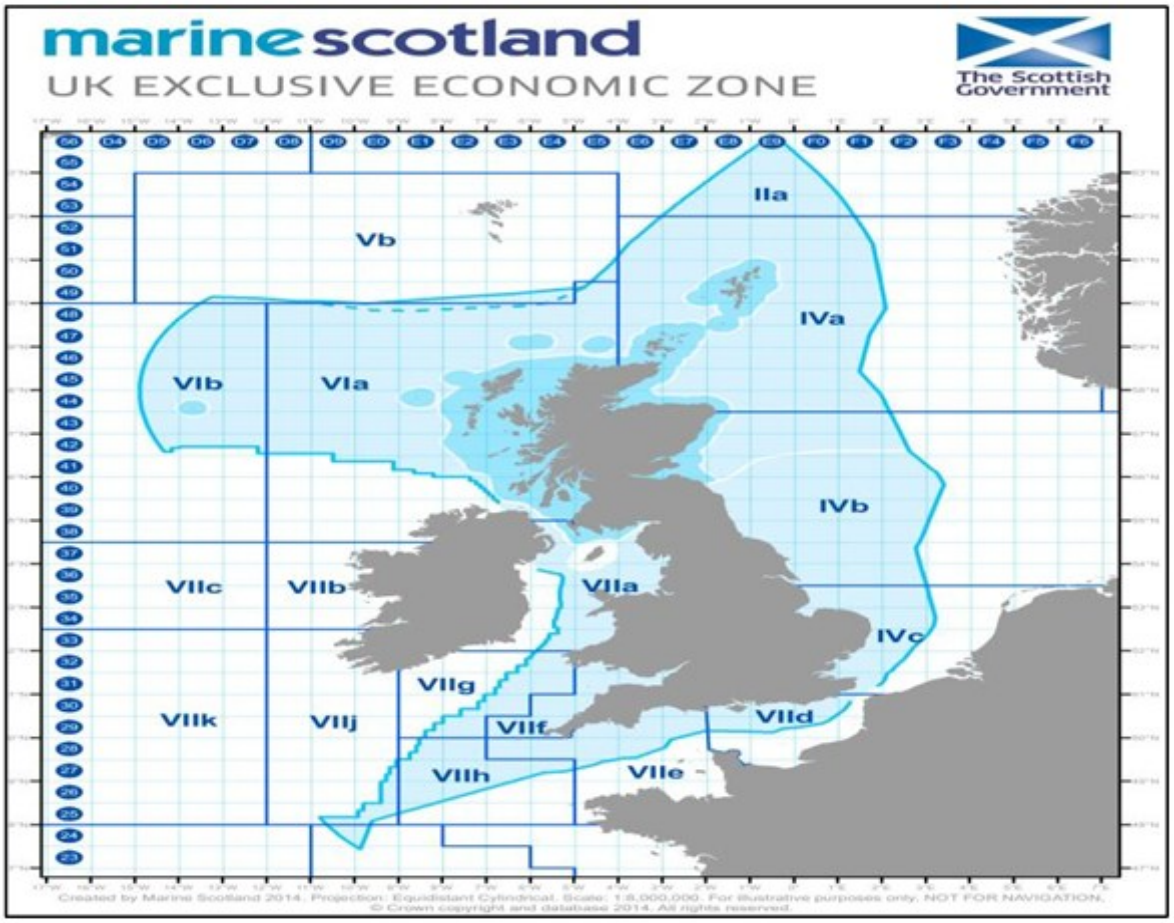

Figure 1: UK Exclusive Economic zone (all sea shaded blue) and how it relates to ICES areas

2.3.2 MPAs

MPAs safeguard and support the recovery of key ecological features such as habitats or species. Within Northern Ireland's inshore waters there are five types of MPAs covering 38% of the inshore region across 48 MPAs, see Figure 2. These are clearly defined geographical spaces, recognized, dedicated and managed, through legal or other means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values. [14] With the

[14] Marine Protected Areas, DAERA

network very nearly ecologically coherent, something DAERA is currently working on. [15] The five types of MPA are:

- Marine Special Areas of Conservation (SACs)[16]
- Marine Special Protected Areas (SPAs)[17]
- Coastal Areas of Special Scientific Interest (ASSIs)[18]
- Marine Conservation Zones (MCZs)[19]
- Ramsar sites[20]

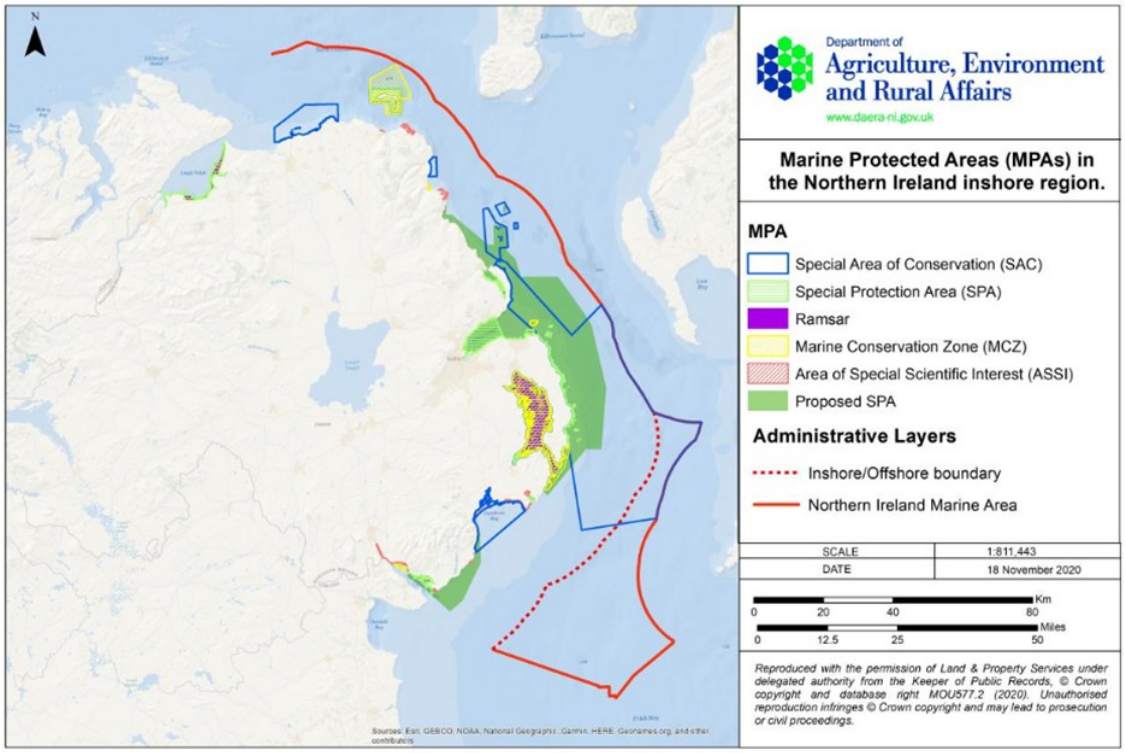

Figure 2: Map of Northern Ireland's MPAs. [21]

[15] JNCC DAERA NIMPA Network Progress, JNCC, 2018

[16] Marine Special Areas of Conservation (SACs), DAERA

[17] Marine Special Protected Areas (SPAs), DAERA

[18] Coastal Areas of Special Scientific Interest (ASSIs), DAERA

[19] Marine Conservation Zones (MCZs), DAERA

[20] Marine Ramsar sites, DAERA

[21] Marine Protected Areas, DAERA

MPAs are managed by:

1) Assessing the potential effects of plans/projects or activities on the designated feature(s) and associated conservation objectives.
2) Monitoring of the designated features on a 6-year rolling cycle.
3) The development of management measures/plans (or byelaws where required) to meet obligations under the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended) and The Marine Act (Northern Ireland) 2013. [22, 23] To maintain or improve the ecological health of SACs/SPAs and MCZs respectively. This can include gear restriction and fishery closures.

2.3.3 Gear and Fishing Restrictions

Gear restrictions and fishery closures are used to reduce bycatch (accidental catch of non-target species), protect juvenile fish, and preserve spawning adults, helping ensure long-term stock sustainability. Northern Ireland enforces mandatory gear selectivity measures such as minimum cod-end mesh sizes, large-mesh panels, and sorting grids. This all aims to reduce the capture of vulnerable species and improve the survival of non-target fish, particularly in the Irish Sea demersal and nephrops fisheries.[24] In the inshore shellfish sector, measures such as minimum landing sizes and prohibitions on landing berried (egg carrying) or soft-shelled crabs protect reproductive capacity and prevent overexploitation. These restrictions are complemented by activity controls in MPAs, where harmful gears or activities may be limited to prevent habitat degradation, aiming to ensure ecosystems remain resilient and capable of supporting healthy fish populations.

[22] The Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995

[23] Marine Act (Northern Ireland) 2013

[24] Fishing gear requirements and Landing Obligation exemptions, MMO, 2025

2.3.4 Stock Status

The key marine stocks to Northern Ireland are herring, mackerel, cod, haddock, whiting, sole, plaice, nephrops, brown crab, velvet crab, lobster, king scallop, queen scallop, and periwinkles. These stocks are all located within the Irish Sea (ICES ecoregion 7a) and their assessed status in 2025 are given below, alongside 2026 recommended maximum sustainable yield (MSY). Also included are details of how this has changed, and the health of the spawning stock biomass – an indicator of how quickly a stock can recover or grow. The historical status of these stocks will be examined in detail below the table.

There can also be some targeting or bycatch of skate, hake, and blue whiting among other species not shown here as they are predominately fished outside of the Irish Sea. [25] However Northern Irish boats do also fish regions of the Celtic Sea and Channel. [26] All shellfish apart from nephrops are excluded as they are not formally assessed by ICES and are examined below. The assessment of the state of the stocks utilises a traffic light approach with green indicating a healthy long-term stock, amber representing overfishing but inside safe biological limits, and red indicating that stock is outside safe biological limits.

Species	Group	Change in recommended MSY from 2025	Recommended catch (tonnes) in 2026	Spawning stock biomass	ICES MSY Stock Size	Data source
Herring	Pelagic	MSY down 9%	2,935	Below MSY	Poor	adviceXplorer
Mackerel	Pelagic	MSY down 70%	174,357	Below MSY and falling	Poor	adviceXplorer
Cod	Demersal	Stock collapse	0	Below MSY and falling	Poor	adviceXplorer
Haddock	Demersal	MSY down 70%	586	Unknown	Poor	adviceXplorer

[25] Fisheries Overview – Celtic Seas, ICES, 2026

[26] Fisheries Overview – Celtic Seas, ICES, 2026

Whiting	Demersal	MSY rising from zero	200	Below MSY but rising	Poor	adviceXplorer
Sole	Demersal	MSY down 10%	545	Above MSY	Good	adviceXplorer
Plaice	Demersal	MSY down 59%	614	Below MSY	Poor	adviceXplorer
Nephrops	Shellfish	MSY down 35%	6,493	-	-	adviceXplorer

2.4 Historical Stock Status

In summary most fish species are of poor stock health with only whiting exhibiting any increase in recommended catch and this only being a small increase from a previously closed fishery, while nephrops show variation between regions. The less assessed inshore shellfish do not have regular stock assessments in the same way as ICES with management generally relying upon reported catch. While using gear restrictions, effort controls, and minimum take sizes: (edible crab:150mm, velvet crab: 65mm, lobster: 87mm, king scallop: 110mm, queen scallop: 40mm, whelk: 45mm). [27]

2.4.1 Herring

Since the 1980s, annual catch varied around 5,000 tonnes with a notable drop to 2,000 tonnes from 2000 to 2004. After 2018 annual catch rose close to 7,000 tonnes. TAC suggested by ICES has closely matched these numbers however dropped rapidly from 8,455 tonnes in 2020 to 2,935 tonnes for 2026. This is partly because spawning stock has declined but also due to the collapse of the neighbouring Celtic Sea stock which mix with the Irish Sea stock and may be caught as bycatch (this is where stocks other than the target stock are

[27] Inshore fisheries policy, DAERA

accidentally caught). [28] It appears likely that recommended catch will remain low in future years.

2.4.2 Mackerel

While primarily found in the northeast Atlantic mackerel are still a species of some relevance to Northern Ireland. Total mackerel catch in this region was around 600,000 tonnes in the early 2000s and increased to a peak of 1,401,766 in 2014 from which catch has shown a slight decline to 897,701 in 2024. However, spawning stock has dropped significantly since 2014 and is now well below replacement meaning the stock is expected to shrink. This, alongside increasing fishing pressure since 2019, has led to recommended TAC falling from 922,064 tonnes in 2020 to 174,357 for 2026. [29] However, this stock may recover quickly as spawning biomass is only somewhat below MSY.

2.4.3 Cod

Cod are recorded being extensively fished from the mid nineteenth century with catch peaking at 14,168 tonnes in 1988. However, from here catch rapidly declined year on year with advice from the year 2000 recommending zero take as part of a recovery plan. [30] This has since led to an increase in spawning stock biomass and thus capacity of the stock to grow in 2015 and a small reopening of the fishery (1,000 tonnes) in 2018, but spawning stock biomass immediately fell and catch advice has been zero ever since and appears likely to remain so over the next few years. [31] Some industry representatives argue that Irish Sea cod abundance is higher than indicated by ICES assessments; however, these contrasting views remain unresolved due to ongoing differences in data sources and interpretation. [32]

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[28] Herring (Clupea harengus) stock advice in Division 7.a, ICES, 2025

[29] Mackerel (Scomber scombrus) stock advice in the Northeast Atlantic and adjacent waters, ICES, 2025

[30] Cod Conservation measures in the Irish Sea, DAERA

[31] Cod (Gadus morhua) stock advice in Division 7.a, ICES, 2025

[32] Cod tagging project in the Irish Sea, AFBI

2.4.4 Haddock

There is some data deficiency for haddock, and high bycatch with 49% of catch discarded as bycatch from the nephrops fishery. Catch peaked in 1998 at 4,874 tonnes and has declined to around 600 tonnes through 2000 to 2015 before a smaller peak in 2018 at 1,993 tonnes before declining to 102 tonnes in 2024. Reflecting this decline, recommended TAC has fallen year on year since 2021 from 3,371 tonnes to 586 tonnes in 2026. [33] With limited monitoring it is hard to say where this stock will trend in the future though a management plan is in place. [33]

2.4.5 Whiting

Whiting catch was high in the 1980s, peaking at 18,267 tonnes. Since then, catch has declined year on year with no recommended catch from 2001 onwards. This did not change through the 2000s with spawning stock staying very low. However, more recently spawning stock has begun to increase slowly suggesting some recovery and leading to a small catch of 200 tonnes being recommended in 2026, with careful management this increase in catch may increase. [34]

2.4.6 Sole

Sole catch was consistently above 1,000 tonnes from 1970 to 2000. However, after 2000 stocks began to fall, with ICES recommending no catch from 2007 and very low TAC agreed at 40 tonnes. From 2018 spawning stock has increased leading to some stock recovery and therefore to an increase of TAC to around 500 tonnes; this has remained broadly consistent with TAC set at 545 for 2026 and will likely remain so going forward with high spawning biomass. [35]

2.4.7 Plaice

[33] Haddock (Melanogrammus aeglefinus) stock advice in Division 7.a, ICES, 2025

[34] Whiting (Merlangius merlangus) stock advice in Division 7.a, ICES, 2025

[35] Sole (Solea solea) stock advice in Division 7.a, ICES, 2025

Plaice catch was between 4,000 to 6,000 tonnes from 1980 to 1990, since then it has undergone gradual decline until the present day. This is despite the fact that for much of this period post-2000, spawning stock biomass has been above MSY. However, in more recent years spawning stock biomass has fallen below MSY and partially in response suggested MSY has consistently fallen, from 5,640 in 2020 to 614 in 2026 and looks like it may remain low for the upcoming years with very low spawning biomass. [36]

2.4.8 Nephrops

Since the 1980s catch in the western Irish Sea has generally ranged between 6,000-8,000 tonnes. However, since 2017 catch has been more consistently around 6,000 tonnes, with catch in 2024 6,279 tonnes. This coincides with a declining stock size and has led to a significant reduction in the suggested TAC for 2026, though this may recover quickly. Previously TAC had been consistently around 10,000 tonnes but has now declined to 6,493 tonnes. [37] Other regions can also be fished for nephrops such as the east Irish Sea, which has also suffered declines, and the firths of Clyde and Jura where recommended catch has just increased to 6,080 tonnes. [38] Therefore, while regions of this fishery may be in temporary decline, boats can move to other regions with healthier areas, as each ICES functional unit is surveyed and managed separately.

2.4.9 Inshore Shellfish

There is less data surveying of shellfish stocks with 56% of stock status unknown and only 8% reaching good environmental status under UK regulations in the Celtic Sea. This compares to only 27% of quota fish stocks at unknown levels. Furthermore, there is insufficient data available to allow MSY-

[36] Plaice (Pleuronectes platessa) in Division 7.a, ICES, 2025

[37] Norway lobster (Nephrops norvegicus) stock advice in Division 7.a, ICES, 2025

[38] Norway lobster (Nephrops norvegicus) in Division 6.a, ICES, 2025

level stock assessments for some shellfish stocks of king scallop, velvet crab, and lobster. [39]

However, landing data suggests brown crab have declined since 2004 accelerating since 2015. [40] This has resulted in successive raises of minimum landing size changes, now set to 150mm and a ban on landing berried (egg carrying) females. [41] These changes are aimed at allowing brown crab to reproduce before capture, with ongoing monitoring continuing.

Velvet crab landings have remained mostly stable since 2008 at around 200 tonnes, though have declined in recent years leading to AFBI suggesting landings of no more than 146 tonnes. [42] 102 tonnes of European lobster were landed last year, the highest weight in a decade. Data suggests both males and females are overexploited and thus catch should be limited to 102 tonnes in 2026, though this is still above mean catch for the last decade. [43] King scallops are decreasing and at below average stock size with landings of no more than 437 tonnes suggested,[44] while Queen scallops have undergone little fishing in the past decade. [45] Periwinkles are hand gathered but currently we have little knowledge of the stock size and sustainability of this harvest as it is unregulated, though new regulations seek to better control this harvest. [46]

2.5 Pressures

Northern Ireland's marine fisheries depend on several stocks that are already depleted, and these will likely face additional pressures in the coming decades. Climate change is driving ocean warming, with Irish Sea temperatures having

[39] Commercial fish and shellfish - Marine online assessment tool, CEFAS

[40] Brown crab working group, 2024

[41] The Edible Crabs (Conservation) Regulations (Northern Ireland) 2020

[42] Velvet crab, Necora puber advice sheet 2026, AFBI

[43] European lobster, Homarus gammarus, advice sheet, 2026, AFBI

[44] King scallop, Pecten maximus advice sheet 2026, AFBI

[45] Scallop Stock Assessment, AFBI, 2022

[46] The Shellfish Gathering (Conservation) Regulations (Northern Ireland) 2026

risen by approximately 0.5°C in recent decades. [47] This warming is occurring alongside wider trends of acidification and deoxygenation across UK shelf seas. [48] Rising temperatures are expected to alter the size, abundance, and spatial distribution of many commercial species, with some stocks likely to shift towards cooler, higher latitudes. [49, 50] Future legislation may therefore need to anticipate changes in species composition and relative abundance within the Irish Sea.

Increasing temperatures also reduce dissolved oxygen levels, contributing to deoxygenation. In severe cases, this may inhibit growth rates in finfish, though research in this area remains emergent. [51] Acidification poses additional risks, particularly for shell-forming species; reduced calcification rates could have significant implications for Northern Ireland's shellfish sector. [52] Climate-driven increases in extreme weather and storm frequency may also elevate safety risks and operational costs for fishing vessels, disproportionately affecting the predominantly small-boat fleet operating from Northern Ireland's ports. [53]

Finally, many Northern Ireland fisheries operate within mixed-fisheries systems, where multiple species are caught together as bycatch e.g. haddock in ephrops fisheries. Changes in species distribution, abundance, or quota availability can therefore create management conflicts, as the most vulnerable stock within the mix effectively constrains overall effort. Climate-driven shifts may intensify these interactions, complicating quota-setting and requiring more adaptive management approaches.

2.6 Enforcement

[47] Irish Ocean and Climate Status Report, Marine Institute, 2023

[48] Irish Ocean and Climate Status Report, Marine Institute, 2023

[49] Temperature and Organism Size—A Biological Law for Ectotherms?, 1994

[50] Impacts of climate change on fisheries, 2006

[51] Fisheries, low oxygen and climate change: how much do we really know?, 2017

[52] Fisheries, low oxygen and climate change: how much do we really know?, 2017

[53] Northern Ireland Climate Change Risk Assessment, Climate Northern Ireland, 2024

Enforcement of Northern Ireland's sea fisheries relies on a combination of at-sea and on-shore monitoring. This monitoring is carried out by DAERA Fisheries Protection vessels, aerial surveillance, and port-based inspections, all aimed at ensuring compliance with quota allocations, gear regulations, marine protected area (MPA) measures, and wider obligations under the UK Fisheries Act 2020. Future legislation may shift toward an ecosystem-based approach requiring assessment of environmental pressures and cumulative impacts rather than solely policing catch limits. [54] Unlike the offshore fleet, a large proportion of the inshore sector consists of vessels under 12 meters, and DAERA is in the process of introducing mandatory inshore vessel monitoring systems (IVMS) for this fleet to improve compliance, monitor activity near MPAs, and strengthen traceability. [55]

3 Freshwater Fisheries

Northern Ireland's inland fisheries are managed by DAERA Inland Fisheries in all catchments outside the Foyle and Carlingford areas, and by the Loughs Agency within those cross-border catchments. Recreational angling requires both a rod licence and a permit/day ticket. Commercial inland activity is limited primarily to Lough Neagh (eel and coarse fish) and to a small, controlled fishery on Lough Erne. While freshwaters may be less commercially valuable there is a large recreational angling scene in Northern Ireland. In 2024, 26,381 rod licences and 19,571 day tickets and permits were issued for recreational angling. Commercially there were 65 eel licences, and 1,012 licences to fish for other freshwater species on Lough Neagh and Lough Erne. In addition, there are 212 freshwater fish dealer licences issued to the inland commercial sector. In combination, these fisheries bring in significant income locally. [56] [57]

[54] Fisheries and Water Environment Bill - Consultation Document, DAERA, 2025

[55] DAERA Response to IVMS consultation, 2022

[56] Fisheries and Water Environment Bill - Consultation Document, DAERA, 2025

[57] Written evidence submitted by the Lough Neagh Fishermen's Co-operative Society Ltd, UK Parliament, 2021

Recreational fisheries generally target the following:

Coarse fish: These are non-game fish including roach, bream, perch, and pike among others.

Game fish: In Northern Ireland these are Atlantic salmon and sea trout. Both these fish can migrate to sea, with some brown trout and all Atlantic salmon smolting and migrating to sea to feed before returning generally the following year. Brown trout can also remain within the river.

There are 11 native freshwater species in Northern Ireland: Atlantic salmon, brown trout, arctic char, pollan, European eel, river lamprey, minnow, perch, gudgeon, pike, and roach. [58] However, there are also many non-native introduced coarse fish species such as carp and rainbow trout.

3.1 Legislative Framework

Northern Ireland's inland fisheries are governed primarily through the Fisheries Act (Northern Ireland) 1966, which provides the statutory basis for DAERA's authority over the conservation, protection, and development of inland fish stocks. [59] This framework is supported by a suite of more modern legislation, including the Fisheries Regulations (NI) 2014 governing angling and commercial activity, the Eel Fishing Regulations (NI) 2010, and byelaws governing the Public Angling Estate and salmonid tagging requirements. [60, 61]

'The Loughs Agency is an agency of the Foyle, Carlingford and Irish Lights Commission (FCILC). It was set up as one of the cross-border bodies under the Belfast Agreement 1998 between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of Ireland [62]. The Loughs Agency's statutory basis comes from the Foyle Fisheries Act (NI) 1952,

[58] Species in Northern Ireland, DAERA

[59] Fisheries Act (Northern Ireland) 1966

[60] Fisheries Regulations (Northern Ireland) 2014

[61] Fisheries Public Angling Estate Byelaws (Northern Ireland) 2005

[62] Loughs Agency, DAERA

Foyle Fisheries Act 1952 (Ireland), Foyle & Carlingford Fisheries (NI) Order 2007, and Foyle & Carlingford Fisheries Act 2007 (Ireland). [63, 64, 65, 66] The Agency has powers to make secondary legislation covering angling, commercial methods, close seasons, and licensing of fishing engines. It uses these powers to enhance and conserve fisheries in the Foyle and Carlingford areas.

DAERA is currently progressing a new Fisheries and Water Environment Bill, intended to modernize and align Northern Ireland's inland fisheries management with the objectives of the UK Fisheries Act 2020, and introducing ecosystem-based and precautionary principles. [67] Together, these instruments are intended to form a framework enabling DAERA to regulate freshwater fisheries.

3.2 How are Freshwater Stocks managed?

Freshwater management has some overlap in management with marine management: it uses minimum landing sizes, and the precautionary principle, but does not have international oversight from ICES. Thus, freshwater management relies on stock information from local bodies (DAERA, AFBI). Where freshwater fisheries are predominantly recreational there are also additional features such as stocking of water bodies.

3.2.1 Recreational fisheries management

Recreational angling requires a separate licence to fish DAERA or Loughs Agency regulated waters, while permits are also required for public or club-controlled waters. DAERA manages 89 waters where it owns or leases the fishing rights. [68] In order to control and limit fishing pressure licences expire at

[63] Foyle Fisheries Act Northern Ireland 1952

[64] Foyle Fisheries Act 1952 Ireland

[65] The Foyle and Carlingford Fisheries Northern Ireland Order 2007

[66] Foyle and Carlingford Fisheries Act 2007

[67] Fisheries and Water Environment Bill - Consultation Document, DAERA, 2025

[68] Inland Fisheries, DAERA

the end of the season and must be renewed annually, while only rod and line or hand line may be used for angling. Other gear, such as bait nets, are tightly controlled, and some fisheries require barbless hooks. DAERA can also set bag limits (4 coarse fish except pike), species specific minimum size limits, and closed seasons for specific species. [69]

In the DAERA jurisdiction, the game fishing season is from 1 March until the end of October. The following exceptions apply: [70]

- Lough Melvin – 1 February to end of September.
- Upper and Lower Lough Erne and all tributary rivers – 1 March to end of September.
- River Bush and tributaries – 1 March to 20 October.

In fisheries outside the DAERA area, salmon and wild brown trout fishing seasons vary: [71]

- In the Foyle catchment, the salmon fishing season is from 1 April to 20 October.
- In the Carlingford catchment, the season is from 1 April to 31 October.
- In the Bann catchment and County Antrim rivers, the season is from 1 March to 31 October, except the River Bush where the season ends on 20 October.

For coarse fish such as pike, bream, roach, perch, tench, rudd, carp and rainbow trout fishing, there is generally no closed season.

Under DAERA, Salmon and sea trout angling is exclusively catch and release with the exception of Lough Melvin in County Fermanagh, Glenarm River (County Antrim), and Clady River (County Londonderry) where one to two salmon can be retained per licence. [72]

[69] Fisheries Regulations (Northern Ireland) 2014

[70] Angling regulations (rules), nidirect

[71] Angling regulations (rules), nidirect

[72] Fisheries Regulations (Northern Ireland) 2014

In the Loughs Agency area, salmon can be retained under strict conditions. [73] DAERA regularly undertakes enforcement to ensure these regulations are adhered to with regular boat patrols, licence checks, and seizure of illegal fishing nets. [74]

Stocks are assessed based on angling and commercial catch alongside regular netting surveys of deeper waters, and electrofishing of streams. However, many streams and lakes are rarely sampled, and sampling deeper sections is difficult making fully accurate assessment of stocks across the many complex freshwater habitats difficult.

3.2.2.1 Stocking

Stocking is the intentional release of hatchery reared fish into natural bodies of water to improve or restore fish populations, often to support commercial (e.g. eel and salmon) or recreational (e.g. rainbow trout) species.

DAERA runs the Movanagher Fish Farm which is used as a hatchery to rear fish for stocking. In March 2025, 29,500 brown trout stock were released into 18 bodies of water, while in December, 16,000 rainbow trout were stocked into seven bodies of water. [75] However, identification of invasive zebra mussels at DAERA's fish farm in 2023 has reduced stocking; currently stocking is only continuing while temperatures remain below 10°C (a temperature which stops reproduction of zebra mussels) to avoid spreading this invasive species. [76]

DAERA also operates a salmon hatchery on the River Bush. This involves harvesting fertilized eggs from adult salmon caught returning from sea and then raising these in controlled hatchery conditions. This resulted in the release of 70,579 salmon smolts in 2024, supplementing the wild population on this river. [77] However, hatcheries have been criticised as reducing the genetic variation

[73] Angling regulations (rules), nidirect

[74] DAERA Inland Fisheries Annual Report 2024

[75] 2025 fish stocking figures, nidirect

[76] Zebra Mussels and impact on fish stocking in the Public Angling Estate, DAERA, 2025

[77] DAERA Inland Fisheries Annual Report 2024

and competing with wild salmon, while being unsuccessful in creating self-sustaining populations. [78, 79, 80]

3.2.3 Commercial fisheries management

In terms of freshwater, only Lough Erne and Lough Neagh contain commercial fishing with commercial licences being required for both, as well as to sell freshwater fish to the public. These fisheries also have open and closed seasons, alongside minimum size and mesh sizes for commercial nets. [81] Lough Erne is only open for fishing when stock levels are known and can be sustainably harvested. [82] Additionally, there is stocking of Eel alevin (young) within Lough Neagh with over 900kg stocked in 2024 and 2025, though this has been complicated by the Windsor framework as is discussed below. [83]

3.3 Freshwater Stock Status

3.3.1 Atlantic salmon stock status

> Overall, Atlantic salmon stocks across Northern Ireland remain severely depleted, with only a small number of rivers meeting conservation objectives and increasingly precautionary management measures applied.

The DAERA Standing Scientific Committee on Salmon (SSCS) undertakes annual assessments of Atlantic salmon in Northern Ireland, categorising rivers as primary or secondary based on stock size and data availability. These

[78] Fisheries Management and Ecology, 2023

[79] Hatcheries' Role in Salmon Abundance Challenged by Potential Loss of Diversity, 2024

[80] "Nature's Little Helpers": A benefits approach to voluntary cultivation of hatchery fish to support wild Atlantic salmon (Salmo salar) populations in Norway, Wales, and Germany, 2018

[81] Guidance for Commercial Fishers on Lough Neagh, DAERA, 2021

[82] Lough Erne Commercial Fishing Permit Policy, DAERA, 2022

[83] NI eel industry failing to meet targets as Windsor Framework hampers ability to restock waterways | Belfast Telegraph, 2025

assessments draw on electrofishing surveys, fish-counter records, rod-catch returns, and Conservation Limit modelling.

Overall, Northern Ireland reflects the wider North Atlantic trend of long-term decline in adult marine survival. Returns have fallen sharply, from around 30% before 1997 to below 5% today, placing many stocks under sustained pressure. In this context, DAERA continues to manage mixed-stock coastal net fisheries for salmon and sea trout. The 2025 scientific advice again recommends maintaining the long-standing prohibition on coastal netting, as mixed-stock exploitation is inconsistent with international guidelines and insufficient surplus exists above conservation limits to permit harvesting. [84, 85]

A small number of rivers: Agivey, Clady, Melvin, and Blackwater exceeded their management objectives in the latest assessment. Two of these (Clady and Blackwater) were identified as having potential to move from catch-and-release (C&R) to a limited harvest, although this is contingent on sustained performance. By contrast, no harvestable surplus was identified in the 11 other primary rivers, see below. The Lower Bann, classed as a Mixed-Stock Fishery, remains subject to precautionary management to protect the weakest component stock.

Status of salmon stocks in primary salmon rivers of the DAERA area, assessment data available, and recommendations for harvest or catch and release angling for 2025. C&R = Catch & Release, HS = Harvestable Surplus. [85]

River	Adult Assessment Data	Juvenile Assessment Data	Attainment Management Objective	Status
L. Bann	Counter	Electrofishing	MSF	C&R
Main	Tracking	Electrofishing	No	C&R

[84] Atlantic salmon from the Northeast Atlantic ICES, 2023

[85] Standing Scientific Committee on Salmon: Advice on DAERA area salmon stocks 2025, AFBI, 2025

Blackwater	Tracking	Electrofishing	Yes	C&R
Sixmile	Tracking	Electrofishing	No	C&R
Ballinderry	Tracking	Electrofishing	No	C&R
Moyola	Tracking	Electrofishing	No	C&R
U. Bann	Tracking	Electrofishing	No	C&R
Clady	Counter	Electrofishing	Yes	HS
Agivey	Rod Catch	Electrofishing	Yes	HS
Bush	Trap	Electrofishing	No	C&R
Ballycastle	Rod Catch	Electrofishing	No	C&R
Glendun	Counter	Electrofishing	No	C&R
Glenarm	Rod Catch	Electrofishing	No	C&R
Shimna	Counter	Electrofishing	No	C&R
Melvin	Rod Catch	Electrofishing	Yes	HS
Erne	Counter	Electrofishing	No	C&R

Management measures have also tightened in response to emerging concerns. The Glenarm was reclassified from harvest-surplus to catch-and-release in 2024 following notably poor recruitment in 2020 and 2023. [85] Secondary rivers characterised by smaller and more vulnerable populations are managed more cautiously. They are monitored using semi-quantitative electrofishing, but no salmon fry were detected in 2024, suggesting these populations may rely heavily on straying from other systems and face elevated risk of collapse.

Salmon numbers are particularly low along the east coast, where multiple recent recruitment failures indicate sustained stock fragility. Evidence from Wales suggests no absolute threshold below which recovery becomes impossible; however, the further a population falls below its catch limit and the longer it remains there the lower the likelihood of recovery. [86]

In the cross-border Loughs Agency areas, returning adult salmon have declined by 63% compared with the five-year average. In response, the Agency has moved to full catch-and-release until 1 June 2026, after which anglers will be permitted to retain only one fish per licence (down from two) until 31 October. [87]

3.3.2 Sea trout and brown trout stock status

> Most brown trout populations in Northern Ireland show stable or improving recruitment, but several key rivers, particularly in southeast Antrim and key lake systems such as Lough Neagh and Lough Erne remain vulnerable and require continued precautionary management.

Although often treated as distinct species, sea trout and brown trout are different life-history morphs of the same species, which creates practical challenges for management and stock assessment. Eight sea trout rivers are monitored within the DAERA area, showing differing regional trends. Rivers in the Northern Glens (Ballycastle and Glendun) and County Down (Moneycarragh and Shimna) display long-term increases in juvenile trout recruitment, while mid-range rivers (Glenarm, Inver and Threemilewater) exhibit persistent declines.

Long-term data (>20 years) are available for the Glendun and Shimna, providing the most consistent record of sea trout juvenile production. Both rivers show overall increasing trends across the full time series; however, young of the year (i.e. fish born that year) recruitment declined in the 2024 surveys. When

[86] Standing Scientific Committee on Salmon: Advice on DAERA area salmon stocks 2025, AFBI, 2025

[87] Loughs Agency reduces salmon tag allocation for 2026 season, Loughs Agency, 2026

only the most recent decade (2015–2024) is examined, both rivers show a downward trend in juvenile abundance, indicating emerging pressures despite longer-term gains. The SSCS concluded that, given current data limitations and management uncertainties, a limited freshwater allocation of two sea trout (<40 cm) per angler per year is unlikely to compromise stock sustainability. Parallel to this, the Loughs Agency aims for an 80% catch-and-release rate to support stock resilience. [88] [89]

Commercial exploitation of sea trout has been prohibited since 2012, and recreational harvest has also been suspended. [90] However, a commercial fishery continues for potamodromous brown trout in Lough Neagh – fish that migrate between lakes but do not enter the sea. This fishery is regulated through the Lough Neagh Fishery Management Plan, which includes exclusion zones around river mouths, a minimum landing size of 35.5 cm, gear restrictions, and a closed season (with fishing permitted from 1 March to 19 August). Recreational fisheries for brown trout are also subject to conservation controls, including minimum landing sizes (generally 25.4 cm, with Lough Erne set at 30 cm), variable daily bag limits (typically four fish per day), and a closed season. [91]

Across Northern Ireland, brown trout recruitment appears to be increasing in around 70% of monitored rivers. However, the southeast Antrim rivers Glenarm, Inver and Threemilewater, consistently show declining juvenile recruitment and remain the most vulnerable. Within Lough Neagh, brown trout abundance has declined from 2016 to 2022, although this may partly reflect reductions in catchability rather than underlying stock collapse. In contrast, Lough Erne has experienced decline since 2010, followed by modest signs of recovery in 2022. [92]

[88] Standing Scientific Committee on Salmon: Advice on DAERA area salmon stocks 2025, AFBI, 2025

[89] Loughs Agency renews appeal for anglers to 'catch and release, Loughs Agency

[90] DAERA area Trout Report 2024

[91] DAERA area Trout Report 2024

[92] DAERA area Trout Report 2024

3.3.3 Freshwater Eel stock status

> European eel stocks across Northern Ireland remain critically depleted, with Lough Neagh the only remaining commercial fishery and strict conservation measures required elsewhere to prevent further decline.

European eel (*Anguilla anguilla*) populations are classified as critically endangered and have undergone substantial declines over recent decades. [93,94] In Northern Ireland, commercial harvesting occurs only within Lough Neagh and the Lower Bann system, targeting both *yellow eels* (immature, freshwater-resident eels) and *silver eels* (mature, outward-migrating adults bound for the Sargasso Sea). Current regulations prohibit the capture of eels under 40 cm, with an annually-set maximum size limit, though the 2026 update has been delayed allowing further engagement with stakeholders. [95, 96] A closed season for fixed-engine fisheries (such as weirs) runs from 16 December to 14 August, alongside additional gear restrictions. All fishing rights are held by the Lough Neagh Fishermen's Co-operative Society.

Historically, the Neagh–Bann system recruited 5 to 18 million glass eels annually, but this plummeted to around 0.75 million in 1983, mirroring declines across Europe. [97] Natural recruitment has remained below 10 million since, with a particularly marked downturn after 2000 and an average of just 0.8 million glass eels between 2007 and 2017. [98] The economic value of the fishery has

[93] Addressing the critical state of European eel stocks, EU, 2024

[94] Anguilla anguilla (European Eel), IUCN

[95] Publication of the 2026 eel catch limits and landing sizes, DAERA, 2026

[96] The Eel Fishing (Amendment) Regulations (Northern Ireland) 2025

[97] Written evidence submitted by the Lough Neagh Fishermen's Co-operative Society, 2021

[98] DAERA Digest of Statistics for Salmon and Inland Fisheries 2019

contracted significantly, falling from approximately £3 million to £1 million in 2021. [99] To counter these declines, the system has been annually stocked with glass eels since 1984, including 2.4 million in 2017. However, much of this stock came from the Bristol Channel, and imports from non-EU sources are now prohibited under the Windsor Framework because European eels are subject to a total import ban. Alternative European sources (e.g. France) remain available but are more costly and often supply late in the season.

Recent years have brought further pressures. In 2024, a major blue-green algal bloom forced the temporary closure of the fishery, while reduced eel fat content critical for successful migration and market quality, rendered many eels unsaleable on the European market.

Outside Lough Neagh, eel populations are less intensively monitored. The Lough Erne commercial eel fishery closed in 2010 following widespread declines, though limited and regulated glass-eel harvesting for stocking continues. [100] In the Loughs Agency jurisdictions (Foyle and Carlingford), stocks are considered severely depleted, consistent with the wider European collapse. Historical comparisons suggest the present Foyle eel population stands at just 3.38% of historical levels. [101] In response, the Loughs Agency employs stringent conservation measures: all eel capture except by rod-and-line is prohibited, and any eel caught must be released immediately, with sale banned to prevent further stock loss. [102]

3.3.4 Coarse Fish Stock Status

Coarse-fish communities in Northern Ireland show generally stable or abundant stocks in many monitored waters, though key lakes such as Lough Erne and Lough Neagh continue to

[99] Minutes Of Evidence Report, 2025

[100] Lough Erne Fishery Management Plan

[101] Historical change in the European eel population in the Foyle estuary, Northern Ireland

[102] The Foyle Area and Carlingford Area (Conservation of Eels) Regulations 2009

experience long-term shifts in species dominance and declines in bream and pollan.

Knowledge of coarse fish stocks in Northern Ireland remains uneven. While regular survey programmes operate on Lough Erne, Lough Neagh, and several additional waterbodies, many lakes and smaller tributaries are not monitored. This limits the availability of fine-scale data on stock status particularly in unsurveyed systems and constrains the development of ecosystem-based conservation approaches, where reliable long-term baselines are necessary. [103]

On Lough Erne, commercial pike fisheries continue, with survey results indicating broadly stable pike populations over the long term, though the 2022 survey reported a slight decline relative to 2019. The wider fish community has shifted considerably: perch now dominate in both abundance and biomass, following a marked increase over the past two decades. Roach, though still common, have declined proportionally and are now outnumbered by perch by roughly two to one. AFBI previously considered the feasibility of a commercial perch fishery, but the 2022 evaluation concluded that further analysis would be required before such a development could be supported. Bream stocks show a substantial long-term decline, with extremely low catch rates in recent surveys. Pollan remain present in Lower Lough Erne; however, unlike earlier years, such as 2016, surveys in 2022 do not indicate continued recovery, with pressures from invasive species still a concern. [104] [105]

Commercial coarse fish activity on Lough Neagh focuses on pollan, roach, perch and bream. Annual pollan and roach landings have at times exceeded 200 tonnes, though market demand for perch and bream remains low. Survey data show that perch, roach and pollan now dominate the species composition, with perch and roach firmly established as abundant introduced species. Bream persists at comparatively low levels. Recent trends point to shifting species

[103] Fisheries and Water Environment Bill - Consultation Document, DAERA, 2025

[104] Lough Erne Fishery Management Plan

[105] Assessment of fish stocks in Lower Lough Erne 2022, AFBI

dominance rather than uniform decline, with perch and roach showing seasonal variability across surveys. [106]

Beyond Loughs Neagh and Erne, available evidence suggests that coarse fish stocks in many smaller lowland still waters such as park lakes, ornamental lakes, and other managed fisheries are generally self-sustaining and often abundant. In the Hillsborough lake complex, AFBI recorded very high catches of roach and rudd alongside substantial tench, with multiple age classes indicating regular recruitment. [107] Longer-term surveys at Castlewellan Lake show a clear structural shift in the fish community, with marked increases in roach and a notable rise in perch (around 30%). [108]

In the Loughs Agency areas, coarse fish stocks appear locally stable in the limited lakes and canals where they occur. These waters support established populations of roach, bream and perch, with strict catch-and-release policies applied to maintain stock health. Year-round angling for roach and perch in both the Foyle and Carlingford catchments further indicates the presence of consistent, resident populations capable of feeding throughout the year.

3.4 Threats

Freshwater fish in Northern Ireland face increasing ecological pressure from a combination of deteriorating water quality, invasive non-native species, and climate-driven harmful algal blooms. The Northern Ireland Audit Office reports that lake and river ecological status has declined markedly, with nutrient pollution from agriculture and wastewater driving conditions that undermine fish recruitment and raise the risk of fish kills. [109] DAERA has similarly warned of the rapid rise of blue-green algal (cyanobacterial) blooms, especially in Lough Neagh and the Lower Bann, where excess nutrients plus warmer, more variable weather patterns have produced repeated toxic events that directly threaten fish

[106] Lough Neagh Fishery Management Plan, DEFRA, 2022

[107] Hillsborough Lake Survey, AFBI, 2020

[108] Castlewellan Lake Fish Survey, AFBI, 2021

[109] Water Quality in Northern Ireland's Rivers and Lakes, Northern Ireland Audit Office

survival and ecosystem stability. [110,111] Invasive species, identified by DAERA and the NI Invasive Species Strategy as one of the greatest threats to native biodiversity, continue to expand, with recent confirmations including quagga mussel, which can transform habitats and alter food webs, outcompeting native fish communities. [112] While Zebra mussels, already well-established in NI waters, further intensify these pressures by filtering out planktonic food resources, altering nutrient cycles, and exacerbating algal blooms. [113]

3.5 Comparisons between marine and freshwater fisheries

Freshwater fisheries in Northern Ireland are governed primarily through DAERA Inland Fisheries (and the Loughs Agency in the Foyle and Carlingford catchments). Management focuses on licensing/permits, seasons, bag limits, technical measures and (in some cases) stocking. This contrasts with marine fisheries where many key stocks are managed through ICES scientific advice, TACs/quota and shared UK-EU arrangements, alongside MPAs and gear controls. Data quality also differs: marine finfish stocks covered here generally have routine analytical assessments and MSY-based reference points, whereas inland coarse fish and several freshwater commercial/recreational stocks rely more on local surveys (e.g., electrofishing, counters, catch returns) with notable coverage gaps; similarly, inshore shellfish often lack formal MSY-level assessment and depend more on landings signals and technical rules. Despite these differences, common pressures cut across both systems, environmental change and cumulative impacts (warming, acidification and deoxygenation at sea; nutrient enrichment, harmful algal blooms and invasive species in freshwaters). Alongside this, there are challenges around monitoring, compliance and maintaining robust baselines for ecosystem-based management.

[110] Algal Blooms and Lough Neagh, RaISe, 2024

[111] Blue-Green Algae DAERA

[112] An Invasive Alien Species Strategy for Northern Ireland, DAERA, 2013

[113] Zebra mussels: the invasive alien species in Irish Loughs, RaISe, 2024

4 Conclusion

Northern Ireland's marine and freshwater fisheries face different governance and evidence conditions but share a common challenge: several economically and culturally important stocks are under pressure. Offshore and shared marine stocks are generally managed through international scientific advice and negotiated catch limits, whereas most inshore shellfish and many freshwater fisheries rely more heavily on local monitoring, technical measures and effort controls, often with weaker data baselines.

Across marine stocks highlighted in this paper, only a limited number show signs consistent with recovery in advice trends, while several remain below levels associated with long-term sustainability; in parallel, inshore shellfish and some freshwater species show pronounced evidence gaps that somewhat constrain confident stock assessment.

For policymakers, the forthcoming Fisheries and Water Environment Bill and associated reforms (including expanded monitoring and an ecosystem-based approach) may provide the primary opportunity to align management tools with these risks.