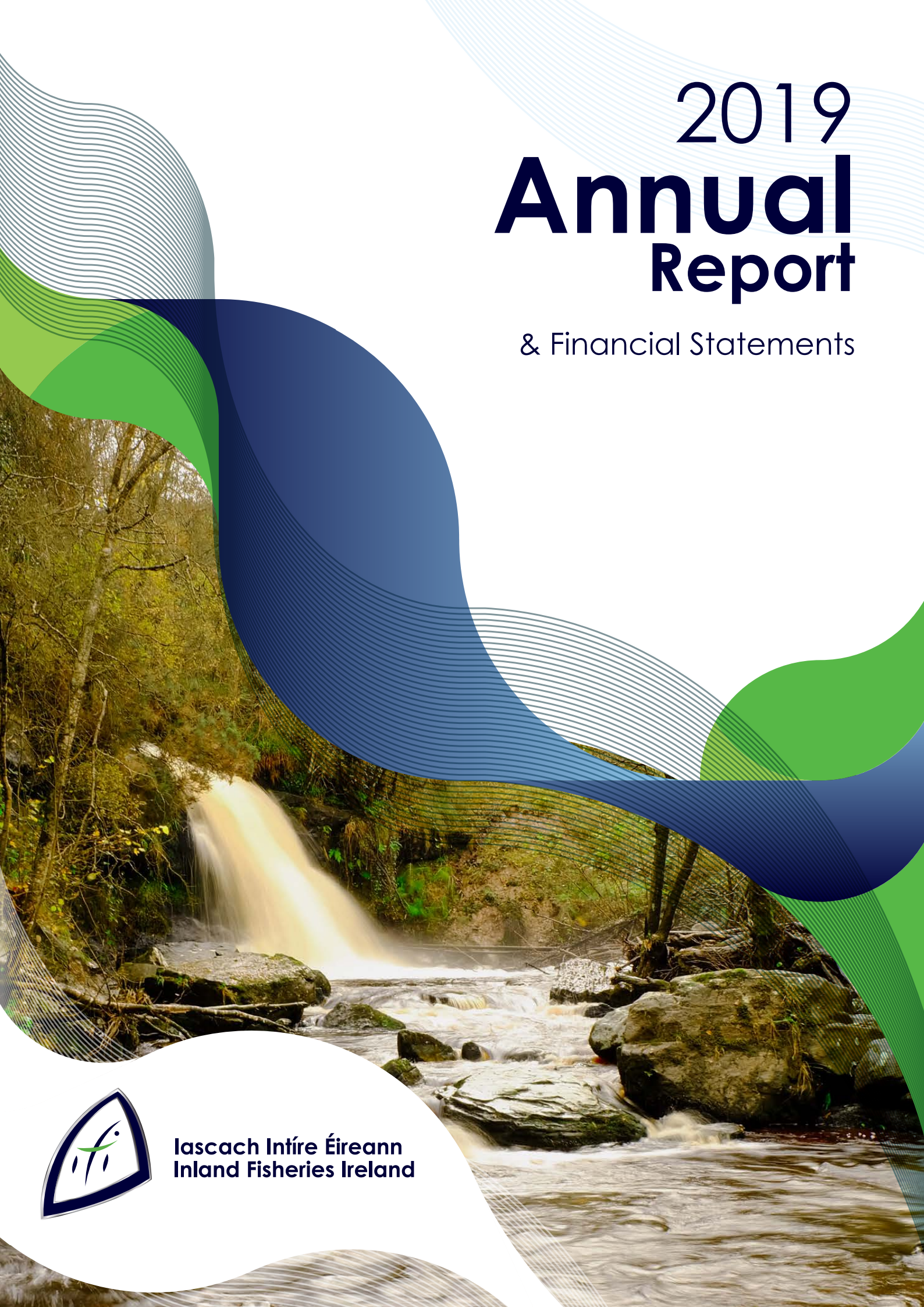
2019 Annual Report

& Financial Statements



Iascach Intíre Éireann
Inland Fisheries Ireland

Mission Statement

'To ensure that the valuable natural resources of inland fisheries and sea angling are conserved, managed, developed, and promoted in their own right to generate a positive return for the community and the environment.'

Principal functions of Inland Fisheries Ireland

Inland Fisheries Ireland is the statutory body responsible for inland fisheries in Ireland. It operates under the aegis of the Department of Communications, Climate Action and Environment (DCCAE).

The principal function of Inland Fisheries Ireland is set out under Section 7 (2) of the Inland Fisheries Act of 2010. This is the protection, management and conservation of the inland fisheries resource. The general functions of Inland Fisheries Ireland are to:

- Promote, support, facilitate and advise the Minister on the conservation, protection, management, marketing, development and improvement of inland fisheries, including sea angling
- Develop and advise the Minister on policy and national strategies relating to inland fisheries including sea angling, and
- To ensure implementation and delivery of policy and strategies developed as agreed with the Minister.

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Chairman's Introduction

It gives me great pleasure to present the 2019 Inland Fisheries Ireland Annual Report. The report focuses on the principal functions of Inland Fisheries Ireland, as set out in the Inland Fisheries Act 2010, which are the protection, conservation, and management of the inland fisheries resource.

A specific function of the Board is to advise the Minister on policies and strategies relating to inland fisheries including sea angling. The Act allows the Board to establish such sub-committees, as it considers prudent to assist the Board in the formulation of policies in specific areas.

The Board is accountable to the Minister for Communication, Climate Action and Environment and is responsible for ensuring good governance and compliance with the provisions of the Code of Practice for the Governance of State Bodies. The Board performs its statutory remit by setting out strategic plans and targets in its five-year corporate plan and in its annual business plan and accompanying budget.

The Board takes strategic decisions on key business issues and deals with the reserved functions as outlined in the 2010 Act.

The ordinary day-to-day management, direction and control of Inland Fisheries Ireland is the responsibility of the Chief Executive Officer (CEO) and the senior management team. The CEO and senior management team must follow the broad strategic direction adopted by the Board and must ensure that all Board members are regularly apprised of progress on strategic policy implementation and any significant risks likely to arise. The Board is also responsible for the maintenance of adequate accounting records and for the safeguarding of its assets and for the taking of reasonable steps for the prevention and detection of fraud and other irregularities.

The CEO is an ex-officio member of the Board of Inland Fisheries Ireland and acts as a direct liaison between the Board and the management team.

Protection staff continued their sterling efforts using novel and ever more efficient systems to protect our valuable fish stocks and habitats throughout 2019. During the period, the final five of the twelve new sea-going rigid inflatable boats (RIBs) became available to support and enhance protection patrols at sea.

The final tranche of National Strategy for Angling Development (NSAD) projects was progressed by the Projects Office in 2019. This strategy has enabled the investment of €2m of capital grant funding over five years in projects to facilitate access to angling.

The year 2019 was the International Year of the Salmon (IYS) and Inland Fisheries Ireland was to the fore in highlighting the precarious state of salmon stocks in Ireland and the world. Unfortunately, the statistics continue to show a continuing and alarming decline in stocks and while the limitation of exploitation and the promotion of catch and release are positive and beneficial, it is becoming increasingly obvious that conservation and preservation of the species will require measures targeted at regeneration. In this context Inland Fisheries Ireland continues to appreciate the concerns and inputs of organisations focused on the welfare of the iconic species and looks forward to working productively with them to achieve shared goals.

The 2016-2020 Inland Fisheries Ireland Corporate Plan will reach its conclusion in June 2020 and the responsibility for formulating its successor rests with the Board. The emphasis in the next phase will reflect the Inland Fisheries Ireland logo, 'it's all about the fish'. Protection duties will continue to be promoted and enhanced by the addition of modern technologies and devices and in tandem with this the energies and limited resources of the organisation will be targeted at the natural resource, conservation of the species and habitat preservation and enhancement. The five-year Corporate Plan and the annual business plans emanating from it will reflect, drive and direct this strategic priority. The Board is confident that this renewed focus on the resource will meet with stakeholder approval and it is hoped that angling groups will positively engage with Inland Fisheries Ireland and assist in its efforts to secure a significant and continuing funding stream to ensure the long-term sustainability of the resource.

The Board wishes to express its gratitude to the Department of Rural and Community Development for the award of €372,870 from the Dormant Accounts Fund to Inland Fisheries Ireland. This generous grant will fund the employment of six full time coordinators for the Education & Outreach Programme and the Novice Anglers initiative for a three-year period.

During 2019, Inland Fisheries Ireland made considerable strides to meet its carbon reduction targets. The addition of extra electric vehicles to the fleet and the provision of charging points at bases is a part of the ambitious Climate Action Plan.

I wish to express my gratitude and the appreciation of the Board, to the Minister of State for Communications, Climate Action and Environment, Seán Canney and to his courteous and dedicated officials for their unstinting support and commitment.

In conclusion I want to again express my appreciation and that of the entire Board (those members who retired and our new members) to the dedicated and committed staff who continue to facilitate the delivery of an efficient and professional fishery service.

Chairman
April 2020

Chief Executive Officer's Foreword

I am delighted to have the opportunity to welcome you to the 2019 Annual Report of Inland Fisheries Ireland, which sets out at a high level the work we have done in 2019. From the outset I would like to thank all our staff for their immense contribution in making 2019 as successful as it was in often challenging conditions.

From an environmental perspective it is clear that things are changing, and changing rapidly, whether it's extended periods of low water levels, elevated water temperatures or flooding events. All of these can and do impact on fish stocks. During 2019, we established an ambitious Climate Change Mitigation Research Programme (CCMRP) to gather knowledge on the impact of climate change on Ireland's fish species. The aim of this programme is to build an evidence-based assessment programme to assess the impact of climate change on the Irish fisheries sector in both freshwater and estuarine environments and to inform and build capacity for fisheries conservation and protection measures (including adaptation and mitigation strategies).

It is clear that programmes like this are going to inform all of the work being undertaken in Inland Fisheries Ireland and it will also be instrumental in feeding into the fisheries conservation works being planned by Inland Fisheries Ireland which will be a cornerstone of the next corporate strategy.

On the fisheries development side of Inland Fisheries Ireland there was a continued focus on governance, and particularly on how Inland Fisheries Ireland delivers fisheries development projects while ensuring that the highest financial and environmental governance standards are achieved.
This is an evolving field -as the case law associated with the Habitats Directive and other directives evolves, so too must our operational practices. It is imperative that any conservation works undertaken are both necessary and improve the fisheries habitat but also do not impact on any other habitats. In this regard there is an important distinction to be made between 'drained' channels which have been the subject of ongoing maintenance work and natural 'wild channels'; these habitats must be considered differently in terms of the works which can be done on them. The relationship between the physical structure of rivers and the habitat and water quality (hydromorphology) is a significant focus of the current cycle of the Water Framework Directive (WFD), and Inland Fisheries Ireland is leading in this developing area.

The year 2019 was the final one of the National Strategy for Angling Development NSAD, our flagship fisheries development strategy, and through its funding streams we have enhanced the levels of financial and environmental governance throughout the sector. The last tranche of NSAD funding will be allocated in 2020 and funded projects will likely take another year or two to be fully completed. While the strategy was not funded to the level originally intended, it nonetheless delivered a number of key successes. Almost €2million was invested in the sector in capital projects designed to improve angling infrastructure and access. Much of this work was undertaken by angling stakeholders and a range of other voluntary groups. In 2018, the Programme Management Office of the NSAD was established and this allowed IFI to centralise and streamline its grant application processes such that they are now all online. Also, we significantly improved our environmental assessment processes such that operational practice reflects the changes and developments in various European Union (EU) directives.

In 2019, Inland Fisheries Ireland continued on its path of improvement and modernisation and in this regard a number of internal systems and processes were implemented which provided valuable management information, improved our overall level of governance and actually decreased the amount of paperwork. Inland Fisheries Ireland introduced a new time management system (TMS) across the entire organisation which built on and improved on the existing TMS, and also a fleet management system, Fleetmatics, was introduced for all vehicles. The Fleetmatics system gives management total visibility on all elements of fleet operations and crucially the associated vehicle safety check app, and single vehicle maintenance agreement provides oversight and assurance on the standards of IFI vehicles.

This is important: vehicle maintenance and operations is one of the biggest cost centres for IFI, and running a large fleet of vehicles is also one of the biggest operational risks.

In 2019, the last of our new Delta 780HX rigid inflatable boats (RIBs) were delivered for use in coastal protection activities. The Delta 780HX 7.8m RIB has been developed as a highly capable platform for open water patrol operations. The craft is designed and built in accordance with the requirements of the P6 Passenger Boat Licence to operate further than three miles from baselines. This is an important development as not only is the RIB the best available boat in its class and because of the safety features and licensing arrangements, RIB patrols can now travel up to 12 nautical miles out to sea from baselines. These new Delta RIBs will allow us to operate single RIB patrols, which is also a significant operational efficiency. Almost immediately after going into service in 2018, the new Donegal RIB seized a significant amount of illegal netting off the north Donegal coast, which underscores the importance of having a strong presence at sea.

The year 2019, was nominated International Year of the Salmon (IYS) in a joint world-wide initiative of the North Atlantic Salmon Conservation Organisation (NASCO) and the North Pacific Anadromous Fish Commission (NPAFC). The objective of IYS was to raise awareness of what humans can do to ensure salmon and their habitats are conserved and restored across their range. Inland Fisheries Ireland held a range of IYS-related activities during the year to highlight the plight of salmon in Ireland and contribute to the overall awareness of the decline in salmon stocks. It is clear that we need to focus more on salmon conservation than exploitation.

As one of Ireland's core environmental agencies, Inland Fisheries Ireland is committed to leading by example in the area of climate action. Inland Fisheries Ireland has the necessary ambition and capacity to deliver and excel on our national obligations in respect of climate action in the context of the Strategic Framework for Public Sector Energy Efficiency, the National Mitigation Plan, the National Adaptation Framework and the ongoing process to implement the Government's Climate Action Plan (2019). During 2019, Inland Fisheries Ireland continued to consolidate its Environmental Management Systems (EMS) to help minimise the impact on the environment resulting from IFI activities and facilities. At the end of 2018, Inland Fisheries Ireland had a further 12.3 per cent saving to achieve the required 33 per cent reduction on 2009 baseline data. Final consolidated energy data for 2019, show that the remaining 'distance to target' figure for Inland Fisheries Ireland is 6 per cent. As the use of vehicles is one of the main sources of CO2 emissions in Inland Fisheries Ireland, we have taken a leadership role in the adoption of electric vehicles into our fleet and have also implemented a programme of installing charge points at all of our bases. In addition, a network of local and national green teams has been established to identify and pilot a range of other initiatives which will help to reduce our environmental footprint.

As part of the ongoing commitment to improving the delivery and governance of projects and services in 2019, we transitioned towards a programme management approach for delivery. This move towards programme management is one of the sub-actions advocated in the Department of Public Expenditure and Reform's development and innovation plan, Our Public Service 2020. In this regard 2019, was very much a learning and transition year and we are continuing to adopt and build on best practice for programme management into 2020 and beyond.

None of the wide range of work we undertook in 2019 could have been done without the support of our dedicated staff. I would like to pay tribute and thank each and every one of them for their loyalty and commitment to Inland Fisheries Ireland and for working towards the shared vision of achieving a sustainable and accessible fisheries resource that will continue to provide social, economic and recreational benefits for future generations.

Finally, I would like to thank Minister Canney and the Board of Inland Fisheries Ireland for the firm support they have given us throughout 2019, which has enabled the leadership team and staff to deliver on all of the activities outlined in this annual report. I also take this opportunity to renew our strong commitment to focusing all our efforts on our core role of protecting, managing and conserving Ireland's inland fisheries resource in the most efficient manner possible.

Chief Executive Officer
April 2020

Inland Fisheries Ireland: Board Members

Back row	
Fiona Walsh	(Appointed July 2019)
Bernadette Orbinski Burke	(Appointed July 2016)
Seamus Boland	(Appointed March 2019)
Michael McGreal	(Appointed March 2019)
Patrick Gibbons	(Appointed January 2016)
Marie Louise Heffernan	(Appointed May 2019)
Seán Coady	(Appointed November 2015)
Front row	
Dr Ciaran Byrne, Chief Executive Officer (ex officio)	(Appointed July 2010)
Fintan Gorman, Chairperson	(Appointed September 2013 & reappointed September 2018)
Professor Frances Lucy, ARC Chairperson	(Appointed March 2015)
Not in Picture	
Martin McEnroe	(Retired February 2019)
Niall Greene	(Retired June 2019)

Inland Fisheries Ireland: Senior Leadership Team

Dr Ciaran Byrne
Chief Executive Officer (and ex officio Board member)

Mr Pat Doherty
Head of Finance & Logistics

Ms Roisin Bradley
Head of Human Resources

Dr Greg Forde
Head of Operations

Dr Cathal Gallagher
Head of Research & ICT

Ms Suzanne Campion
Head of Business Development

Mr Brian Beckett
IFI Dublin (Eastern River Basin District – ERBD)

Mr David McInerney
IFI Clonmel (South Eastern River Basin District – SERBD)

Mr Seán Long
IFI Macroom (South Western River Basin District – SWRBD)

Ms Amanda Mooney
IFI Limerick (Shannon River Basin District – ShRBD)

Mr Francis O'Donnell
IFI Galway & Ballina (Western River Basin District – WRBD)*

Dr Milton Matthews
IFI Ballyshannon (North Western River Basin District – NWRB

* Dr John Conneely, retired as IFI Galway & Ballina Director in June of 2019

1. Protecting and Conserving Ireland's Fisheries Resource

Inland Fisheries Ireland is responsible for the protection, management and conservation of Ireland's fisheries resource, the fish and their habitats in all inland waterways and out to twelve miles from the coast. The species we protect include all freshwater fish species and migratory fish such as salmon, sea trout, eel, lamprey, Arctic char, and shad. We are also responsible for protecting and licensing wild oyster fishing, and through an agreement with the Sea Fisheries Protection Authority (SFPA) we enforce both bass and bluefin tuna fisheries legislation.

In addition to enforcing the provisions of the Fisheries Acts 1959 to 2017, we are empowered to enforce the Water Pollution Acts 1977 and 1990 when discharges to fisheries-sensitive waters lead to a deterioration in water quality and on occasion to fish kills. Our operational work to protect and conserve Ireland's fisheries resource involves:

- Protecting and safeguarding fisheries directly through a network of warrant-carrying field staff located all around the country who enforce regulations and byelaws in relation to fish and fisheries
- Monitoring water quality and ensuring that those responsible for pollution or fish kills are prosecuted
- Ensuring that environmental developments take account of the need to protect our fisheries and secure the future for fish.

Protecting and safeguarding fisheries

Our work in safeguarding our fisheries involves a wide range of activities using personnel with a range of different skills:

- We patrol rivers, lakes, coastal, estuary and sea areas to deter and prevent poaching
- We inspect recreational anglers and licence holders and check fish dealers and restaurants/hotels to ensure that they are achieving regulatory compliance
- We seize illegal items and items that have been used for illegal activity, including boats, vehicles, nets, rods and fish that have been caught illegally
- We prosecute people for breaches of fisheries and environmental legislation. For lesser offences we issue warnings and fixed charge penalty notices.

Our protection patrols

Each year, Inland Fisheries Ireland draws up plans to protect our fisheries. These risk-based plans address the risks to the stocks while also taking into consideration any risks that our field staff might face in carrying out their work. Fisheries cycles are very seasonal and so too are our protection plans, which are varied throughout the year to ensure that in deploying our staff we protect stocks when they are most vulnerable.

In addition to traditional boat, vehicle and foot patrols, our field staff now utilise personal watercraft, kayaks, all-terrain vehicles, bicycles and, more recently, drones. We also use advanced surveillance equipment including night vision scopes, infra-red heat-sensing scopes and enhanced optical surveillance that have proven instrumental in the apprehension of illegal operators.

We also use all forms of intelligence in planning and executing our patrols. We ask members of the public to use our 24-hour confidential hotline (1890 347424) to report any suspected pollution or illegal fishing.

About our field staff

Inland Fisheries Ireland has a field staff of around 180 warranted officers, all of whom have completed training appropriate to their area of activity, including boat handling and safety with water.

The field staff need to retain a significant level of physical fitness as walking over rough terrain in all weathers can be arduous. Staff are deployed in line with the needs of protection plans which may require working through the night and any day of the week. In 2019, we rolled out a comprehensive handbook setting out the full complement of activities and regulations that a field officer must be aware of.

Patrol activity in 2019

During 2019, our patrol staff dedicated a total of 157,980 hours to patrolling activities, as set out in Table 1.1. The number and breakdown of different types of patrol is shown in Table 1.2.

TABLE 1.1: Hours spent on anti-poaching patrols

	2018	2019
Lake patrols	31,030	33,730
River patrols	84,273	76,136
Sea patrols	6,507	7,186
Coastal/ estuary patrols	36,794	30,737
Bass patrols	13,955	10,191
Total number of hours	**172,559**	**157,980**

TABLE 1.2: Number of patrols by type

	2018	2019
Total vehicle and foot patrols	28,640	25,748
Boat patrols	807	917
Kayak patrols	187	154
PWC patrols	16	23
Quad patrols	21	28
Bicycle patrols	758	1,344
Air Corps patrols	16	4
Drone patrols	0	56
Total number of patrols	**30,445**	**28,274**

Salmon

Inland Fisheries Ireland dedicates significant resources to protecting Ireland's precious salmon stocks. This means protecting salmon through those parts of their life cycle that are under our care. Their early life stages (as eggs and juveniles) in the gravel of upper river reaches in winter are protected by staff where necessary. The parr and smolts in the streams, rivers and lakes and adults returning from sea over a year later are also afforded care and protection.

Deterioration in water quality can have a devastating effect on juvenile salmonids and as a consequence all pollution and fish-kill events in fresh water are pursued vigorously.

The adult returning fish are under the watchful eyes of our staff throughout their perilous journey from offshore in summer through the rivers and upstream to their spawning grounds. Every stage of this life cycle is protected from illegal activity, and the key challenge is to ensure that enough salmon survive to spawn in each river.

Throughout the summer and autumn months the rivers holding important salmon and sea trout stocks are patrolled. Any illegal activities detected are investigated and, where necessary, the individuals responsible are prosecuted.

We also undertake special initiatives to protect salmon at vulnerable times – for example, when large numbers of salmon enter rivers such as the Moy or other rivers where numbers have fallen from a harvestable surplus to catch-and-release angling only. Such initiatives can include high-profile and visible operations as well as covert operations requiring additional staff.

Field staff seizing a stake net from the tidal River Suir, Co. Tipperary

Bicycle Patrols

In 2019, we significantly increased the number of bicycle patrols, including electric bikes that enable staff to cover greater distances more quickly. Canal tow paths are particularly suitable for bicycle patrolling.

Air Corps and Navy support for patrols

During 2019, we also carried out just four air patrols with the Air Corps. The Cessna fleet has been withdrawn from active service, and we continue to use the Casa twin-engine offshore planes when available, but these are aged at this stage and are not regularly available to us.

We continued to work with the Navy on coastal patrols throughout 2019.

Deployment of new RIBs

In an effort to ensure illegal fishing at sea is eliminated or at least reduced to a very low level Inland Fisheries Ireland commissioned a fleet of offshore patrol RIBs – these were the first new RIBs delivered to the organisation in over 12 years and represented a very significant investment by the state. In 2019, we took delivery of 5 new Delta RIB maritime protection boats, bringing the national offshore protection fleet to 12. The new RIBs will be based at Cornamona and Oranmore in Co. Galway, Gormanstown in Co. Meath, Farnanes in Co. Cork and New Ross in Co. Wexford.

RIB patrol with illegal nets, Galway, July 2019

Sea trout

The sea trout stocks in the country continue to decline and are under threat. In particular, Ireland's most famous sea trout fishery, Lough Currane in Waterville, has been suffering very poor returns in recent years, especially of multi-sea-winter sea trout. Similarly, the sea trout stocks in Connemara and South Mayo which suffered a stock collapse in the late 1980s and early 1990s have never recovered to anything resembling pre-collapse levels.

As a consequence, it is particularly important to protect the remaining stocks. Many of these struggling sea trout fisheries are adjacent to marine salmon farm sites and in years when spring levels of sea lice are particularly high on caged salmon, the numbers of salmon and sea trout returning the following summer are reduced. We continue to monitor the return of fish to these rivers and sample any prematurely returning fish.

Drones

Eight members of Inland Fisheries Ireland's National Drone Team completed small, unmanned aircraft (SUA) training with the Civil Defence following final flight tests at Gormanstown, Co. Meath in 2019. These pilots are now licensed by the Irish Aviation Authority to deploy drones (as a component of protection or other activities) beyond normal regulatory limits and we are in the process of developing an application to the Authority for a Specific Operating Permission in this regard.

In 2019, we deployed drones in a number of cases, including an environmental investigation in Cork and in a case involving the seizure of illegal equipment that had been used for illegal fishing on the Quinn River.

We expect that our patrol teams will use drones more frequently in the future.

Drone patrol of the Clare River, June 2019

Char

The number of lakes in Ireland containing self-sustaining stocks of char continues to decline. Most recent losses are related to alien fish introductions into lakes that previously had a very poor native species diversity or a deterioration in the pristine water conditions needed to sustain a healthy char population.

A number of lakes in Connemara and Donegal have seen fish species that were not previously present become established and the juveniles of these fish actively compete with the wild char for plankton and macroinvertebrates. Our staff continue to monitor these lakes, while remaining aware that the introduced fish will inevitably lead to a suppression of the wild char stock – Lough Inagh in Connemara is a case in point.

Our fisheries inspections and compliance checks

Our inspection teams carried out regular spot checks on recreational anglers, salmon and sea trout licence holders and on commercial fishermen throughout 2019.

The purpose of these inspections is to ensure that anglers and licence holders are in compliance with all the terms of their permit or licence, including those relating to equipment, bag and size limits, and so on. In 2019, we carried out 34,307 such inspections, which are summarised in Table 1.3.

TABLE 1.3: Inspections of licence holders and anglers

	2018	2019
Inspections of commercial salmon and sea trout licence holders	2,069	881
Inspections of recreational anglers for licence and/or permit	15,674	15,437
Inspections of other anglers	17,321	15,375
Number of bass anglers checked for compliance with fisheries legislation and regulations*	2,461	2,614
Total number of fisheries inspections	37,525	34,307
Total number of fisheries inspections	**37,525**	**34,307**

Coarse fish

Coarse fish are exploited throughout the year as there is no longer a close season – there are, however, a few exceptions where all fishing may be prohibited at certain times of the year. Historically coarse fishing required very little protection as it was primarily carried out by visiting coarse anglers who all returned their catch. However, in recent years, these stocks have been subject to significant angling pressure with larger fish being taken for food, which is contrary to the current regulations.

Traditionally June saw the arrival of significant numbers of international coarse fish and pike anglers, some of whom encountered areas where previously unsafe stands and stiles had been removed in the past year. Areas such as the hot water stretch of the Shannon at Lanesborough is a focus of significant activity. There continues to be significant pressure on larger bream, which are being taken for consumption.

Warnings and fixed charge penalty notices

We issue warnings where anglers are in minor breach of regulations or perhaps just clearly ignorant of the regulations pertaining to a particular area.

Warnings are also issued to juvenile anglers who may be in breach of the regulations – and in 2019 we issued 425 such warnings or cautions. For more serious breaches of regulations, we issue fixed charge penalty notices (158 in 2019) - these are issued in lieu of prosecution, but if they remain outstanding after a given period we initiate prosecution for the original offence

TABLE 1.4: Number of cautions and fixed charge penalty notices issued

	2018	2019
Cautions issued to anglers	558	425
Fixed charge penalty notices issued	165	158

Eel

In 2008 all fishing for eels was ceased in line with the EU requirement to protect the stock of eels and restore outward biomass production to at least 40 per cent of historical levels. Unfortunately, eel stocks have not, as yet, recovered to their historic levels and these conservative protection measures have had to be extended.

In 2019, we implemented and managed a support scheme for former eel fishermen who were active in the industry in 2007 and had a history for fishing for eels in the five years up to 2007. This programme was established by the Department of Communications, Climate Action and Environment with the aim of assisting former eel fishermen to diversify into new activities and to exit the eel fishery permanently.

It is apparent that some illegal eel fishing continues despite the critically low stock levels. Eel nets continue to be located and seized in the Shannon catchment. Locating these nets is a resource intensive activity as eel nets are conventionally set on the bottom (fyke nets) and frequently do not have surface markers, making detection quite difficult and time consuming.

The silver eel season in the darkness of the autumn months was also a period of intense activity in known eel 'hot spot' areas. We maintained a high level of patrolling activity in these areas, and no specific illegal activity was detected. We are, however, concerned that some eels from the south of the country are making their way into Northern Ireland where there is a legitimate sales outlet.

Compliance checks

We also carry out spot checks of fish dealers and restaurants/ hotels/guesthouses to ensure that no illegally caught fish are being made available for sale or consumption.

In 2019, we carried out 807 checks, summarised in Table 1.5.

TABLE 1.5: Number of compliance checks

	2018	2019
Fish dealers checked	433	427
Restaurants/hotels/guesthouses checked	373	380
Total number of compliance checks	806	807

Bass

It is evident that illegal fishing for bass has been on the increase over the last few years. This may be associated with a limited recovery in the bass stocks since the prohibition on commercial fishing for bass in 1980. It may in part be associated with the warming of coastal waters off Ireland. During the year there was one very significant seizure of 29 bass – all caught on rod and line but substantially over the permitted number and some were below the permitted size. Bass are very slow growing and the minimum size for a bass to be retained is 42cm which would be a fish in the region of seven years old. Thus, the protection of juvenile bass is extremely important.

When the one fish a day bag limit for bass came into force there was a marked increase in bass angling – another clear indication that angling in Ireland remains very much focused on fishing for consumption rather than fishing solely for pleasure.

The incidence of bass nets being set from the shore continues to increase. These are easily set as they lie on the strand when set and can be deployed without a boat, and float as the tide rises and capture fish during the higher periods of the tide, leaving fish impaled in the net when the tide retreats. These can only be detected through regular shore-based patrols.

Illegal items seized in 2019

In the course of our patrols and inspections, we come across and seize a wide variety of illegal items as well as items being used for illegal purposes. In 2019 we seized a total of 788 illegal fishing items such as fishing rods, dinghies, spears, engines, and traps. We also seized 192 nets with a total length of 9,499m.

The number of items seized was on a par with 2018, but there was a significant decrease in the length of nets seized. This was as a consequence of the reduction in the length (not the number) of nets seized at sea. It is hoped that in 2020 with the full fleet of new seagoing RIBs operational for the entire period we will ensure that the reduction in offshore nets is maintained.

TABLE 1.6: Illegal items seized

	2018	2019
Nets seized (total length in 2019 was 9,499.48m)	266	192
Seized at sea	42	40
Seized in fresh water	147	95
Seized in estuaries	77	57
Fish seized	363	423
Rods seized	151	152
Other items seized	28	21
Total number of items seized	**808**	**788**

Oysters

Inland Fisheries Ireland continued to monitor the known oyster fisheries throughout the country, in particular those in Lough Swilly, in the bays around Mayo and Galway and in Tralee. Some development work was facilitated where a special authorisation was granted for the collection of undersized oysters which were then transferred to a specially assigned nursery area. It is hoped that this can lead to a healthy native oyster breeding stock being re-established in the nursery area.

Unfortunately, much of Lough Swilly is infested with pacific oysters (Gigas sp.) which have become feral in the bay. Elsewhere monitoring the activity of oyster picking on low water strands during spring tides was an important element of protecting the stock. The only legal method of taking oysters is by a licensed oyster fishing dredge, which is usually mounted on a boat. A number of scallop dredging boats were also detected with oysters on board although they did not have a licensed oyster dredge.

Fisheries offences and prosecutions

It is a feature of fisheries protection work that many nets are seized 'unattended'. However, where individuals are apprehended, we do pursue a prosecution. We operate a very strict protocol in relation to the procedures for undertaking a prosecution. Many of the fisheries cases relate to the use of nets in fresh water where a poacher has been caught 'red handed'. Convicted poachers are usually named in local newspapers, which serves as a good deterrent to others who read reports of the cases.

Prosecutions initiated and concluded in 2019

For more serious offences against fisheries and environmental legislation, Inland Fisheries Ireland initiates prosecutions, of which there were 89 in 2019. It takes some months to process the necessary paperwork and legal processes, so the prosecutions we take usually relate to incidents that occurred in the previous year. Table 1.7 shows the numbers of prosecutions initiated and concluded in 2019 and 2018.

TABLE 1.7: Number of prosecutions initiated and concluded

	2018	2019
Prosecutions initiated for fisheries offences	52	67
Prosecutions initiated for environmental offences	31	22
Total prosecutions initiated	83	89
Prosecutions concluded for fisheries offences	54	54
Prosecutions concluded for environmental offences	13	23
Total prosecutions concluded	67	77

Bass (29) seized from two boat anglers off the Waterford coast.

Bluefin tuna

In 2019, a scientific catch-and-release bluefin tuna fishery was permitted off the Irish coast as part of an international scientific programme carried out under special authorisation and with strict conditions attached – see Atlantic Bluefin Tuna Programme (Tuna CHART) on **page 54.** A total of 15 licensed sea angling boats were permitted to operate in the programme.

All skippers were required to attend a one-day training course, and our field staff carried out inspections of all angling gear and equipment to ensure their suitability for the programme.

We also carried out a total of 11 dedicated Delta RIB sea patrols over the course of the season. Some unauthorised vessels were encountered during the peak of the fishing season and we issued warnings to several anglers for unauthorised targeting or fishing for bluefin tuna.

Aggression towards our staff

In 2019, there was a further increase in the number of incidents of aggression encountered by our staff in the course of carrying out their work, and in some cases, knives were produced.

In the South East there were encounters with gangs on the river Slaney in the early part of the year; and in the second quarter, the Enniscorthy team seized 11 rods, issued 8 fixed charge penalty notices and issued 27 warnings to anglers. This higher level of risk associated with such behaviour means that we need additional resources to ensure that staff can carry out their patrols safely in this area. Some prosecution case studies are overleaf'

At **Drogheda District Court** on 18 June 2019, Judge Coughlan convicted and fined a man €100 on a first count (possession of a net) together with prosecution costs and expenses in the sum of €2,168 with six months to pay. In respect of a second count of 'refusing to give your own name and address when lawfully demanded', the individual was convicted and fined €100 with six months to pay.

At **Clonmel District Court**, a man was prosecuted by Inland Fisheries Ireland having pleaded guilty to the offence of angling for salmon during the closed season on the river Suir on 8 November 2018. The man was fined €1,200 in fines and costs and all his angling equipment was forfeited.

At a sitting of **Kilkenny District Court** two men were convicted of obstruction, assault and the illegal use of a net on the tidal river Barrow near St Mullins on 2 June 2017. One of the men was given community service and the other fined €500. The Judge also revoked the firearms licence from one of the men. The incident was very serious as a shotgun was produced by one of the men on the night and an Inland Fisheries Ireland vehicle was vandalised.

Crayfish

In 2019, Inland Fisheries Ireland staff continued to find crayfish traps which are removed and destroyed because of the risk they pose to the spreading of crayfish plague. The incidence of crayfish plague in Ireland has increased significantly in recent years despite the fact that no 'signal crayfish' have as yet been detected.

There is a suggestion however that some of these traps may have been used previously outside Ireland.

Indiscriminate deployment of traps for crayfish in the Grand Canal at Digby Bridge led to the suffocation of an otter as well as various coarse fish. More recently 'anglers' have been found baiting for crayfish and catching them in hand nets.

Water quality

Water quality is the single most important factor in ensuring that fish have a habitat in which they can thrive, and we carry out routine water quality inspections to assess levels of pollution in different habitats. It is our policy to prosecute organisations and individuals in relation to environmental offences where significant habitat damage or pollution have occurred, in particular where fish kills are involved.

Water quality inspections, 2019

In 2019, we carried out a total of 25,064 water quality inspections. The reduction in number from 2018 was partly due to a reduction in manpower in this area and also to the fact that the absence of drought in 2019 placed less pressure on the habitat.

Table 1.8 summarises the different types of environmental inspections we carried out in 2019.

TABLE 1.8: Number and type of water quality and habitat inspections

	2018	2019
Agricultural inspections	2,060	1,623
Industrial inspections	1,527	1,131
Wastewater and water treatment plant inspections	2,611	2,361
Civil engineering / infrastructure project inspections	2,599	2,189
Forestry inspections	995	834
Habitat inspections	18,862	16,926
Total inspections	**28,654**	**25,064**

Environmental checks in the Lough Sheelin catchment

Lough Sheelin has over the last 30 years been subject to significant pollution from municipal and agricultural sources which has impacted on fish stocks. The lake is currently performing well but following breaches to wastewater discharge licences it remains under significant pressure.

A significant number of farm inspections took place throughout 2019 in the Sheelin catchment including counties Cavan, Meath, Westmeath and Longford. All four counties exhibited a substantial number of potential threats to water quality. Five sewage treatment plants (STPs) in Ballyjamesduff, Oldcastle, Collinstown, Granard and Castlepollard were also monitored throughout the year.

During the early part of the year the persistently wet weather led to an increase in the issue of verbal warnings and warning letters in relation to water quality. The local authorities and the Environmental Protection Agency (EPA) both issued penalty notices for non-compliance with integrated pollution control (IPC) requirements.

Monitoring continued particularly in the spreading season and during extreme water conditions. Two algae blooms on the lake were reported in the year.

Prosecutions brought against Irish Water

Two convictions were secured in June 2019 in Cavan District Court against Irish Water in relation to Ballinagh STP and an attenuation chamber adjacent to Cavan Town River.

Following an investigation, it was discovered that untreated sewage was being discharged from the water treatment plant and at the pumping station further downstream at Ballinagh.

Judge McLoughlin fined Irish Water €3,000 and total costs of €4,679 were awarded to Inland Fisheries Ireland in relation to the first case.

An investigation in relation to the Cavan Town River incident found that a fish kill was caused by the release of sewage effluent into the river from an overflow culvert located under Farnham Street Bridge. Irish Water were again convicted and fined €4,000 plus costs of €4,346.

Irish Water STP pollution incident at Ballinagh River Co. Cavan

Irish water pollution incident in the Cavan Town River, Co. Cavan

Inland Fisheries Ireland prosecuted Irish Water on 24 October 2019 at Dublin District Court for the discharge of deleterious matter into the river Tolka on 18 September 2018. Hundreds of fish (including brown trout, lamprey, eels, stoneloach and stickleback) were killed when raw sewage was discharged into the river. Judge Anthony Halpin heard evidence from Inland Fisheries Ireland staff, outlining how they carried out a detailed investigation following a pollution report received from a member of the public. The investigation found that a significant fish kill had occurred over a 5km section of river, and this had been caused by the discharge of a large volume of untreated sewage from an overflowing main sewer line in the Huntstown area in Dublin.

Following legal argument, Irish Water entered a guilty plea. Judge Halpin fined Irish Water €1,000 and, in thanking Inland Fisheries Ireland staff for their work, emphasised the unique character of Dublin's urban rivers and the importance of supporting healthy fish populations.

Dead trout on the Tolka River observed by Dublin staff while investigating the fish kill

Investigating and reporting on fish kills

In 2019, Inland Fisheries Ireland recorded 20 fish kills, which was a significant and welcome reduction on the number recorded in 2018, in which the long summer drought had led to a high number of fish kills. In addition, a single pollution event in 2018 had resulted in the loss of some 14,500 fish. When this event is excluded, the number of fish killed in the 20 events in 2019 was on a par with the balance of fish kills in 2018.

A fish kill is recorded when our staff identify a significant loss of fish, which can arise from any one of a number of causes in their habitat - including agricultural run-off, industrial effluent, natural causes and other issues such as licensed discharges.

Our team of environmental officers specifically investigate such events and where authorised prosecute those responsible through the courts.

We always monitor known sources of licensed discharges as well as other 'hot spots' where pollution has occurred in the past. Reports from the EPA, indicate that from a fish habitat and water quality point of view the number of high-quality rivers and streams is continuing to decrease. Table 1.9 summarises the causes of the 20 fish kills reported in 2019.

TABLE 1.9: Fish kills by cause

	2018	2019
Total of reported fish kills	40	20
caused by agricultural practice	7	4
caused by industrial operations	2	2
caused by municipal works	8	5
other causes (disease, natural causes)	15	3
cause unconfirmed	8	6
Estimated number of fish casualties	**21,703**	**7,000**

Environmental protection

Inland fisheries Ireland undertakes a very significant environmental protection role throughout the country. Staff monitor all relevant planning applications to assess the potential effects that such development might have on the natural water resources and associated fish habitat. We also assess all EPA wastewater discharge licence applications and where necessary make submissions on these to ensure that water quality will not be compromised by any resulting activities. We work with other public bodies as well as developers, contractors, and consultants on areas such as the following:

- Flood relief schemes
- Road infrastructure and bridge maintenance
- Water and wastewater works
- Forestry, wind farms and quarries
- Sludge hub site selection methodology.

Flood relief schemes in 2019

During 2019, Inland Fisheries Ireland worked with the Office of Public Works (OPW), local authorities and associated contractors to ensure protection and conservation of the fisheries resource on a number of multi-annual flood relief schemes and other flood relief/defence projects. Where possible we seek to replace any lost habitat with additional measures as part of the drainage programmes. Major flood relief projects we worked on in 2019 included:

- Whitechurch Stream flood alleviation scheme (Co. Dublin)
- Dunkellin River and Aggard Stream flood relief scheme (Co. Galway)
- Fermoy Weir (Co. Cork)
- Cor River flood alleviation scheme (Co. Monaghan)
- Dodder River flood alleviation scheme (Co. Dublin)
- Enniscorthy River flood relief scheme (Co. Wexford)
- Poddle River flood alleviation scheme (Co. Dublin)
- Bandon River flood relief scheme (Co. Cork).

Dunkellin River and Aggard Stream Flood Relief Scheme

Inland Fisheries Ireland undertook consultation with Galway County Council regarding a programme of channel maintenance works on the Dunkellin Drainage District between July and September 2019. These works were undertaken in accordance with the Council's statutory responsibility to maintain arterial drainage districts under its control.

We also advised the Council on the replacement of a former stone arch bridge over the Dunkellin River downstream of Craughwell with a clear span structure. The original bridge collapsed in September 2018 during the Dunkellin flood relief scheme works.

Under the programme the fish counter on the river is to be reinstalled at an agreed location downstream of Rinn Bridge. This work is scheduled for the summer of 2020.

Road infrastructure projects, bridge maintenance, replacement and restoration

In 2019, Inland Fisheries Ireland continued to offer expert assistance in protecting the fish and their habitat in the context of significant national and local infrastructural development projects, including on the following projects:

- National bridge maintenance programmes
- Large number of culvert replacement programmes
- Road diversions and town by-passes
- N4 Collooney to Castlebaldwin road project (Co. Sligo)
- New Ross bypass (Co. Wexford)
- Enniscorthy bypass (Co. Wexford).

Our environmental staff continue to liaise with a huge range of infrastructure developments under roads and bridges programmes, both big and small. We have long been advocating the use of box culverts instead of pipes and of ensuring that water remains present in the culvert by dropping the installed floor level below the existing stream bed. In addition, we advocate the use of two-stage culverts so that, if necessary, the low flow in the culvert is condensed into the central section. Such measures help ensure that the structure is accessible to fish and other wildlife.

Infrastructure Repair Meelick Weir – Shannon

The upgrading of Meelick Weir is a two-year project which was commenced in 2019 by Waterways Ireland. Detailed plans were submitted to Inland Fisheries Ireland, and following this we have monitored the works closely and liaised with contractors and consultants.

We carried out inspections of work completed in 2019 to ensure that the site was made safe over the winter period and that it would not give rise to any pollution issues. Particular attention was paid to existing anti-scour protection and to assess whether it would be possible to put in additional anti-scour measures this year.

Works at Meelick Weir on the Shannon River (left) and nearing completion of the 2019 works (right)

Working with Donegal County Council to improve fish access

Two river crossing structures with fish passage issues were addressed by Donegal County Council at Craighnahorne culvert over the Straid River and Drumfries culvert over the upper Crana River (Owenboy River).

Both locations had been identified as barriers to fish movement upstream and following the works they now allow for the free passage of all species at all water levels. The Council undertook the works from their own budget, and in both cases Inland Fisheries Ireland advised on timing and methodology.

Craighnahorne culvert before (left) and after (right) works

Drumfries culvert before (left) and after (right) works

Water and wastewater infrastructural works

In any case where water or wastewater infrastructural works have the potential to impact on the fisheries resource, Inland Fisheries Ireland engages with contracting authorities and their consultants to ensure the protection and conservation of the fisheries resource.

During the year, a significant number of wastewater treatment plants were upgraded. Some of those works that took place in counties Galway, Mayo and Sligo are described below.

Luimnagh Water Treatment Plant, Ballindiff Bay, Lough Corrib

In 2018, Inland Fisheries Ireland carried out an investigation into the standards of the Luimnagh Water Treatment (Abstraction) Plant and its discharges back into Lough Corrib. Following this, Irish Water agreed to incorporate an additional settlement tank into the final stages of the water treatment process in February 2019. The results of a subsequent water quality sampling programme indicated that this additional process has improved the quality of the water discharging from the plant into Lough Corrib. We have also asked Irish Water to investigate legacy issues relating to discoloration/possible sludge deposits evident in the reed beds of Ballindiff Bay adjacent to the discharge point.

Sligo and Mayo Wastewater treatment plants

Construction commenced or continued on five wastewater treatment plants (WWTP) at Grange, Tubbercurry and Ballinafad in Co. Sligo and at Charlestown and Foxford in Co. Mayo. Tubbercurry and Grange were commissioned in 2019 and are expected to contribute to significant improvements to water quality in the Grange River and Maiden River. Inland Fisheries Ireland staff carried out consultations, site inspections and method statement reviews with construction contractors throughout the year.

Grange River at WWTP site early 2019 (left) and (right) on completion

Forestry, wind farms and quarries

Inland Fisheries Ireland takes an interest in forestry and on how activities such as forestry planting, thinning, fertilising, and harvesting might affect water and fish habitat quality. In 2019, we saw the recommencement of aerial fertilisation of forestry stock in the West. We do not favour this practice as the indiscriminate spreading of fertiliser by helicopter leads inevitably to fertiliser pellets entering streams and channels in the forest, from where the nutrients are then transported directly into neighbouring lakes and water courses.

Quarrying activities continue to cause problems with fisheries habitat, as the washing of gravels and crushing of stone can lead to significant pollution of rivers. Most quarries are monitored by our staff on an ongoing basis.

The recent proliferation of windfarm developments has also significantly increased our workload in assessing such projects.

Sludge hub site selection methodology consultation

Irish Water is proposing to use sludge hub centres as centralised facilities for the effective treatment of wastewater sludge prior to its reuse or disposal. These centres are part of Irish Water's National Wastewater Sludge Management Plan, which aims to ensure the safe and sustainable management of sludge nationally. Inland Fisheries Ireland has made contributions to the methodology by which the sites for sludge hub centres around the country are selected for development.

We have also expressed concerns in relation to the land spreading of sludge and its potential to cause contamination of lands, groundwater and surface water with excessive nitrogen, heavy metals and other pollutants, particularly where the sludge is derived from industrial waste sources. Such contamination could have significant long-term negative impact on the fisheries resource.

In the case that the location of the sludge hub will ultimately determine the location of sludge disposal, then the suitability of the local environment to receive the sludge must be considered. This assessment should include consideration of soil types, ground water vulnerability and catchment compliance with the WFD as well as the potential impact on fisheries.

Barriers surveys in the North Western RBD

A major focus of Inland Fisheries Ireland staff during off-peak periods of 2019 was the completion of catchment-based barriers assessments of several key fisheries throughout the NWRBD. Barriers assessment surveys entail initial desktop studies by our research staff to identify potential barriers from maps and existing data. We then follow up the desk research with walk-over surveys conducted by NWRBD staff to examine and measure the barriers and potential barriers, either man-made (e.g. drains, bridge aprons) or natural (e.g. waterfalls, bedrock), and to capture the relevant data on mobile digital devices on site. Once barriers are located, they are photographed, measured and assessed as to their impact on different species of migrating fish or eels.

A number of joint workshops were held in Co. Donegal between our research staff and our NWRBD staff to consider the barriers assessments completed in the region and to familiarise staff with use of new digital tablets for barriers assessments.

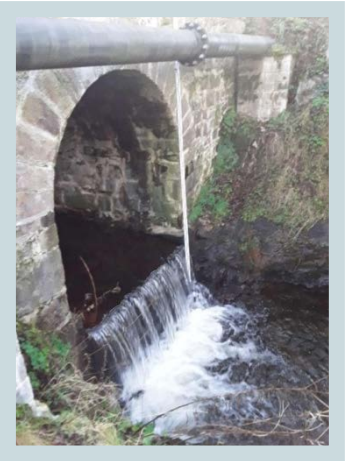
A key catchment for which barriers assessments have recently been completed is the river Drowse / Lough Melvin system. Ballyshannon staff inspected a total of 252 potential barrier sites, of which 31 were confirmed as barriers to fish migration.

TABLE 1.10: Potential Barriers/Sites visited measured to 31 December 2019

Weirs	
Culvert/bridge aprons	18
Waterfalls (Rock /bedrock obstruction)	9
Total barriers identified, out of 252 sites visited	**31**

Of the 31 barriers, 6 were previously unknown and were discovered by desktop studies of ordnance survey maps and walk-over surveys of tributaries and headwaters.

A summary of the overall number of potential barriers to fish migration in the NWRBD and the number and type of those measured, recorded and confirmed as barriers is shown below in tables 1.11 and 1.12.



Weir on Gubnageer stream, just upstream of confluence with the Ballagh River

TABLE 1.11: Status of potential barriers in the NWRBD

	Number	% of total
Desk survey complete, no further research required	2,212	29.5%
On-site assessment carried out - more detailed measurement required	217	2.9%
Desk survey not yet complete, under review	5,408	67.4%
Attempted access to site not successful	14	0.2%
Total	**7,491**	**-**

TABLE 1.12: Surveyed barriers (structure type)

Culvert/bridge apron	135
Weir	43
Ford	2
Sluice	1
Rock/bedrock obstruction	86
Total	**267**

Barrier surveys have been carried out to date on the following rivers: parts of the Upper Erne (Annalee-Dromore, Glenfarne), Duff, Drowse, Eany, Oily, Stragar, Crana, Ray, Tullaghobegley, Owenea, Owentocker and Bracky and Duach.

Inland Fisheries Ireland: Climate Action Framework

The Intergovernmental Panel on Climate Change (IPCC) warns of the serious and irreversible consequences of global warming if we do not enact 'rapid, far-reaching and unprecedented changes in all aspects of society'. Climate change is one of the principal threats to biodiversity, and to the structure and functioning of ecosystems, and Inland Fisheries Ireland has put together a Climate Action Framework to do what we can to meet these challenges.

We are one of Ireland's core environmental agencies, and we are committed to leading by example in the area of climate action. We also have the ambition and capacity required to meet our obligations on climate action within the context of the Strategic Framework for Public Sector Energy Efficiency, the National Mitigation Plan, the National Adaptation Framework and the ongoing process to implement the Government's 2019 Climate Action Plan.

Inland Fisheries Ireland is obliged to play its part in helping Ireland meet its national carbon reduction targets - a collective target to reduce CO2eq. by 30 per cent and to improve energy efficiency by 50 per cent by 2030 with a view to achieving carbon neutrality by 2050. As a public body, we are also required by Government to develop and begin implementation of a tailored Climate Action Mandate by the end of 2020, and this process is under way.

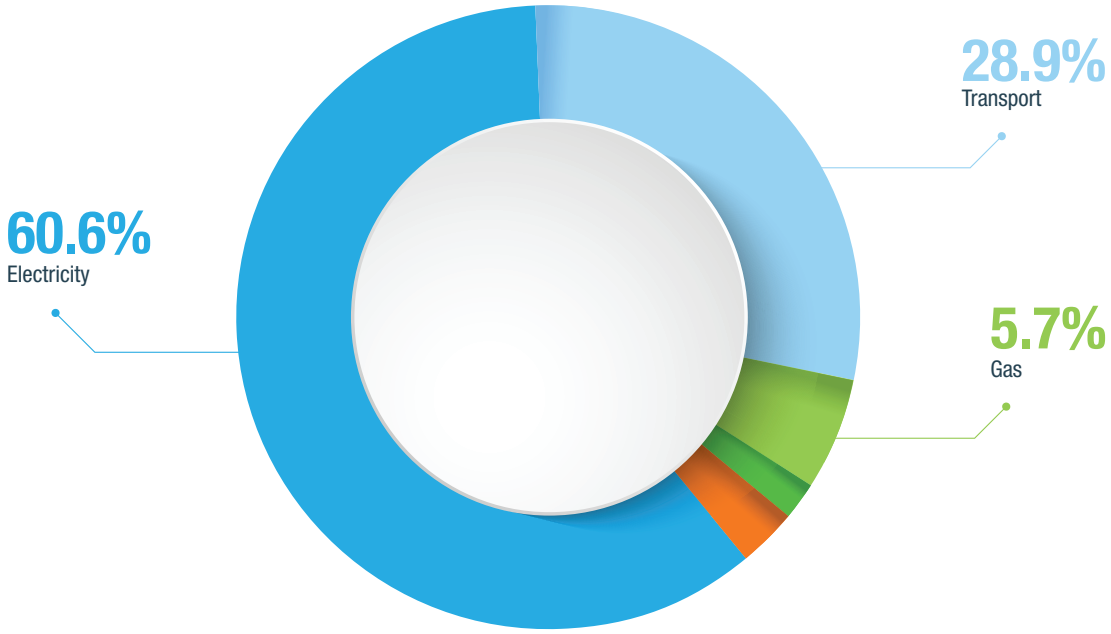
Reducing transport energy

Transport energy accounts for approximately 60 per cent of all Inland Fisheries Ireland's energy consumption. This reflects our mobile workforce who travel on a daily basis to carry out their duties. Throughout 2019, we continued with our change programme in the area of fleet management including:

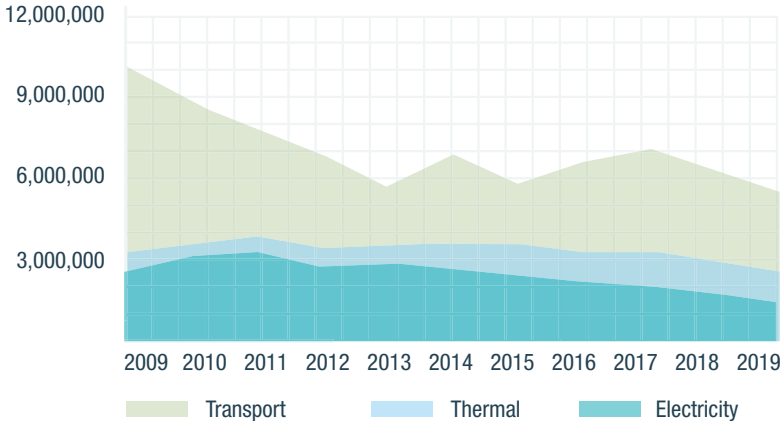
- Ongoing rationalization of the fleet to remove carbon-intensive vehicles, replacing end-of life fleet vehicles with low or zero-emission variants - our fleet now includes eight fully electric vehicles, and in 2019 we procured 55 new vehicles with a reduced carbon profile.
- Increasing our network of electric vehicle charging points - installation is now complete at Citywest and Mullingar and is under way nationally at other locations.

An Taoiseach, Leo Varadkar, Minister for Communications, Climate Action and Environment, Richard Bruton, and Minister of State for Natural Resources, Community Affairs and Digital Development, Seán Canney with IFI staff members and some of the new electric vehicles.

Enery Consumption 2019 (TPER)



Energy Consumption Since Baseline (TPER)



FI energy consumption trends 2009 (SEAI reporting baseline year) to end 2019

Since 2017 we have achieved net savings of 159,117 Kg CO2 in our fleet operations, as shown in the table below. The approximate equivalency of CO2 is calculated on the basis that fuel used is diesel.

Carbon equivalent savings in IFI's vehicle fleet, 2017 to 2019

	2017	2018	2019
Diesel used (litres)	423,415	393,438	372,380
Kg CO_2	1,134,752	1,054,413	975,635
Kg CO_2 saved	-	80,339	78,778 (~7%)

Climate Action in IFI – progress in 2019

At the end of 2018, the Sustainable Energy Authority of Ireland placed Inland Fisheries Ireland's 'gap to target' for reduction in energy by 2020 use at 12.3 per cent. In 2019 we put in place a series of intensive actions to address this gap and achieve energy savings. In parallel, we developed mechanisms to support staff-led initiatives in the broader area of climate action. Headline items included an energy auditing programme of property portfolio and the establishment of our national Green Team network.

Our Green Teams are key to how we make the necessary collective positive change to reach our energy reduction goals (33 per cent reduction from a 2009 baseline) while reducing our environmental footprint. Our Green Team network consists of one local team per RBD, a cross-divisional Citywest team and a national team representing all local teams. Energy, water conservation, eco-product and biodiversity projects were identified and implemented nationally.

Among the green initiatives we took were attic insulation at a number of locations, procurement of electric vehicles, installation of external building cladding, energy monitoring and smart building systems, window and door upgrades, e-bike trials and procurement, telematics data management, distribution of recycling bins, heating system upgrades, a keep-cups project, biodiversity programmes at IFI properties, and the installation of solar photovoltaic systems installation.

SEAI recently published its 2019 energy data confirming that Inland Fisheries Ireland has now achieved 29 per cent of our target energy savings, with a 6 per cent improvement to make over 2019 energy figures.

Next steps on climate action

IFI remains committed to optimising the sustainability and efficiency of property, fleet, waste, water management and green procurement regimes. Among the measures for 2020 are:

- Finalisation of our Climate Action Mandate
- Ongoing development and support of national and local Green Teams
- Adoption of carbon abatement measures at no (overall lifetime) cost
- Reporting of emissions and sustainability, resource efficiency and biodiversity activities
- Delivering a green procurement approach - carbon pricing and climate criteria in public tenders
- Facilitating employees in adopting lower carbon lifestyles (workplace travel planning)
- Seeking collaboration with sister agencies, suppliers and service providers in joint decarbonisation initiatives
- Ongoing digitisation of paper-based processes
- Ensuring policies and practices do not lock Inland Fisheries Ireland into high-carbon pathways and the carbon-proofing of major decisions and programmes on a systematic basis, moving over time to a near-zero carbon investment strategy (property procurement programme)
- Cultivating and actively participating in partnerships with stakeholder groups who have as their goal the protection and conservation of biological diversity, improvement in use of resources and reduced climate impact.

2. Research: Developing knowledge to inform action

All of Inland Fisheries Ireland's operational work in protecting and conserving Ireland's fisheries resource is underpinned and supported by evidence-informed research that helps us build accurate knowledge about our fisheries and their habitats. Our research effort ensures that we have a thorough understanding of the challenges we face and that we can develop appropriate responses, whether these are operational guidelines, infrastructural works, or measures to mitigate known environmental pressures.

First and foremost, our researchers are scientists whose work is based on proven methodologies, rigorous scholarship, and strong commitment to the welfare of our fisheries and the environment and habitats that sustain them. They are acknowledged internationally in their specialist fields and their collaboration in international programmes is regularly sought after.

Research highlights for 2019

Our research activity covers a wide area in many different fields of work and on a variety of species, habitats and environments.

In many cases different projects are interconnected and work from one project feeds into or supports others.

- **National Research Survey Programme – Lakes and Rivers (NRSP-L&R)** - a wide-ranging programme covering individual fish species, habitats, invasive plants, surveys of individual lakes and rivers, and also meeting some of Ireland's obligations under the WFD.
- **Work focused on habitats** – particularly in relation to the EU's Habitats Directive, and also including specific projects on lamprey and migratory fish
- **Hydromorphology projects** – projects that consider the relationships between communities of fish species and their physical habitats
- **National eel monitoring** – ongoing research and monitoring of Ireland's eel population
- **Salmonid research** – a range of research and advisory projects relating to wild salmon and sea trout
- **Sport fish research** - including studies on particular species such as bass, blue fin tuna and elasmobranchs.

National Research Survey Programme (NRSP)

The main functions of the NRSP-L&R team are to provide field support and expertise in sampling methodologies to a number of research programmes. Its work includes:

- Meeting Ireland's fish monitoring obligations under the EU's WFD
- Conducting river and lake surveys
- Carrying out research and monitoring of brown trout, coarse fish and pike in lakes and rivers
- Promoting the recovery of salmonid populations in the Owenriff catchment
- Building an evidence base in relation to the impact of climate change on freshwater and estuarine fish species in Ireland
- Learning more about invasive species (including *Lagorosiphon*) and how to control them.

The work we did in each of these areas in 2019 is outlined below.

Water Framework Directive - monitoring fish in lakes and rivers

In 2007, Inland Fisheries Ireland began a fish monitoring programme to assess the health of Ireland's rivers, lakes and estuaries/ lagoons. This work is necessary to fulfil the requirements of the EU's WFD, which was transposed into Irish legislation as S.I. No. 722 of 2003). The surveys were conducted using a suite of European standard methods. The comprehensive three-year rolling fish monitoring programme encompasses over 300 water bodies, (river, lakes and transitional water bodies such as estuaries and lagoons). Information collected in the surveys is used to assign an 'ecological status' to each water body, ranging from high status to bad status.

Since 2015, the NRSP-L&R team has had responsibility for WFD fish monitoring in lakes and rivers only, but also provides support in the form of staff and expertise to the WFD fish in the transitional water (TRaC) survey programme. Under the WFD monitoring programme in 2019, 7 lakes and 13 river sites were surveyed and assigned fish ecological status. In addition, the team also calculated the fish ecological status for the 9 lakes and 220 rivers surveyed under other Inland Fisheries Ireland programmes relating to brown trout, coarse fish and pike, Arctic char and climate change research programmes.

Reports for all water bodies surveyed in 2019 will be published in due course on the Inland Fisheries Ireland and WFD fish website (**www.wfdfish.ie**).

River surveys in 2019

A total of 233 river sites were surveyed during 2019 - this was done for a variety of purposes, including brown trout research, WFD, and so on. A catchment-based approach to electrofishing surveys was undertaken in 2019 and surveys were made on rivers flowing into Loughs Carra, Corrib and Mask. Catchment-wide surveys were also carried out on the rivers Liffey and Bandon.

Twelve fish species including sea trout were recorded in river surveys in 2019. No fish were recorded at six sites. Brown trout was the most common species and was recorded at 91 per cent of sites, followed by salmon (29 per cent), three-spined stickleback (22 per cent), minnow (21 per cent), European eel (18 per cent), stone loach (41 per cent), pike (6 per cent), lamprey (3 per cent), perch (6 per cent) and roach (1 per cent). Sea trout and gudgeon were recorded at one site each (<0.5 per cent).

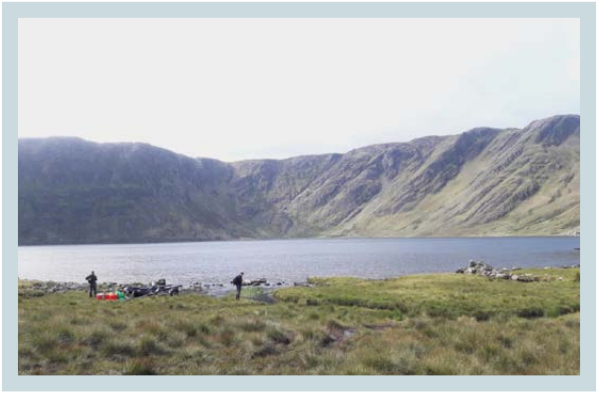
Lake surveys in 2019

A total of 16 lakes were surveyed in 2019, and the data acquired on the age structure, diet, growth rate and abundance for all fish species present will be used to inform conservation and management measures.

Thirteen fish species (sea trout are included as a separate 'variety' of trout) and one type of hybrid were recorded in all 16 lakes surveyed during 2019. Brown trout was the most common fish species recorded, occurring in 93.8 per cent of the lakes surveyed. This was followed by eels (81 per cent), perch (62 per cent), pike (37 per cent) and roach (31 per cent). Sea trout, salmon, bream, Arctic char, and roach × bream hybrids were also recorded in numerous lakes. In general, salmonids were the dominant species in lakes in the north-west, west and south-west of the country.

Sea trout were recorded in five lakes - Kylemore Lough, Lough Barra, Lough Inagh, Tawnyard Lough and Cloon Lough. Arctic char were also captured in five lakes: Kylemore Lough, Lough Mask, Lough Glenawough, Derryclare Lough and Cloon Lough.

Hydroacoustic surveys were completed in the pelagic zones of Lough Mask in July 2019 and of Lough Allen in November 2019.



Glenawough Lough, Co. Galway

Brown trout research in 2019

As part of Inland Fisheries Ireland's national brown trout lake fisheries programme two lakes (Loughs Carra and Mask) were surveyed to assess the status of their brown trout stocks during 2019. The status of brown trout was also assessed in tributaries flowing into Loughs Corrib, Mask and Carra and in the rivers Liffey and Bandon. Reports on these will be available in mid-2020.

Coarse fish and pike research in 2019

Surveys of fish stocks were conducted on four lakes (Lough Boderg, Lough Ramor, Belhavel Lough and Inniscarra Reservoir) in 2019. Roach, bream and their hybrids dominated cyprinid stock in all lakes with the exception of Belhavel Lough, where bream was the only

Lough Boderg, Leitrim / Roscommon

Following reports that specimens of round goby (Neogobius melanostomus), a potentially invasive species, had been captured on Lough Ramor in 2018, baited traps were set at 30 locations throughout the lake in addition to the survey nets. No round gobies were recorded.

Promoting recovery of salmonid populations in the Owenriff catchment

A fish population rehabilitation plan was initiated in 2018 for the Owenriff catchment, a sub-catchment of Lough Corrib. The purpose of the plan is to develop projects to promote the recovery of the brown trout (both resident and migratory) and salmon populations in both lakes and rivers to prevent further decline.

Baseline surveys of the fish stocks in the catchment were undertaken in 2017 and 2018 and will continue every three years to monitor change.

Radio telemetry was used to examine predatory interactions between pike and salmonids on the Owenriff system in 2019. Juvenile salmonids were tagged in tributary streams in spring, while adult brown trout migrating from Lough Corrib were tagged in autumn. Several adult pike were also tagged and monitored from spring 2019. Temperature loggers were also deployed at river and lake sites within the catchment to complement this study. The study is continuing in 2020 and aims to identify potential predation bottlenecks and aid management of native and introduced species within the Owenriff catchment.

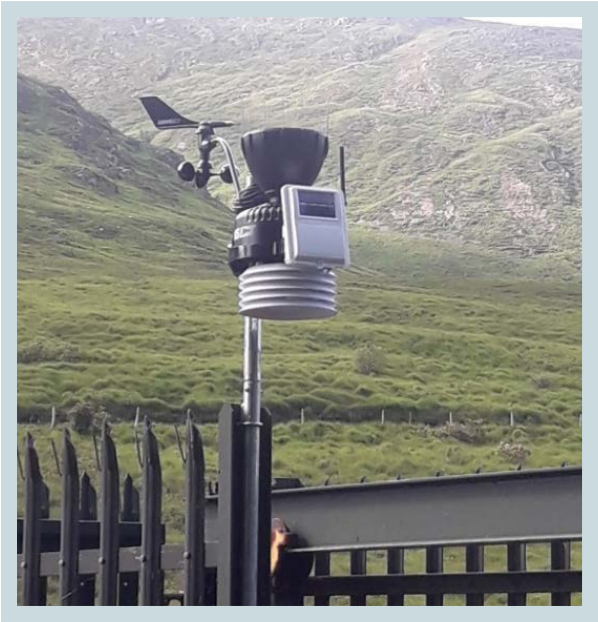
Radio tracking equipment on the Owenriff Catchment in 2019

Climate Change Mitigation Research Programme (CCMRP)

Inland Fisheries Ireland initiated a Climate Change Mitigation Research Programme (CCMRP) in 2019 to gather knowledge on the impact of climate change on Ireland's fish species. The aim is to build an evidence-based assessment programme to assess the impact of climate change on the Irish fisheries sector in both freshwater and estuarine environments and to inform and build capacity for fisheries conservation and protection measures (including adaptation and mitigation strategies).

We also initiated a Geographic Information System (GIS) project in 2019 to identify long-term index catchments and to monitor sites that are representative of the broad range of environmental variables in catchments across Ireland. Water temperature data loggers were deployed in rivers in three catchments in the East (38 loggers), in one catchment in the North West (28 loggers), as well as in the National Salmonid Index Catchment (NSIC) in the Erriff River (33 loggers). Each data logger records water temperature at each site at 30-minute intervals. A sub-sample of sites was also surveyed within each catchment to assess the status of the fish stocks. Chains of temperature loggers (20 in total) spaced at regular 2-metre intervals from the lake surface to lakebed were also installed in two lakes in the West and North West.

Two automatic weather stations were installed, one at the NSIC close to Aasleagh Falls on the river Erriff and the other at Inland Fisheries Ireland's Glenties base. Live weather station data from these stations is now available to the public on **www.weatherlink.com** and on the Weatherlink app. Additional index catchments and monitoring sites will be added in 2020.



River Erriff weather station sensor array in situ

Lagarosiphon research on Lough Corrib (LARC)

Curly-leaved waterweed (*Lagarosiphon major* (*L. major*)) is an invasive aquatic plant first recorded in Lough Corrib in 2005, and in 2018 Inland Fisheries Ireland set up a new research project to deal with it - **Lagarosiphon Research Lough Corrib (LARC)**. The main aims of the project are to:

- Provide up-to-date information on the distribution and extent of *L. major* in the lake
- Review advancements in national and international aquatic weed control
- Determine the influence of habitat and environmental factors on the establishment and persistence of *L. major* in Lough Corrib
- Develop and trial innovative approaches to enhance surveying and monitoring activities.

In 2018/2019, the LARC team completed a literature review of control methods and identified control options that could be considered. New survey methods were also trialled - for example, subaquatic remotely operated vehicles (ROVs), unmanned aerial vehicles, and hydroacoustics. Digital field data collection applications were also developed and tested.

L. major distribution was determined at 200 randomly sampled sites and six bays on Lough Corrib during 2019. Environmental and habitat data were also collected at the 200 sites across the lake and in two of the bays. A network of temperature (112), light (60) and depth (26) loggers was also deployed. Nutrient and GIS-derived variables have been collated for inclusion in statistical models. The 2019 interim report will be available in due course.

Underwater image of the invasive aquatic plant, *Lagarosiphon major*, in Lough Corrib

Habitats work

The work of the Habitats team is focused primarily on meeting Ireland's obligations to monitor and report on the status of the fish species listed under the EU's Habitats Directive, but it also contributes to two international projects on lamprey and migratory fish.

The Habitats Directive and Red Data Book (HD&RDB) fish programme

The EU's Habitats Directive (HD) requires member countries to report every six years on the implementation of measures taken under the Directive, and Inland Fisheries Ireland's Habitats team supports that requirement in relation to reporting on fish species.

Reporting on the period 2013-2018 was completed by the team in 2019 and passed to the National Parks and Wildlife Service in advance of its submission to the EU.

The team began work on the next six-year cycle (2019-2025) in 2019. This has included revising protocols for assessment, particularly in regard to developing trend analysis for larval lamprey. Synergies with the National Lakes Programme saw shared surveying for pollan on Lough Allen with the outcomes feeding into reporting for the next six-year cycle.

This HD&RDB programme also covers two Red Data Book (RBD) fish species – char and smelt – and there are also significant synergies with Inland Fisheries Ireland's Lakes team in regard to char and shared surveying. Smelt surveying in estuaries was undertaken with the Marine Sport Fish team.

For more information
The annual reports of the HD & RDB team's surveys and investigations are available at: **https://www.fisheriesireland.ie/Projects/habitats-directive-and-red-data-book-fish-species.html.**

EVOLAMP: lamprey at different life stages

EVOLAMP is a genetics-based project that is led by colleagues from the University of Évora in Portugal and funded by the Portuguese Government. The project is examining the genetics at different life stages of the closely related river and brook lamprey. Inland Fisheries Ireland's Habitats team collaborates with the project by sampling and collecting specimens at the relevant life stages from channels where unique populations of each species occur and from channels where the two species co-occur. The Inland Fisheries Ireland team then harvests the relevant tissues for genetic analysis by our Portuguese colleagues.

DiadES: migratory fish in the context of ecological goods and services

DiadES is an EU-funded Atlantic Area Project on migratory (diadromous) fish in the context of ecological goods and services. The project is led by the French research organisation, Institut National de la Recherche Agronomique **(INRAE)** and has partners from Spain, Portugal, France, the UK and Ireland, which is represented by Inland Fisheries Ireland. The Irish DiadES team is using Waterford Harbour / the Three Sisters estuaries for its case study and is focusing on twaite shad and thin-lipped mullet. The team has clear synergies with the Habitats team and with the Marine Sport Fish team. Surveying involves sampling waters for environmental DNA evidence and harvesting of scales and otoliths for microchemistry and telemetry. The project kick-off meeting was hosted by Inland Fisheries Ireland in April 2019 and the project runs until spring 2022.

Hydromorphology – linking habitats and species

The WFD has highlighted the importance of connectivity in the natural functioning of rivers. Connectivity is one component of river hydromorphology, the composite physical habitat factors that underpin a river's ecology - this includes the quantity of water, the condition of the instream and riparian habitat and the connectivity of the channels both laterally and longitudinally. Consideration of these hydromorphology factors is consistent with Inland Fisheries Ireland's overall aims with regard to the conservation of species and their habitats. It is also consistent with the aims of the Habitats Directive with regard to the various life stages of migratory fish.

In 2019, Inland Fisheries Ireland continued to work on the following four significant hydromorphology projects, all with shared strands:

- The Environmental Riverine Enhancement Programme (EREP)
- The EU-funded AMBER (Adaptive Management of Barriers in European Rivers) project
- The National Barriers Programme, funded by the Department of Housing, Planning and Local Government
- The INTERREG[1] cross-border Catchment CARE project.

Environmental Riverine Enhancement Programme (EREP)

The EREP study is a long-term multi-faceted project on which Inland Fisheries Ireland collaborates with the Drainage Division of the OPW. The project applies the WFD criteria to drained rivers in order to examine the status of the fish community and hydromorphology (physical habitat and connectivity) and to implement appropriate management strategies to retain and improve the physical habitat in drained channels.

During 2019, the project examined the fish community, physical habitat and barrier issues in the Deel catchment in Limerick. Part of the EREP's work also involves revisiting channels where studies have been undertaken previously - in order to build up a long-term database on fish and habitats. Repeat surveys were conducted on the Enfield Blackwater in the Boyne catchment where major instream capital works were carried out in 2010, and in the Eignagh and Cloonlavis rivers in the Moy catchment where experimental maintenance strategies were implemented in the early 2000s.

The levels of tree cover and occurrence of large wood in channels are factors that may help to create improved quality of habitat for fish species, particularly brown trout, and may mitigate adverse impacts of global warming of watercourses.

1 Interreg Programme. The European Territorial Cooperation (ETC), better known as INTERREG Programme is financed through the European Regional Development Fund (ERDF). Its overarching objective is to promote a harmonious economic, social and territorial development of the Union as a whole

A small-scale experiment was undertaken by the OPW in the river EIgnagh, where trees removed in maintenance were reused as low-level paired deflector structures, introducing some large wood into the channel margins and producing local flow diversity and scouring of the central channel.

Adaptive Management of Barriers in European Rivers (AMBER)

Inland Fisheries Ireland is one of 20 partners in Adaptive Management of Barriers in European Rivers (**AMBER**), which is an EU Horizon 2020 project. Our work involved contributing to work packages relating to the development of a European Barriers Atlas, for which we completed a detailed survey of the Barrow catchment. In addition, we are compiling habitat and fish population information for a work package that looks at locations where barrier removal or mitigation is planned - in this instance, we used the Munster Blackwater as our case study. A population study on eel in an impounded section of river developed into an exciting ongoing study where eels have been tagged with a passive integrated responder (PIT) and annual fyke netting has provided information on eel residency and growth rate in the period 2016-2019. The team completed a telemetry-based study examining dace and trout interactions in the same impounded channel reach and submitted a manuscript for journal publication.

AMBER allows Inland Fisheries Ireland to interact scientifically with international partners. We have teamed up with colleagues in the University of Southampton to look at the Barrow barrier data in more detail with a view to generating ICE scores (French barrier assessment method) from our own field data. A manuscript on this research is being submitted for publication.

Colleagues from the Polish Fisheries Institute visited in 2019 and took part in a shared data collection survey in the Munster Blackwater, in which mesohabitats were examined; this data will form part of a larger study within AMBER.

National Barriers Programme

Inland Fisheries Ireland's work on the National Barriers Programme continued during 2019. This programme is funded by the Department of Housing, Planning and Local Government, and our tasks include:

- Developing a GIS-based national layer of barriers in rivers
- Prioritising of barriers for management in the third WFD cycle
- Developing mitigation strategies for connectivity at barriers.

The programme will build on already-generated data available from our Inland Fisheries Ireland RBD colleagues, from AMBER and from the EREP. During 2019, the project team developed an app-based approach for data collection that enables survey data collected on site to be immediately uploaded to a cloud-based server, so eliminating the need for paper records.

A number of our RBD teams have undertaken a programme of training to enable them to become involved in barrier surveys, and feedback from these teams has been very positive.

The Catchment Actions for Resilient Ecosystems (CARE) project

CARE is an EU INTERREG-funded project involving local authorities and agencies on both sides of the border. It was commenced in late 2017, with a focus on improving water quality in three cross-border catchments – those of the rivers Finn, Arney and Blackwater.

The project has a series of catchment actions to examine and improve water quality (as defined by WFD) and these include point source enrichment, diffuse source enrichment, hydromorphology measures (instream and riparian) and groundwater issues.

In addition, to its strong scientific component, the project also has a community engagement component. The Inland Fisheries Ireland team was recruited during 2018 and consists of a hydromorphology specialist and a technician for the rivers Arney and Blackwater and a catchment project officer for the river Arney. The hydromorphology team examined fish community and habitat indicators in the rivers Arney and Blackwater and developed a matrix of instream and riparian measures for sites surveyed. They then moved to consider how to prioritise sites for mitigation in respect of (a) instream and riparian actions and (b) barrier mitigation works. The work implementation programme will commence in 2020.

For more information
http://www.catchmentcare.eu/

National Eel Monitoring Programme

Inland Fisheries Ireland's National Eel Monitoring Programme monitors the different life stages of the eel in key eel index catchments around the country. The recruitment of juvenile eels from the ocean into rivers was very poor for 2019 with low numbers recorded in four of the trapping sites (Ballysadare, Inagh, Maigue and Feale), the exception being the trap on the Corrib which caught 122kgs of elvers. The poor recruitment in Ireland was matched with a similar pattern across Europe. The latest from the International Council for the Exploration of the Sea (ICES) reports recruitment at 6.0 per cent (provisional) for the 'elsewhere in Europe' series (down from 8.9 per cent (adjusted figure) reported in 2018) and 1.4 per cent for the 'North Sea' series (down from 2.1 per cent in 2018).

A pilot study looking at glass eels in the river Boyne estuary was started in 2018 and continued in 2019. This study looks at the presence of glass eels in a substrate trap at the outflow of Beaulieu pond. The trap is monitored weekly from January to July to establish the trend in abundance. The total catch in 2019 was 783 glass eels, down from 2,189 recorded in 2018. This decrease in the number of glass eels corroborates the decrease in recruitment seen in the elver monitoring and in the modelling data from ICES. With only two years of data it is difficult to make any other conclusions on the glass eel population in the estuary.

Glass eel from Boyne Estuary

Mark - recapture eel studies

The eel mark-recapture study in Waterford Harbour was designed to identify movement of eels within an estuarine environment and to help us arrive at more accurate population estimates. The study, which was in its fourth year in 2019 highlighted the movement of eels between the different zones and their site fidelity in returning to their zone of capture.

In collaboration with colleagues from the AMBER project, we surveyed the stretch of the Munster Blackwater River above Clondulane Weir for a third year as part of a mark- recapture fyke net study. Ten eels were recaptured in 2019, eight of which had been tagged in 2017 and two in 2018. The average growth of recaptured eels across the three years (based on 17 recaptures) was 2.8cm with an average weight gain of 310g.

Eels in the Barrow catchment

A second year of fyke netting the river Barrow's main channel was undertaken to confirm the distribution of eels in the Barrow catchment. This follows on from a number of years of electrofishing the sub-catchment which showed very low numbers of eels in the tributaries of the river Barrow.

Data over the two years confirms the low density of eels in the upper Barrow catchment with greater numbers concentrated around St Mullins at the high-water mark. This reduction in the spatial distribution of eels and concentration of eels in the lower reaches of systems is an expected consequence of the low population of eels in Ireland.

The link between eel eDNA and eel abundance

In 2018, the National Eel Monitoring Programme and the University of West England signed a partnership agreement to investigate the link between eel eDNA presence and eel abundance as evidenced in samples taken from fyke nets in five lakes around the country.

The results of this study showed higher concentration of eel environmental DNA (eDNA) in one litre water samples for 'high eel' population lakes such as Lough Derg and Upper Lough Corrib, with low levels of eel eDNA in 'low eel' population lakes such as Lough Owel and White Lough. There were similar quantities of eDNA found in mid-lake water samples compared with shore samples, which indicates that shores are appropriate locations for sampling. This study has now been completed and the results are being reviewed in preparation for publication. Further research is needed on the temporal abundance of eDNA and eDNA decay rates in lake environments.

The silver eel season 2019

The silver eel season for 2019 was in marked contrast to the 2018 season. The 2018 season did not start until November whereas in 2019 the fishing started in late September with the bulk of the run occurring over a two-week period of heavy rain.

The silver eel catches for both the rivers Fane and the Barrow were down compared with catches from 2018 and 2017. The research carried out by Inland Fisheries Ireland at our index silver eel sites highlights the risk climate change can have on eel migration and how it can hinder recovery of the stock.

Salmonid research

Inland Fisheries Ireland's researchers are involved in a wide range of projects relating to salmon and sea trout. The focus of this activity is on adding to our knowledge about salmon and trout, so that we can protect and conserve stocks. In 2019, our work involved:

- Providing the information on which annual salmon management advice is based
- Managing Ireland's NSIC on the river Erriff - a wide ranging research facility through which we seek to arrive at a better understanding of the biology, life histories and population dynamics of Atlantic salmon and sea trout
- Developing knowledge of sea lice and seeking ways to mitigate its impact on wild salmon stocks - through the LiceTrack Project
- Investigating the migration, distribution, habitat usage and survival of sea trout and salmon smolts in the marine environment on the west coast of Ireland - Salmonid West Project, including **SMOLTRACK**
- Examining the consequences of land-use change and human activity on sea trout - **CHASES** project
- Implementing the Sea Trout Assessment Monitoring Programme (**STAMP**) at lough Currane in Co. Kerry
- Building capacity for environmental monitoring and management of marine protected areas - **COMPASS[2] project.**

Supporting national salmon management advice

Each year, the independent Technical Expert Group on Salmon (TEGOS) publishes its assessment of the status of salmon stocks and provides catch advice for the forthcoming year. Inland Fisheries Ireland supports this work by supplying data derived from catchment-wide electro-fishing (CWEF), which enables us to assess the abundance and distribution of salmon fry, which in turn is a proxy for adult salmon presence in the rivers. In 2019, we visited a total of 564 sites and carried out CWEF in 28 catchments or sub-catchments and in many systems this provides the only data on salmon spawning in these catchments.

Based on the scientific advice provided by the TEGOS, Inland Fisheries Ireland management determined that during 2019, 40 rivers would be open for a harvest fishery, 40 rivers would open for catch-and-release angling and 63 rivers would be closed. Of the 16 spring salmon rivers, 11 were open, and 5 were open for catch-and-release angling in 2019.

For more information
A comprehensive series of reports on the Inland Fisheries Ireland salmon management programme is available on the Inland Fisheries Ireland website at: **https://www.fisheriesireland.ie/Fisheries-management/salmon-management.html.**

2 COMPASS: Collaborative Oceanography and Monitoring for Protected Areas and Species

The River Erriff - Ireland's National Salmonid Index Catchment (NSIC)

The Erriff catchment combines a riverine and a lake-fed tributary sub-catchment that is representative of typical migratory salmonid habitats in Ireland. For that reason, the catchment is designated as the NSIC for salmon and sea trout populations in Ireland.

A long-term sea trout monitoring programme has operated on the Tawnyard Lake sub-catchment of the Erriff since 1985. From March through to June 2019, a total of 993 sea trout smolts (juveniles) and 235 sea trout kelts (spawned adults) were recorded in the downstream trap situated near the lake outflow.

Returning adult salmon and sea trout were also monitored as they ascended through the trap/fish counter at Aasleagh Falls, and during 2019, the numbers recorded were 3,355 salmon and 1,037 sea trout.

The work of the NSIC team is critically important in monitoring the Erriff sea trout population, and it enables us to assess the impact of environmental factors, including sea lice levels, on the sea trout stock.

Since 2014, we have used an array of hydroacoustic receivers installed in Killary Harbour to monitor sea trout and salmon movement and residency in the marine environment. This array is central to a five-year programme to investigate the marine phase of salmonids and is reported under the Salmonid West Project on page 51 below.

Passive integrated transponder (PIT) technology

In spring 2016, we began to use PIT tag technology to determine sea trout and salmon marine survival returning to the river Erriff. In 2016, 2017 and 2018, respective totals of 1022, 553 and 893 salmon smolts were PIT-tagged during the spring smolt migration. The marine survival of these tagged cohorts was 3.5 per cent, 2 per cent and 3.6 per cent, respectively. The latter marine survival estimate may be revised upwards if smolts tagged in 2018 return as multi-sea-winter salmon in 2020. However, to date, the vast majority of returning tagged fish are one-sea-winter (1SW) grilse, which reflects the predominance of this stock component in the river.

The percentage of PIT-tagged sea trout returning to the Erriff as finnock (i.e. in the same year as they migrated as smolts) was 17.2 per cent in 2016, 4.9 per cent in 2017, 23.4 per cent in 2018 and 2.7 per cent in 2019. Previous spawners and 1SW maidens are a minor component of the sea trout returns in the time series to date (< 8.5 per cent and < 2.4 per cent, respectively). Detailed studies of the spatial distribution, habitat and life history of juvenile sea trout progressed significantly in 2019. Electrofishing and PIT-tagging of juvenile trout, measurement of habitat variables and monitoring of tagged migrant trout have all been undertaken. The data collected will be analysed to develop sea trout production models for the Erriff, and this will have applications for management of this and other sea trout fisheries.

Developing knowledge of sea lice - the LiceTrack Project

The greater our knowledge about sea lice, the more we can do to support the sustainable development of aquaculture while ensuring the conservation of wild salmon stocks.

Since 2017, Inland Fisheries Ireland has been part of the EU-funded LiceTrack project, which aims to model the biological, environmental, oceanographic and anthropogenic drivers of sea lice populations, as well as identifying the role of specific salmon farming sites as recipients or sources of sea lice. Such models had been developed in Norway and Scotland, but in order to make directly comparable estimations of lice dispersal, and hence larval concentrations and infection pressure, the models needed to be integrative and standardised – and it is in this area that LiceTrack has made considerable progress.

The LiceTrack project was completed in November 2019, and its final report outlining a standardised framework to model sea lice dispersal has been submitted to the EU. The project is funded by the EU through the North Atlantic Salmon Conservation Organization (NASCO), and our partners were the National University of Ireland Galway, the Norwegian Institute for Nature Research, Marine Scotland Science, and the Institute of Marine Research, Norway.

Salmonid West Project and SMOLTRACK projects

The Salmonid West Project is investigating the migration, distribution, habitat usage and survival of sea trout and salmon smolts in the marine environment on the west coast of Ireland.

Primarily focused on a long-term smolt study on the river Erriff, in Killary Harbour and in the surrounding coastal waters, the study mainly uses acoustic telemetry technology to track fish movement. Outputs from this study are helping to inform us on salmonid ecology in the early marine phase and are contributing to our knowledge of the impact of sea lice on these species. The work will also provide information on how we can better assess the impact of developments such as windfarms, harbour development and finfish aquaculture on wild salmonids.

In 2019, 30 sea trout smolts were acoustically tagged and released. Survival in fresh water was high during their out-migration with only 2 tagged smolts not completing the journey into Killary Harbour. At 3 per cent, the rate of smolt to finnock survival was very low - this is based on the numbers of tagged finnock returning to fresh water following their marine feeding migration.

In 2019, the salmon smolt tagging programme was carried out under the EU-funded SMOLTRACK project. This is a NASCO-led project, and similar tagging programmes were carried out by project partners in Great Britain and Northern Ireland, Spain, Sweden and Denmark. On the main channel of the river Erriff, 20 wild salmon smolts were acoustically tagged and released in spring 2019. Of these, 3 were lost (presumed mortalities) in fresh water, while 16 had entered the sea at Killary Harbour, en route to more distant feeding grounds.

An additional 43 wild smolts were tagged with miniature radio transmitters to help identify and understand predation bottlenecks. Unlike acoustic tags, radio tag signals can be detected in air and fish losses can be attributed to different predators based on information gleaned when the tag is recovered. Fish were released in the main channel of the Erriff and below Lough Tawnyard on the river Black (a tributary to the river Erriff).

Survival was considerably higher for fish released in the main channel with 63 per cent surviving to Killary Harbour compared to 26 per cent for the Tawnyard group. Further work into predation and survival bottlenecks is planned for 2020, in this NASCO-led project.

CHASES - investigating the impact of human activity on sea trout

Inland Fisheries Ireland is in the final stages of its collaboration with researchers from the Norwegian University of Science and Technology (and other international partners) as part of the Research Council of Norway funded CHASES project. The overall aim of the project is to examine the consequences of land-use change and human activity on sea trout in the context of large declines in sea trout populations in recent decades.

The work package that we worked on involved comparing the growth and marine residency period of sea trout in areas with finfish aquaculture with those in control areas in selected bays in Ireland and Norway - the comparisons are based on the detection of subtle changes in the elemental composition of scales. Complex life histories (due to natural population variation and environmental or anthropogenic effects) are a feature of many sea trout populations, which makes it difficult to interpret scales.

An LA-ICPMS-based[3] scale analysis was designed by Inland Fisheries Ireland researchers to discriminate between the freshwater and marine phases of individual fish life cycles, so enabling life history interpretation and quantitative assessment of marine growth. Scale samples from sea trout from several systems in Norway and Ireland were analysed using this method. The study detected a relationship between the presence of salmon farms and reduced marine growth among sea trout. This work is currently under peer review.

Currane STAMP

The Currane catchment in Co. Kerry is internationally recognised as a premier salmonid angling location, but in recent years experienced anglers have reported declines in sea trout and expressed concern on the sustainability of the fishery. In 2019, Inland Fisheries Ireland implemented the Currane Sea Trout Assessment Monitoring Programme (**STAMP**), with the aims of: (a) providing an updated status report on the abundance, distribution and behaviour of salmonids in the Currane catchment; and (b) determining the extent of, and examining potential causes behind, the perceived decline in the area.

In addition, and as a precautionary measure to stem further pressure on sea trout, a temporary bye-law (Bye-Law No. 971, 2019) was introduced within the Currane catchment and Ballinskelligs Bay to permit only catch-and-release of sea trout.

The STAMP programme involved a range of activities, including:

- Collation of rod catch data, both recent and historical
- Visual assessment of the main channel and streams
- Electrofishing
- Acoustic tagging.

Rod catch data

To provide an indicator of adult stock status, the programme is collating all recent and historical rod catch data, and preliminary observations for the 2017–2019 period show that the lowest values were recorded in 2018. Continuation of this citizen science-led data collection by angling guides in 2020 will contribute substantially towards understanding the status of the fishery.

3 LA-ICPMS: Laser ablation - inductively coupled plasma - mass spectrometry

Visual assessment

Within the extended Currane catchment the physical condition of the main channel and tributaries was assessed using RHAT[4], a technique that involves a rapid visual assessment of how much a river deviates from its expected natural state. Most rivers and streams in Currane retain natural flow features with only minor historical modifications along riverbanks and tops and no enhancement is necessary for improving salmonid habitats. The results demonstrated that all monitoring sites received a WFD score of 'high' or 'good', consistent with healthy naturally flowing rivers and streams with channels and banks displaying minor, if any, historical alterations.

Electrofishing

In 2019, electrofishing was conducted at 34 monitoring sites which had been the focus of previous juvenile salmonid assessments between 1985 and 2014. The results from 2019 demonstrate that some monitoring sites still retain nationally high densities of juvenile salmonids, but declines were observed at some sites. Environmental Quality Ratings (EQR) were assigned to the electrofishing monitoring sites based on the results of the electrofishing and numerous associated environmental and geographical parameters: of the 34 sites, 26 received a scoring of 'good' or 'high', 6 scored 'moderate 'and 2 scored 'poor'.

Acoustic tagging

To investigate utilisation of marine waters in Ballinskelligs Bay where the Currane system discharges to the sea and understand where mortality might occur, a total of 50 trout smolts were tagged with miniature acoustic transmitters in April 2019.

In total, 22 acoustic receivers were deployed in the Currane and Ballinskelligs Bay to determine the spatial use, movements and survivorship rates of trout as they undergo migration from freshwater to marine habitats.

Of the 50 smolts, at least 28 fish were confirmed at sea which is probably a conservative estimate given that 8 additional fish were last detected at Butler's Pool, 60 metres from the coast. All fish completed their initial marine migration between 20 April and 16 June 2019. Seven fish completed a full migration cycle from fresh water to sea and back to fresh water. Mortality events were highest in the area of passage between Butler's Pool and Ballinskelligs Bay where 29 fish are assumed to have experienced a predation event. Eight fish remained in fresh water for the duration of the monitoring period and were deemed lake residents.

COMPASS: building capacity for environmental monitoring

COMPASS is a transnational project that aims to build capacity for environmental monitoring and management of marine protected areas in the coastal seas between Ireland and western Scotland.

Inland Fisheries Ireland is working with Northern Ireland's Agri-food and Biosciences Institute on the salmonid work package, whose main objectives are to understand habitat utilisation and migration behaviour of salmonids in the near-shore marine environment. This work also aims to identify important habitats for sea trout and to identify routes or pathways of salmon smolts as they migrate from fresh water into the marine environment. To date, as part of this project, over 400 sea trout and salmon have been tagged with acoustic transmitters.

4 RHAT: river hydromorphology assessment technique

- In spring 2019, we tagged 65 sea trout smolts from the Castletown River and 70 salmon smolts from the Boyne. Receivers were also placed in the estuaries and lower reaches of the rivers to detect the time of migration out of each system. The coastal arrays were placed inshore to detect the initial emigration behaviour of the fish, so providing information on the length of time smolts spend along the coast before moving offshore.
- In autumn 2019, with the help of anglers from the Dundalk and District Brown Trout Anglers Association we tagged 50 sea trout finnock in the Castletown River with acoustic tags. Receivers were deployed in the lower and upper reaches of the river to monitor the migration of finnock in and out of the system.
- In winter 2019, we completed the retrieval of the acoustic telemetry array from marine sites in Dundalk Bay and from the lower reaches of the Castletown River. Several receivers were redeployed in strategic locations in the riverine portion of the Castletown River in late summer/early autumn to track tagged finnock.

Tracking data collected on the fixed receivers was supplemented by manual tracking of these tagged finnock. A preliminary analysis of all tagging data and results to date show several different types of migration and marine habitat utilisation for sea trout leaving these rivers. When comprehensively analysed, all of this data will provide valuable information on the migration success of smolts as they moved through the lower reaches of both the Castletown and Boyne rivers.

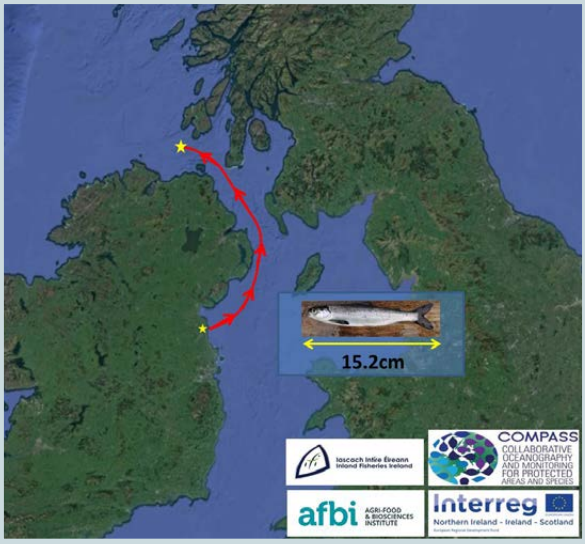
In parallel, other COMPASS researchers monitoring whale and dolphin movement in deep marine waters off the north coast of Ireland detected salmon smolts in early summer migrating past their offshore coastal receivers, and this has revealed salmon smolt migration patterns in a northerly direction out of the Irish Sea for the first time.

One salmon smolt (15.2cm in length) which left the river Boyne in May 2019 travelled a distance of 250km in just over 30 days, providing vital marine migration information.

For more information
Inland Fisheries Ireland made two videos centred around smolt capture and tagging activity for the COMPASS project which summarise the tagging work of salmonids in these study sites.

https://www.fisheriesireland.ie/Fisheries-Research/compass-project.html#video-river-boyne-acoustic-array

https://www.fisheriesireland.ie/Fisheries-Research/compass-project.html#video-smolt-tracking



Journey of a salmon smolt from the Boyne northwards out of the Irish Sea, as recorded by COMPASS researchers

Marine Sport Fish Programme

Inland Fisheries Ireland is the statutory body responsible for advising on policy and national strategies relating to sea angling in Ireland. The Marine Sport Fish Programme includes studies on particular species, including bass, blue fin tuna and elasmobranchs, and also covers recreational and estuarine surveys.

National Bass Conservation Programme

Because of the collapse of bass stocks, commercial fishing for bass in Irish waters was prohibited in 1990; and since that time, bass has been managed solely for angling. Since 2013, Inland Fisheries Ireland's National Bass Conservation Programme has combined fisheries research and citizen science to better understand the European sea bass found in Irish coastal waters. Four important bass nursery estuaries are surveyed annually to monitor recruitment of the juvenile life stages (age 0-4 years). Citizen scientists contribute to bass conservation by collecting bass scale samples from bass of all sizes, by keeping logs of their bass angling activity and by tagging bass on behalf of Inland Fisheries Ireland.

Bass nursery seine netting surveys indicated that bass recruitment of fry in 2019 was poor across all four main bass nurseries (Slaney, Barrow, Munster Blackwater, Lee at Tralee). Trawling surveys of the three south coast bass nurseries provide information on the 1-4 year age classes and suggest that those bass recruited to the Barrow in 2018 continue to thrive in good numbers as one-year-olds. Densities of bass in the age range 1-4 were low in the Slaney and Munster Blackwater in 2019.

In 2019, citizen scientists submitted data on 343 bass from scale samples and tagging data. Few large bass were reported by anglers in 2019, with 76 per cent reported at less than 50cm in length. Tagging data indicates that bass return annually to their summer feeding grounds, often to within a few hundred meters of their tagging location in previous years.

Bass caught, tagged and released by Shane Wickham, bass angler and citizen scientist.

Atlantic Bluefin Tuna Programme (Tuna CHART)

In 2019, the International Commission for the Conservation of Atlantic Tunas (ICCAT) granted Ireland permission for the first time to run a pilot scientific programme to catch, tag and release Atlantic bluefin tuna. These are the largest tuna in the world (over 4m in length and up to 1500lbs in weight), and they are highly sought after by sea anglers because of their power and speed.

Atlantic bluefin tuna (200cm), caught, tagged and released September 2019 by Adrian Molloy, authorised charter skipper Tuna CHART

This was a multi-agency programme involving collaboration between Inland Fisheries Ireland, the Marine Institute, the SFPA and the two parent government departments (Department of Communications, Climate Action and Environment (DCCAE)and the Department of Agriculture, Food and the Marine (DAFM)). Following a selection process, authorisations were granted by Inland Fisheries Ireland and DCCAE to 15 experienced charter skippers, each of whom was required to attend a training course and to adhere to the guidelines laid down by the Tuna CHART team. The highest rated equipment – rods, reels, hooks and line, were required in order for skippers to receive their authorisation. This gear was specified in order to ensure the welfare and good handling of this powerful but sensitive fish.

The bluefin tuna angling season was open from 15 August to 12 November 2019, and in that short time 209 tuna were tagged and released in good condition by authorised skippers over 202 fishing trips. Data on the location, length and condition of every tuna encountered was recorded. The majority of the bluefin were tagged and released off the coast of Donegal (205), with one encountered off the coast of Clare and three off West Cork.

Following the success of the programme in 2019, it has been extended into 2020.

Elasmobranch tagging programme

The elasmobranch tagging programme was initiated in 1970 by the Inland Fisheries Trust. The concept behind the tagging programme was to encourage conservation and catch-and-release of elasmobranchs (sharks, skates and rays). This is the longest running citizen science programme in Inland Fisheries Ireland. We collaborate with charter angling skippers who tag the elasmobranchs they catch, record their length and return them to the sea. The original programme continues to this day, with some adaptations in tagging methods over time.

Fifty years on, the value of this long-term dataset is apparent in this era of rapid species loss and climate change. Over 40,000 elasmobranchs have been tagged over the fifty years, encompassing fifteen different species. Because of the citizen science nature of the programme, data is usually reported a year in arrears. Full data is currently available up to 2018.

Capture of tagged tope

In 2018 over 446 elasmobranchs were tagged encompassing ten species, from the commonly encountered tope and blue shark to less frequently seen species such as painted ray, undulate ray and blonde ray. Recaptures of tope, common skate and blue shark were reported in 2019.

The elasmobranch tagging programme has made an important contribution to the scientific literature about the distribution and migration patterns of elasmobranchs, and it has also been valuable in informing ongoing conservation efforts.

Irish Marine Recreational Fisheries Survey (IMREC)

As an island with just over 3,000 kilometres of coastline and a rich marine life, Ireland has a sea angling resource that is very highly regarded internationally, and one that offers an important recreational activity and provides social and economic benefits across rural and coastal communities.

But we need to know more about that resource, so that we have a solid basis for scientific analyses of fisheries. To meet this requirement, Inland Fisheries Ireland developed the Irish Marine Recreational Fisheries (IMREC) survey in 2019, a programme which is designed to facilitate the gathering of information about recreational fish catches at sea and along the coast. This is part of a wider European Commission (under Council regulation 199/2008) effort to underpin sound scientific advice for the implementation of the Common Fisheries Policy (CFP).

The information gathered through IMREC will help all stakeholders to manage the fisheries resource and recreational angling. It will support the protection of the resource for both sea anglers and for those who provide the services that support sea angling and provide jobs in communities around the coast.

Estuarine fish surveys

Estuaries are highly productive habitats that provide shelter and food for marine species and are especially important as a nursery habitat for juvenile fish. Surveying and monitoring the distribution and abundance of marine fish species in estuaries is within Inland Fisheries Ireland's sea angling brief and also addresses a WDF requirement to sample and report fish status in listed transitional waters. Our broadly-based estuary survey programme is designed to determine the presence and distribution of fish species in Irish estuaries.

In autumn 2019, we surveyed six water bodies, including the Nore-Barrow-Suir transitional water body complex, Tralee Bay, Ballinskelligs Bay, the Ilen estuary, the Erriff estuary and Killary Harbour. Over the course of the survey we set 116 nets and a total of 8,914 individual fish were captured, counted and identified to species level prior to release. We encountered 50 different fish species over the course of the sampling programme.

Of all sites surveyed, species richness was lowest in the Erriff estuary on the west coast. This estuary drains rapidly into Killary Harbour, so habitat is limited with consequent low species richness. The Nore-Barrow-Suir transitional water body was the largest water body surveyed in 2019, and with 31 species, it had the highest species richness recorded.

3. Sustainably developing Ireland's fisheries resource

Inland Fisheries Ireland's Business Development division is responsible for the sustainable development of Ireland's precious inland fisheries and sea angling resource. The division is made up of a number of teams with staff based throughout Ireland.

- The **Project Management Office** promotes and administers the various funding schemes that we use to protect and enhance fisheries resources and their habitats
- The **Salmon and Sea Trout Management team** manage all aspects of the licensing of salmon and sea trout angling and commercial fishing, including advising on legislative and regulatory matters
- The **Angling Marketing team** work to ensure that the attractiveness of angling in Ireland is brought to a wider audience, and to achieve sustainable growth in recreational angling
- The **Corporate Communications team** bring the story of Ireland's fisheries resource to a wider audience
- Our new **Education and Outreach team** are focused on getting more people 'hooked' on angling, with all the recreational and social benefits that it can bring.

Highlights from the work of each team in 2019 are presented below.

Promoting and administering funding schemes

Inland Fisheries Ireland's Projects Management Office (PMO) is responsible for promoting and administering our funding schemes, and it also supports our staff in the development and implementation of projects. The PMO team have the wide experience and expertise in fisheries management, research, development, engineering, administration and environmental assessment, and team members draw on all of these areas to ensure that projects are delivered to a high standard and in compliance with our governance procedures.

These projects that we fund make a real difference to the environmental, economic and recreational amenity of the localities in which they are sited. They include projects that:

- Protect and enhance fish habitats to ensure sustainability of fisheries and angling
- Improve access to unique natural resources throughout the country
- Provide positive opportunities for recreation in the Irish outdoors
- Promote the attractiveness of angling to visitors and tourists.

New funding schemes for 2019

In May 2019, the PMO was sanctioned to open the following new funding schemes:

- Capital Grants Scheme (under the NSAD) to the value of €128,300)
- The Midland Fisheries Fund, to the value of €15,000
- The Salmon and Sea Trout Rehabilitation, Conservation and Protection fund, to the value of €707,760.

To help potential applicants under these news schemes and to introduce them to our regional RBD staff, the PMO ran a series of workshops at nine different venues around the country.

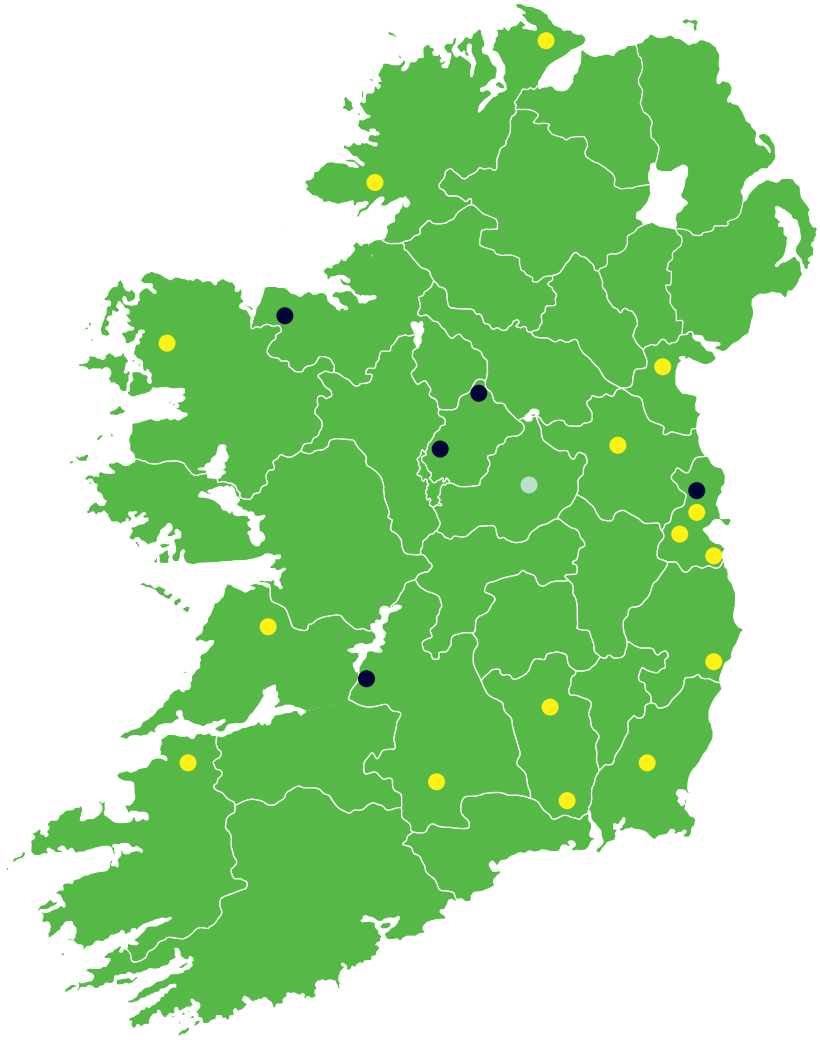
The workshops included both group presentations and one-to-one sessions with interested individuals, who were advised on the procedures for making an application and on the resources required for a proposed idea or project. In total, we met 105 applicants at these workshops. In addition to the workshops, the PMO team also engaged with interested individuals, fishery owners, clubs, communities, and local authorities on an ad-hoc basis to illustrate the processes and priority objectives for the funding available.

The application process was streamlined through the use of an 'expression of interest' stage that enabled us to evaluate potential projects at an early stage, so that only suitable projects were progressed to the full application stage. In total, 35 full applications were received under these schemes, of which 26 were approved to a total value of €1,038,150.

TABLE 3.1: Funding schemes 2019 - number and value

Funding Scheme	Successful applications	Value of successful applications
NSAD, Capital Grants Scheme	6	€128,300
The Midland Fisheries Fund	1	€15,000
The Salmon and Sea Trout Rehabilitation, Conservation and Protection Fund	19	€894,850
Total	**26**	**€1,038,150**

Channel Stabilisation project on Behal's Weir, Kilmacow, Co. Kilkenny, carried out under the Salmon and Sea Trout Rehabilitation, Conservation and Protection fund



Map showing the locations of the projects approved under each of the three new funding schemes

The PMO team continues to support and engage with applicants and with regional staff throughout the development stages of projects. In this way we help projects achieve their objectives and to ensure that all insurance, planning and environmental conditions are met and documented.

Willow weave bank revetment on the Glenamurra River Co. Mayo, carried out under the Salmon and Sea Trout Rehabilitation, Conservation and Protection fund, and completed in summer 2019.

Ongoing funding schemes

Throughout 2019, the PMO team worked closely with our regional fisheries colleagues to guide and support projects that have received funding awards through to completion.

The purpose of this funding is to improve access to angling and to enhance riverine habitats; and for all projects we support, we also assess the appropriateness of proposed enhancement measures. In 2019, we guided to completion 30 projects with a total value of €939,000. The categories of projects completed included those relating to angling access, environmental assessment and habitat enhancement.

Unfortunately, not all projects go smoothly, and in the past year we became aware of some projects that were struggling to deliver - for all kinds of reasons, such as time constraints, project governance, insurance problems, difficulties with contractors, and so on. In these cases, we made available our PMO team's expertise and resources in preparing instream habitat enhancement plans, as well as engineering and project management skills in environmental projects. In all such cases, our overriding concern is to enhance the habitat for fish and to achieve positive impacts for other river dwelling species.

Accessible angling platform on the river Moy at Straide

Corrib Catchment Enhancement Project

The Corrib Catchment Enhancement Project was initiated in late 2019. This project aims to take a high-level look at the Corrib catchment and to advise on potential river conservation and enhancement works, in particular those that could have the greatest positive impact on salmonids and their habitats. This project will bring together all relevant fisheries and environmental datasets available to Inland Fisheries Ireland and conduct an initial desktop study to help identify river sections where riparian and/or instream development works might be of benefit.

Under the project, river enhancement works will only be undertaken in rivers that have undergone hydromorphological modifications, but which have not yet recovered as expected. Such rivers are either not achieving good ecological status or have the potential to fail and thus not meet WFD requirements. All development works will be carried out in full compliance with both the WFD and the HD.

A specific stakeholder engagement plan will be developed early in the programme and implemented at all stages in its life cycle.

External supplier frameworks

The PMO operates a number of supplier frameworks to give applicants for funding and Inland Fisheries Ireland colleagues access to the expertise necessary to assess and develop projects. A supplier framework is essentially an arrangement with a group of technical experts whose expertise can be called on to assist with technical or specialised tasks as and when required. Having such a framework in place allows Inland Fisheries Ireland to speed up the procurement process for appropriate projects.

The suitability of the experts is assessed when the framework is established, so this does not have to be reassessed every time expertise is required. Then, when a need does arise, the appropriate framework members are invited to tender.

We now have supplier frameworks in place for the following specialist areas:

- Environmental engineering
- Computer-aided design (CAD)
- Project supervisor design process (health and safety)
- Construction
- Environmental expertise
- Environmental assessment Process (EAP).

NASCO International Year of the Salmon (IYS)

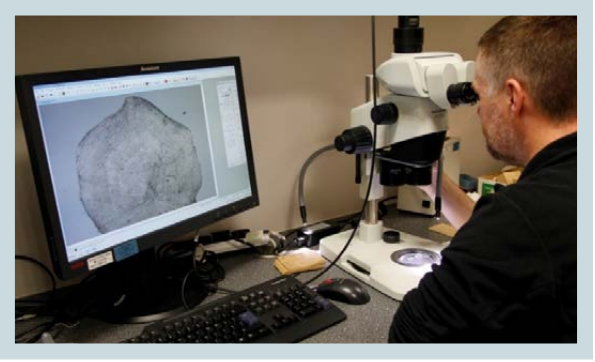
The IYS is an initiative from the NASCO (North Atlantic Salmon Conservation Organization) that has the aim of creating awareness of these magnificent fish and of the challenges they face. The focal year was 2019, but some ongoing activities will continue into 2022.

International Year of the Salmon launch with Seán Canney, TD and Minister of State with responsibility for the inland fisheries sector

Inland Fisheries Ireland's PMO team worked with NASCO to implement its IYS international education and outreach programme, which had grant funding of €150,000. This work included preparing procedures for the approval of project grant claims.

One such project is the National Salmon Scale Project, which invites anglers to become citizen scientists by taking scale samples from the salmon and sea trout they catch before they release them back into the water. When analysed, the scale samples can provide a great deal of information about the fish.

See also
For more information on the National Salmon Scale Project, see **https://www.fisheriesireland.ie/Fisheries-Research/national-salmon-scale-project.html#national-salmon-scale-archive**



Fish scale being analysed at Inland Fisheries Ireland's National Salmon Scale Archive

Standard operations procedures (SOPs) for development

In 2019, the PMO brought together colleagues to facilitate the development of standard operating procedures to be followed in typical fisheries development operations. Fourteen separate groups were formed, and colleagues were chosen to take part based on their experience and knowledge of specific areas of fisheries development.

This work is ongoing and includes both review of existing procedures and development of new procedures. When completed, the standard operating procedures (SOPs) will provide additional guidance to our staff and to third parties involved in fisheries development.

The SOPs developed cover a wide area of operations, including riverbank restoration, weed control, invasive species management, pike management, bridge and culvert works, removal of angling stands, gravel removal, de-tunnelling, and biosecurity for field work.

Salmon and sea trout management

Salmon and sea trout licences

Salmon and sea trout angling and commercial fishing licences and tags were procured by public tender and were made available to the general public via approved licence sales distributors in advance of the 2019 fishing seasons. Sales of salmon angling licences, which were made available online one month in advance of the angling season, are increasing year on year.

In 2019, there was a review of salmon and sea trout angling licence prices with a view to maximising the socioeconomic activity that angling tourism contributes in Ireland. No changes were made to licence prices or types following this review.

Supporting legislation

Inland Fisheries Ireland took part in a review of the regulations and bye-laws governing the conservation and management of salmon and sea trout, and to which interested parties were invited to contribute. The published legislation sets out where angling and commercial fishing for salmon and sea trout is permitted and what bag limits and other conditions apply.

We also produced summaries of the legislation in leaflet form and made these available to be distributed with angling licences at all authorised licence distributor outlets.

See also
The salmon and sea trout regulations and bye-laws are available on the website of the Department of Communications, Climate Action and Environment at: **https://www.gov.ie/en/publication/b4f20-inland-fisheries-bye-laws-2020/**

Reporting on fish catches

Every year Inland Fisheries Ireland collates full details of salmon angling and commercial fishing catches and publishes these on our website.

Further catch reports are generated from logbook returns and used for scientific analysis and contribution towards the review of current salmon management policies. The 2019 reports will be available in 2020 when all logbooks returned are entered on the national database and have been reviewed and agreed.

See also
The latest wild salmon and sea trout statistics are available on our website at: **https://www.fisheriesireland.ie/Salmon-Management/wild-salmon-and-sea-trout-statistics.html**

Marketing and promotion of angling

Angling tourism is an important contributor to the Irish economy and it provides employment to numerous small businesses and other stakeholders in all areas of the country. One of the key elements of our Corporate Plan is to ensure that demand for Irish angling tourism remains strong, so the marketing and promotion of our angling product is a critical facet of Inland Fisheries Ireland's work.

We have a dedicated team of angling advisors who are themselves experienced anglers and for that reason are well placed to understand Ireland's strengths as an angling destination and how to match those strengths to the requirements of anglers. We use a number of different methods to market and promote Irish angling and some of the work we undertook in 2019 is described below.

Promoting Ireland at international angling trade shows

One way that we promote angling in Ireland is to attend specialist angling trade shows in various countries that are our key target markets. In 2019, we attended a total of 17 trade shows spread across Ireland, the United States, Germany, France, the Netherlands, Belgium, Italy and the United Kingdom. Attending trade shows gives us a chance to talk directly with anglers who are interested in fishing in Ireland and to help them to make the right choices so that they get the most out of their visit.

As well as engaging with people who come to our stand, we often give presentations on various aspects of angling in Ireland to stimulate additional interest. Angling trade shows also give us opportunities to talk to key influencers in the angling world, to learn of any new developments or areas of interest that we can tap into, and to liaise with journalists from the main angling magazines to make plans for media visits for the coming year. At many of these trade shows we also encourage representatives from the Irish angling trade to participate with us on our stand - in 2019, we facilitated 27 trade members at a number of different trade shows. Having a good mix of trade at events improves the dynamic and visibility at the event and also gives our trade partners an easier way to sell their product, and this has helped many of them to grow their business in recent years.

Trade exhibiting on the Angling Ireland Stand at the Angelwelt Show in Berlin

Maps and brochures in five languages

Another way that we provide information to anglers is through promotional brochures and maps. Anglers love to look at brochures and they are particularly attracted to maps, so for that reason it is important to have good and up-to-date information that we can offer in these formats.

In 2019, we finished a new suite of promotional angling brochures aimed predominantly at anglers from abroad who may be planning a fishing trip to Ireland. The brochures are available in English, German, Dutch, French and Italian and they are a useful 'take-away' for visitors to trade shows. The new suite includes over 40 brochures and we believe that they are at least as good if not better than those of our competitor destinations.

Some examples of our new angling brochures for 2019

Media visits

It is important to keep Ireland visible and to the forefront of anglers' minds so that they naturally associate Ireland with good fishing and consider it a destination worth visiting. One way that we do this is to work with journalists and media across a range of online and print publications to highlight some of the best that Ireland has to offer. Over 2019, we hosted twelve journalists on trips to Ireland and worked with them to promote and highlight some of our prime angling destinations.

Where possible we try to work with members of the angling trade (guides, charter skippers, angling guesthouses etc.) on these trips so that they can get direct exposure from any resulting articles. We expect each trip to produce at least one article; but if the fishing goes well, that might become three or four articles, and this helps ensure that Ireland remains well represented in all the main angling publications.

Some articles in international angling magazines that appeared following media visits carried out in 2019

Getting our message out - corporate communications

Through all our corporate communications we seek to engage our stakeholders and the wider public with the good story of Ireland's wonderful fisheries resource and the initiatives we are taking to protect and conserve it.

During 2019, there were 281 media releases issued, of which 58 were for national media, with the balance being for regional media. As a result of this outreach, there were 957 print media clippings (hardcopy), 568 online clippings and 546 broadcast features. This coverage resulted in an audience reach of 16 million and is valued at €3.68 million.

A number of integrated cross-channel communications campaigns were rolled out on platforms last year. Because 2019 was the IYS, we took the opportunity to raise awareness of the different challenges facing salmon today and to create a framework for international outreach and research. As the state agency for the inland fisheries resource and sea angling tourism, we took an active part of the national conversation around the IYS and the events and activities associated with the initiative in Ireland.

A strategic PR campaign resulted in substantial editorial coverage, including 2 national media articles, 19 regional print articles, 23 broadcast features on national and regional radio stations, as well as 17 online articles, 3 regional profile interviews and one national profile interview. In addition, our Facebook had an organic post reach of almost 61,000 people. IYS items were included in 21 issues of the Irish Angling Update e-newsletter which has an open rate of 34.3 per cent (against an industry average of 26.8 per cent) and a click-through rate of 18.2 per cent (against an industry average of 3.4 per cent).

Continued growth in digital communications platforms in 2019

Inland Fisheries Ireland's online channels were active with 146 new webpages created on www.fisheriesireland.ie and 937 blog posts generated on **www.fishinginireland.info**.

There were 4,626,439 page views (an instance of a page being loaded or reloaded in a browser) by 611,106 visitors to Inland Fisheries Ireland's various websites in 2019, and our audience figures on all platforms increased in 2019.

- Page views on our corporate website, **www.fisheriesireland.ie** increased from 934,306 in 2018 to 1,353,615 in 2019.
- The number of followers on our Facebook page grew to 14,883 (up by 8.51 per cent from 2018). There were 302 posts published on this platform during the year and 2.9 million impressions (the number of times Inland Fisheries Ireland's content was displayed).
- Our Twitter account @IrishAnglingUpdate saw its followers increase to over 3,700 (up 13 per cent) and monthly tweet impressions (total number of times Inland Fisheries Ireland's tweets have been seen) were as high as 108,000. In 2019, there were over 900 tweets sent from this channel.
- The popular Irish Angling Update continued to be well received by subscribers. It was published 40 times during the year, giving the latest angling news across all angling disciplines. It continued to have a really strong open rate to over 50 per cent (compared to industry average of 26.8 per cent). We also updated its communications contact lists and digital platforms to ensure they are compliant with the requirements of the General Data Protection Regulation.

Education and outreach

The big news in 2019, in relation to our education and outreach remit was the appointment of a new and dedicated Education and Outreach team, which was made possible through funding from the Dormant Accounts Fund.

Inland Fisheries Ireland's education and outreach initiatives are designed to ensure the continuing protection and conservation of our valuable fisheries resources, and also to promote knowledge and awareness of those resources to a wide audience.

Our actions in relation to education and outreach are underpinned by the vision set out in our Corporate Plan 2016–2020: '…to provide an accessible and sustainable, world class, inland fisheries resource for all'. Our work is also integrated into wider public policy across a number of related areas.

- In the National Biodiversity Action Plan 2017–2021, Inland Fisheries Ireland is listed as one of the state bodies with a role in biodiversity conservation. And during 2019, much of our work in education and outreach has been informed by Target 1 of the action plan, to ensure that '… conserve and use it sustainably'.
- In 2016, the National Council for Special Education (NCSE) published policy advice for children with autism spectrum disorder and in its review called for all Government departments to develop a national day activity programme that would provide a structured, safe and social environment for students with complex needs during the month of July. Our Go Fishing Programme fits well with this objective, and it also has the potential to be further tailored in line with NCSE's advice.
- Our Something Fishing Programme for primary schools throughout rural Ireland is designed to inform and educate students on fish, water, angling and the environment in their local areas, and this work is consistent with the objectives of the Action Plan for Rural Development.
- Fishing is an outdoor activity that can help people to reduce their levels of stress, and this is consistent with the Government-led Healthy Ireland initiative that aims to improve the health and wellbeing of everyone in Ireland.

The work of our Education and Outreach team is encompassed in three broad interconnected categories: novice angling initiatives, educational programmes, and public and stakeholder events. An outline of our work in these areas in 2019 is set out below.

Novice angling initiative

The Novice Angling Initiative seeks to develop events and activities to attract people (particularly young people) who are new to angling and to let them see what a great recreational activity it can be. Although the initiative is new, it did draw heavily on the work and experience of previous initiatives, such as the Dublin Angling Initiative.

In 2019, we ran pilot novice angling programmes around the country with the aim of getting more people fishing - always listening and evaluating after each pilot to see what we could do better or differently. What we found worked best was to:

- Run an event for people who have never fished before - 'try fishing'
- Make a longer programme available for those who already know they like to fish - 'go fishing'.

Wexford school completion programme at Oaklands

Dublin Angling Initiative Competition 2019 - a hands-on angling initiative aimed at young people from the greater Dublin area

Young people from the Waterford hub at Ballyshunnock reservoir listening intently to a safety briefing before fishing. Rods are all set up in the background and all are wearing hats and glasses to ensure their safety

We were particularly keen to ensure good governance around all novice angling events, so that everyone could have a 'safe place to fish'. Having angling coaches available to assist meant that in some areas there was expertise that was invaluable in getting people hooked. During 2019, many angling clubs and angling federations helped us to deliver these events.

We were aware, however, that there was no suitable accredited programme for delivering courses to anglers to date. So, in October 2019, we published an invitation to tender looking for providers who could design and deliver courses for angling coaches and novice anglers. Another shortcoming we are seeking to address is the lack of suitable venues where novice anglers can catch their first fish and so 'become hooked'.

We are currently working with external consultants to develop a comprehensive Novice Angler Strategy for 2020-2025. This has involved an extensive online survey and other face-to-face consultations.

Moy Rivers Trust – Youth Angling and Biodiversity Day
Inland Fisheries Ireland's educational stand at the Foxford Riversfest, in August 2019. The focus here was on the fish species present in the river Moy (with the aid of a fish display tank). There was a strong focus on salmon as the Moy is one of Ireland's main salmon rivers.

TABLE 3.2: Funding schemes 2019 - number and value

2019, Month	Number of angling events	Number of participants
May	2	16
June	9	106
July	16	253
August	13	230
September	4	40
October	9	152
November	4	62
December	1	6
Total	**58**	**865**

Angling for the Mary Robinson Perpetual Trophy 2019 held at Loch an Dóchais, Offaly in May 2019

Educational programmes

Key to the success of our educational programmes has been the way in which they help our young participants to develop an awareness and to become unofficial stewards of the environment without them even realising it.

Something Fishy

Something Fishy is the main educational programme that Inland Fisheries Ireland is involved in and it continues to be very successful, with the delivery by the local fisheries staff being key to its popularity among teachers. By the end of the 2018/2019 programme in June, 110 schools had taken part. The programme was promoted through Blackrock Education Centre to ten regional education centres.

And the winner of the Something Fishy schools blog competition for 2019 is … Doora National School from Co. Clare, who were officially presented with their trophy by Minister Pat Breen amid great excitement.

Something Fishy: pupils from Doora National School with their trophies

Young people from Limerick City examining a sample of invertebrates from the riverbed, which will help them check on the water quality status of the river. (Newport river at the Clare Glens, Co Tipperary)

TABLE 3.3: Best blog uploads for each Education Centre

Education Centre	School
Navan	Clonmellon NS
Donegal	Rasheney NS
Mayo	Snugboro NS
Galway	Kiltartan NS
Clare	Doora NS
Tralee	Holy Cross, Killarney
West Cork	Clogagh NS
Wexford	Murrintown NS
Kilkenny	Scoil Chiaráin Naofa
Carrick On Shannon	Tibohine NS

TABLE 3.4: Numbers of schools involved with Inland Fisheries Ireland in the 2018/2019 school year by River Basin District.

River Basin District	Number of schools	Total number of pupils
Eastern	12	280
South Eastern	10	326
South Western	17	411
Shannon	11	288
Western	35	889
North Western	25	426
Total	**110**	**2,620**

Transition year and other school programmes

The Eastern River Basin District trialled an angling programme for post-primary students in transition year at James's Street CBS in Dublin. St James's TY Angling Adventure was a joint project between EIR and Inland Fisheries Ireland and it ran over 13 weeks in early 2019.

The project mixed classroom events with field trips to introduce non-anglers to angling.

School completion projects in Limerick took part in an 'outdoor classroom' setting on the Clare Glens in Co. Tipperary which allowed for a greater learning experience for science and geography classes.

Biosecurity station at Suirfest

Knowledge transfer at Swinford

In July, Inland Fisheries Ireland took part in a Knowledge Transfer (KT) programme run by the Department of Agriculture, Food and the Marine in Swinford, Co. Mayo. This involved setting up an outdoor display on environmental issues related to farmers, farming and farming practices. On the stand we concentrated our efforts on invasive species with some angling information for the area as well as presenting a leaflet on farming best practice.

Bioblitz at Ballycroy, Co. Mayo

The Bioblitz at Ballycroy National Park event was held over a 24-hour period from 5pm on 30 August. Because of high waters, however, it wasn't possible to carry out the planned electrofishing assessment, so instead we concentrated on promoting the IYS, including a colouring event for children to participate in as part of the Natural History Museum's IYS competition. We also had a presentation on local biodiversity and on the various species of fish and invertebrates found in the rivers of the National Park.

Bioblitz at Ballycroy National Park

Kenmare Welcome participated in a short introductory fishing programme in which migrants to the town learned about fishing. The programme included a trip to Dingle Aquarium.

Public and stakeholder events

Engaging with the public and all our key stakeholders is fundamental to Inland Fisheries Ireland's success as an organisation. We do this by meeting people at national and local events around the country and throughout the year - with the focus firmly on fish and their habitats. At larger national events, such as the National Ploughing Championship, our aquarium with its display of fish captures the interest of people of all ages, while our 'kick samples' of invertebrates also engages people who are often unaware that such animals exist.

As 2019 was the focal year for the International Year of the Salmon, we also promoted this at all events we attended. In particular, we began a new collaboration with the Natural History Museum in July, which brought Inland Fisheries Ireland to a new family audience of people who were hugely positive and interested in the work we do, as well as learning all about salmon.

Natural History Museum 'Fishy Fun' event and International Year of the Salmon Natural History Museum

Inland Fisheries Ireland staff with Seán Canney TD, Minister of State with responsibility for the inland fisheries sector at the 2019 National Ploughing Championships

TABLE 3.5: Major national events Inland Fisheries Ireland took part in, 2019

Month	Event	Attendances
February	Angling Ireland Expo, Dublin	10,000
June	Carnival of Science, Cork	13,000
July	International Year of the Salmon, Natural History Museum, Dublin	2,000
September	National Ploughing Championships, Carlow	297,000

National Ploughing Championships 2019

TABLE 3.6: Regional events Inland Fisheries Ireland took part in, 2019

Month	Event
April	Celebration of Sport, Belfast
June	Suirfest, Tipperary
	Festival of the Maigue, Limerick
	Tallaghfest, Dublin
	Pettigo and District Youth Open Day, Donegal
July	Launch of Salmons Wake Journey to Greenland, Limerick
	Chapelizod Community Day, Dublin
	East Mayo Anglers Family Fun Day, Mayo
August	Darndale Community Day, Dublin
	Splish, Splash Learn about rivers, Mayo
	Foxford River Festival, Mayo
September	Easkey Street Festival, Sligo
	Enniscoe House Biodiversity Weekend, Mayo
October	Munster Science Fair, Cork
	Dowth Point to Point Country Festival, Meath
November	River Broadmeadow LAWPRO Event, Meath

Poster for Festival of Fun on the Maigue

4. Supporting efficiency and effectiveness

Inland Fisheries Ireland's Corporate Services provides all of the human resources and financial management services that enable the organisation to run smoothly and to deliver on our mission to protect and conserve Ireland's fisheries resource in an efficient and effective manner.

These services also cover responsibility for health and safety, learning and training procurement, facilities management, and data governance.

Human resources

The Human Resources division is responsible for all aspects of managing our most important asset - our people. It manages all the administrative functions around recruitment, payroll and benefits, health and safety, training, and freedom of information.

Almost 80 per cent of our staff work in the field most of the year in protecting, developing, conserving, and researching fish and their habitats.

Learning and training

We continuously work to improve the skills knowledge and abilities of all our employees as they are the most important asset we have.

TABLE 4.1: Key figures for learning and training in 2019

Number of training courses delivered	119
Number of participants in training courses	807
Value of training for 2019	€451,761
Number of days of training delivered	305
Number of different types of courses	40

Seasonal Fishery Officer Training College 2019

In April 2019, the Learning & Development Team organised a training college for all the new starters. This took place over two weeks and was a great success for our staff with coordinated training to ensure all staff were ready to work once they started in their area.

Attending the training college were the 39 new seasonal fisheries officers, one general operative and four new Education and Outreach employees who joined our teams.

The following were among the training areas covered in 2019:

- HR induction
- Health and Safety
- Induction and Driver training
- Manual handling
- Notetaking
- General data protection regulation (GDPR)
- Tetra radio
- Conflict Resolution
- Safely working in water (formerly Swift water rescue
- Boat and kayak training (for some participants)
- Fisheries legislation
- Time Management System
- Pre-Hospital Emergency Care Council (PHECC) first aid responder

Training to use the Delta RIB fleet

We continue to train our employees to be crew and coxswains on our Delta RIB fleet to ensure they stay safe and are able to go on patrol along Ireland's coastline. A key part of the training is for staff to attend the Personal Survival Technique course, which mainly takes place in swimming pools and includes, among other things, training in how to get from the water onto a life raft.

Training in securing loads

We have an extensive car and trailer fleet and many employees have equipment to bring with them in their work around the country. To ensure that all equipment is safe while we are driving (including that on trailers), we are collaborating with a driving school who provide us with training in securing loads.

This training helps ensure that loads on our vehicles are secure and do not cause any hazard to our drivers or to any other road users.

RIB Training

Health and Safety

Health and Safety is fully integrated into Inland Fisheries Ireland's daily operations. Our commitment is to continuously improve our overall safety performance and strive for zero incidents with regard to the safety, health and welfare of employees, contractors and stakeholders. Our Health and Safety Executive plays a critical role in cultivating our safety culture and in maintaining high safety standards. A recent audit on our safety management systems was carried out to the standards of the Chartered Institute of Internal Auditors, and this found that the existing risk management, control and governance systems in place in relation to Health and Safety provide a satisfactory assurance.

Fleet safety

Following a competitive tender process, we introduced a series of driver training programmes in 2019, including:

- Trailer towing training, allowing drivers to tow loads of up to 3,500kg (leading to category BE driving licence)
- Certified training in secure loading for road transport
- Advanced training for staff towing, launching and recovering large RIBs.

The training complements the existing driver handbook training at induction, the telematics system and the daily vehicle safety check (phone app). In 2019, our vehicle fleet operations retained its 'Van Safe' accreditation from Freight Transport Association of Ireland - this is an award for organisations who operate van fleets at the highest level of industry best practice, compliance and safety.

These measures also help to meet the requirements of the Health and Safety Authority and the Road Safety Authority with respect to driving for work.

Health and Safety graduate scheme and benchmarking

In 2019, we recruited a Health and Safety graduate, and this has enabled the Health and Safety Executive to increase the frequency of site safety inspections and to facilitate the development of internal benchmarking for safety performance. Benchmarking is an important driver in continuous improvement and gives us the opportunity to reassess control measures and to introduce new methods where appropriate.

Health and Safety training

Training continues to be an integral part of the overall Health and Safety management system. Trained and competent staff greatly contribute to the overall positive safety culture within Inland Fisheries Ireland.

The newly introduced Seasonal Fishery Officers Training College has been a great success in this area, as it provides a number of safety related-modules. Ensuring staff are competent for field operations from a very early point in their contract mitigates risk, increases potential productivity and is a significantly more efficient and cost-effective way of providing training.

Financial management

Inland Fisheries Ireland's Finance division provides a comprehensive set of financial and governance systems that ensure effective financial management. These systems are flexible enough to adapt to our evolving needs as an organisation and also meet the highest standards of corporate governance.

The Finance division is also responsible for providing the senior leadership team and the Board with the financial advice they need for strategic decision making. Management accounts are presented to each meeting of the Board, together with a commentary on performance against budget.

On a quarterly basis, the division provides the Board with a Statement of Financial Position, a Statement of Income and Expenditure and a Capital Account Statement.

Funding for 2019

In 2019, Inland Fisheries Ireland received an Exchequer grant of €31.583 million which includes ring-fenced non-pay funding of €1.2 million for the Eel Support Scheme, €300k for the Lagarosiphon weed control programme and €393k for Education and Outreach projects – Novice Angling Strategy and Go Fishing.

From the Eel Support Scheme, €687k of funding was deferred to 2020 and NSAD income of €576k was generated giving an Exchequer income figure of €31.584 million in the financial statements. We also generated €3.630 million from other income sources in 2019 (compared to €3.254 million in 2018) and a detailed breakdown is provided in the Financial Statements 2019.

Almost €0.5 million was generated from the Salmon Conservation Fund portion of receipts from the sale of salmon and sea trout rod licences in 2019. This fund is due to be disbursed in future years for reinvestment in the conservation and rehabilitation of salmon and sea trout fisheries and habitats. Part of these funds will be made available to angling clubs, federations and similar organisations.

Value for money ethos

An overarching value for money ethos is supported throughout Inland Fisheries Ireland, particularly in our tendering processes. We follow the guidelines set out by the Department of Public Expenditure and Reform's Public Spending Code.

Financial and treasury management

In conjunction with our sponsoring department, the Department of Communications, Climate Action and Environment, Inland Fisheries Ireland met both its strategic and operational funding requirements during 2019.

Internal audit

In its review of Inland Fisheries Ireland's systems of internal financial control, our outsourced internal auditor, ASM Chartered Accountants, confirmed that systems are in place to provide substantial assurance that objectives relating to key financial systems can be achieved. Details of other internal audits are available in the Annual Report of Inland Fisheries Ireland's Audit and Risk Committee.

Financial statements for 2018

Inland Fisheries Ireland submitted its financial statements in respect of 2018 to the Minister for Communications, Climate Action and Environment before 28 February 2019, and to the Office of the Comptroller and Auditor General before 31 March 2019, in compliance with our statutory obligations.

Property and fleet management

Our Logistics team is responsible for property, fleet (vehicles and boats) management, and the provision of workwear. In 2019, a project to replace a large number of the oldest vehicles with high mileage and higher CO_2 emissions was undertaken. In total, 69 new vehicles were purchased including 4 new fully electric vehicles bringing our fleet of electric vehicles up to 8, 61 older vehicles were disposed of.

In 2019, our Logistics team also gave assistance on all areas of procurement and in the issuing of personal protective equipment (PPE), and it also had a significant involvement in the acquisition and licensing of the new RIBs. The final delivery of four Delta HX 780 RIBs was completed in 2019.

The process to recruit a new Logistics Manager was completed in December 2019 with the new appointee commencing in the role in early 2020.

Information and transparency

Freedom of Information

As a public body, we adhere to the Freedom of Information Act 2014. We received 65 Freedom of Information requests for the period 1 January to 31 December 2019, with two outstanding requests at the end of the year.

Access to Information on the Environment (AIE)

Under the European Communities (Access to Information on the Environment) (AIE) Regulations 2007 (S.I. 133 of 2007) to 2014 (S.I. 615 of 2014) we provide information on fisheries-related environmental matters. Eight such requests were received in 2019.

Parliamentary questions and Oireachtas queries

As part of our commitment to Dáil information flow, we supplied material for 72 parliamentary questions (PQs) answered by the Minister. Two queries were received directly from members of the Oireachtas in 2019.

Protected disclosures

Section 22 of the Protected Disclosures Act 2014 requires the publication of a report each year relating to the number of protected disclosures made in the preceding year and any actions taken in response to such disclosures. We received no protected disclosures in 2019.

Complaints

We received seven formal complaints from members of the public in 2019. These related to fisheries, pollution and service matters.

General Data Protection Regulation (GDPR)

The GDPR Project Plan for the organisation was further delivered throughout 2019. Additional measures to raise awareness of data protection within the organisation included the circulation of a quarterly data protection newsletter to all staff and the roll-out of online training modules on the topic of information security.

An internal audit of Inland Fisheries Ireland's data protection function was conducted, and subsequent recommendations implemented. GDPR compliance is an ongoing activity that requires regular assessment of risks and awareness of data protection requirements. The audit provided satisfactory assurance regarding the effective and efficient achievement of Inland Fisheries Ireland's objectives in respect of data protection.

Glossary

Acoustic telemetry
Tagging fish with sound-emitting devices that are detected by listening stations

Citizen science
The collection of data relating to the natural world by members of the general public, typically as part of a collaborative project with professional scientists

Elasmobranchs
A group of marine fish that have cartilage-based skeletons e.g. sharks, rays, and skates

Finfish aquaculture
Farming of fish with fins (fish farming)

Finnock
Sea trout that migrates to sea between April and June and returns to freshwater to spawn after the summer migration

Grilse
A salmon that has returned to fresh water after a single winter at sea

Hydroacoustics
The study and use of sound in water. Hydroacoustics also describes the use of sound (sonar) to monitor fish and other underwater features. An array of hydroacoustic receivers is a series of listening stations, listening for fish tagged with an acoustic (sound transmitting) tag

Kelt
A salmon that has recently spawned and is usually in poor condition

LA-ICPMS
An acronym for Laser Ablation Inductively Coupled Plasma Mass Spectrometry – a technique used to explore the life history of individual fish by analysing the elemental makeup of otoliths and scales

Pelagic zone
Mid-water zone

River hydromorphology
The physical characteristics of a river e.g. flow regime, sediment transport. Examples of alterations to natural hydromorphology are channelisation and man-made weirs

Smolt
A young salmon (or trout) after the parr stage, when it becomes silvery and migrates to the sea for the first time

Spring Salmon River
A river that receives salmon between January and May. These salmon are generally larger as they spend more than one winter at sea

Time management system
Often include a time clock or web-based application used to track staff work hours, automating processes helping to reduce manual records

TRaC
An acronym for transitional and coastal waters

Transitional waters
Waters that are influenced by both tidal and freshwater flows e.g. estuaries, fjords and lagoons

Appendices

Appendix A

Published Papers in 2019

1. Connor, L., Ryan, D., Feeney, R., Roche, W.K., Shephard, S. and Kelly, F.L. (2019) Biogeography and fish community structure in Irish estuaries*. Regional Studies in Marine Science.* **https://doi.org/10.1016/j.rsma.2019.100836**

2. Connor, L., Shephard, S., Rocks, K. and Kelly, F.L. (2019) Potential climate change impacts on Arctic char *Salvelinus alpinus* L. in Ireland. Fisheries Management and Ecology. DOI: 10.1111/fme.12327

3. Fitzgerald, C., Shephard, S., McLoone, P., Kelly, F.L. and Farnsworth, K. (2019) Evaluating management options for two fisheries that conflict through predator-prey interactions of target species. *Ecological Modelling*, 410. **https://doi.org/10.1016/j.ecolmodel.2019.108740**

4. Coyne, J., Connor, L. and Kelly, F.L. (2019) Manual for Ageing Common Freshwater Fish Species in Ireland. IFISH – Fish and Habitats: Science and Management, Volume 1. ISSN 2565-6244.

5. McLoone, P., Shephard, S., O' Reilly, S. and Kelly, F. (2019) Shifts in diet of an apex predator following the colonisation of an invasive fish. *Hydrobiologia*, DOI: 10.1007/s10750-019-03972-w

6. O' Briain, R., Coghlan, B., Shephard, S. and Kelly, F.L. (2019) River modification reduces climate resilience of brown trout (Salmo trutta) populations in Ireland. *Fisheries Management and Ecology*. DOI: 10.1111/fme.12326

7. Ferguson, A., Adams, C.E., Johansson, M., Kelly, F.L., King, A., Maitland, P., McCarthy, I.D., O' Grady, M., Prodohl, P.A., Skulason, Skuli, Verspoor, E. and Winfield, I.J. (2019) Trout and Char of the North Atlantic Isles, In: *Trout and Char of the World* (Edited by Jeffrey L. Kershner, Jack E. Williams, Robert E. Gresswell, and Javier Lóbon-Cerviá). Publisher: American Fisheries Society

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9. Ryan, D., Shephard, S., Gargan, P & Roche, W. (2019). Estimating sea trout (*Salmo trutta* L.) growth from scale chemistry profiles: an objective approach using LA-ICPMS. *Fisheries Research*, Vol. 211, 69-80.

10. Strøm, J.F., Rikardsen, A., Campana, S., Righton, D., Carr, J., Aarestrup, K., Stokesbury, M., Gargan, P., Javierre, P. and Thorstad, E. (2019). Ocean predation and mortality of adult Atlantic salmon. *Scientific Reports*: 9 (7890). DOI: 10.1038/s41598-019-44041-5

11. Shephard, S., Josset, Q., Davidson, I., Kennedy, R., Magnusson, K., Gargan, P., Walker, A., Poole, R. (2019). Combining empirical indicators and expert knowledge for surveillance of data-limited sea trout stocks. *Ecological Indicators* 104: 96–106.

12. Archer, L.C., Hutton, S.A., Harman, L., O'Grady, M.N., Kerry, J.P., Poole, W.R., Gargan, P., McGinnity, P., and Reed, T.E. (2019). The Interplay Between Extrinsic and Intrinsic Factors in Determining Migration Decisions in Brown Trout (*Salmo trutta*): An Experimental Study. *Front. Ecol. Evol.* 7:222. doi: 10.3389/fevo.2019.00222

13. Millane, M., Walsh, L., Roche, W. & Gargan, PG. (2019). Unprecedented widespread occurrence of Pink Salmon *Oncorhynchus gorbuscha* in Ireland in 2017. J. Fish Biol. 2019; **1–4. https://doi.org/10.1111/jfb.13994**

14. Shephard, S., Gallagher, T., Rooney, S.M., O'Gorman, N., Coghlan, B., King, J.J., 2019. Length-based assessment of larval lamprey population structure at differing spatial scales. *Aquatic Conservation: Marine and Freshwater Ecosystems*, 29,1.

15. Shephard, S., Wögerbauer, C., Green, P., Ellis, J. R., Roche, W. K., 2019. Angling records track the near extirpation of angel shark *Squatina squatina* from two Irish hotspots. *Endangered Species Research*. 38:153-158. **https://doi.org/10.3354/esr00943**

Audit and Risk Committee Annual Report 2019

For the year ending
31 December 2019

Iascach Intíre Éireann
Inland Fisheries Ireland

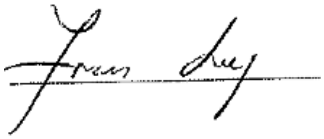
Contents

Foreword

I am very happy to introduce the Inland Fisheries Ireland Audit and Risk Committee (ARC) 2019 Annual Report which outlines the committee's programme of work for the period. This work focused on the oversight of; the organisation's systems of risk management; compliance audits, policy and charter review, assurance statements review and the review of management accounts, budgets and financial statements in advance of being presented to the Board of Inland Fisheries Ireland.

I confirm that Inland Fisheries Ireland continues to implement the Code of Practice for the Governance of State Bodies 2016 and has taken steps to ensure its compliance during the reporting period.

I would like to take this opportunity to thank my colleagues on the committee for their continued hard work; both Mr Gibbons and Ms Orbinski Burke were re-appointed by the Board in June for a second term.



Professor Frances Lucy
Chair of the Audit & Risk Committee
(Re-appointed September 2018)

Membership and meetings of the Audit & Risk Committee

1.1 Members of the Committee during 2019

Prof. Frances Lucy (Chair)
Re-appointed: 27/09/2018

Mr Patrick Gibbons
Re-appointed: 27/06/2019

Ms Bernadette Orbinski-Burke
Re-appointed: 27/06/2019

All members of the ARC are non-executive members. Each member serves for a period of three years on the committee; this may be renewed for (but is limited to) a further three years or to the end of their term of office as a Board member. At the end of the reporting period, there continues to be a vacancy on the committee.

1.2 Committee meetings during 2019

The ARC met four times in 2019: on 8 March, 1 May, 28 August, and 22 November.

Individual members of the Senior Leadership Team were invited to present on specific matters at each meeting, these included the CEO, Dr Ciaran Byrne, Head of Finance and Logistics, Pat Doherty and Finance Director, Michael Martin. For specific matters, Head of Human Resources, Roisin Bradley (May), Director of the ERBD, Brian Beckett (May) Director of the NRBD, Dr Milton Matthews (May), were in attendance.

The members met on three occasions without the executive present, on 8 March, 1 May, and 22 November.

Inland Fisheries Ireland's appointed Internal Auditor, ASM Ltd attended three meetings of the committee: on 8 March (by phone), on 28 August and on 22 November. The committee took the opportunity to speak with the Internal Auditor without the executive at each of these meetings.

ARC Programme of Work 2019

The Committee engaged in the following activities and made recommendations on its findings to the Board.

2.1 Internal Audit (IA) Programme 2019

The nature and scope of the 2019 internal audit programme was initially proposed in November 2018, finalised by the committee and submitted for approval to the Board in June 2019. Terms of reference of each of the IA reviews were agreed and the following risk-based audit reports/reviews of operational areas within Inland Fisheries Ireland were delivered. (See the Internal Audit Assurance Ratings and Priority Levels at Appendix 1)

Review of GDPR Compliance – April

Corporate Risk Register – non-compliance with General Data Protection Regulation (GDPR) (Risk 8)

- Consideration of policies and procedures, training provided to staff, privacy impact assessments, relationships with third party processors, records management, subject access requests, data security, data protection breaches, management of consent and roles and responsibilities; and
- Establishment of mechanisms to monitor compliance with GDPR.

FINDING: Satisfactory
[Recommendations: 1 x priority 2 and 3 x priority 3]

The output of this review was analysed by the Committee at its meeting on 28 August and was presented to, considered and adopted by the Board on 7 November 2019.

Review of Fleet Management – July

Corporate Risk Register risk of non-compliance with Revenue, Health and Safety and Road Safety regulations in relation to Fleet Management (Risk 10)[1]

To ensure that there are adequate procedures in place in respect of the utilisation, telematics and responsible use of the Inland Fisheries Ireland fleet and to consider compliance with those procedures;

- To consider the status of implementation of those recommendations arising from the Review of Fleet Management completed by previous Internal auditor RSM (March 2017);
- To ensure that tax, insurance, licences and maintenance checks are being completed, as appropriate, on fleet stock operated by Inland Fisheries Ireland;
- To consider the adequacy and effectiveness of the fixed asset procedures established to ensure that fleet assets are correctly included on Inland Fisheries Ireland's Fixed Asset Register (to consider additions, disposals, and impairments);
- To consider the adequacy and effectiveness of the processes in place in relation to the procurement of fleet assets;
- To ensure there are robust internal controls operating over fuel cards in use by Inland Fisheries Ireland staff;
- To ensure that there are documented procedures in place in relation to instances when staff are required to take an Inland Fisheries Ireland vehicle home at night and to assess compliance with those procedures; and

- To ensure that adequate processes are in place in relation to the identification of private usage of the Inland Fisheries Ireland fleet and that any benefits in kind (BIK) which may arise from such use are appropriately disclosed and accounted for.

FINDING: Satisfactory
[Recommendations: 3 x Priority 2 and 2 x Priority 3]

The output of this review was analysed by the Committee at its meeting on 28 August and was presented to, considered and adopted by the Board on 7 November 2019.

Review of Internal Communications – September

Corporate Risk Register – risk of damage to reputation due to ineffective communications with stakeholders (both internal and external (Risk 6)

- To ensure that a Communications Strategy and Plan have been developed which adequately outline Inland Fisheries Ireland's considerations in relation to internal communications with staff
- To ensure that Inland Fisheries Ireland effectively manages its internal communications with staff including: staff emails; staff meetings and conferences; staff briefings; the staff intranet; staff liaison committees; and staff surveys
- To ensure that Inland Fisheries Ireland has adequate resources in place to effectively manage internal communications.

FINDING: Satisfactory
[Recommendations: 2 x Priority 2 and 5 x Priority 3]

The output of this review was analysed by the committee at its meetings on 13 February 2020. The Chair presented the work of the committee and the recommendations were considered and adopted by the Board on 27 February 2020.

Review of Internal Financial Controls - November

Corporate Risk Register– risk of financial fraud (inappropriate use of resources such as assets) (Risk 15) and risk of failure to maximise value for money (Risk 16)[2]

- To ensure that Inland Fisheries Ireland's policies and procedures are up to date
- To ensure that there are appropriate and effective key internal financial controls in place in the following areas:
  - Payments process
  - Procurement process
  - Capital assets
  - Financial reporting system
  - Payroll
  - Tax compliance, and
  - Follow-up on previously accepted recommendations.

FINDING: Satisfactory
[Recommendations: 7 x Priority 3]

The output of this review was analysed by the committee at its meetings on 13 February 2020. The Chair presented the work of the committee and the recommendations were considered and adopted by the Board on 27 February 2020.

2.1 Planned Internal Audit Programme for 2020

At its meeting on 22 November 2019, in collaboration with the Internal Auditor and with reference to Inland Fisheries Ireland's Corporate Risk Register, the Audit and Risk Committee agreed to recommend the draft internal audit programme to the Board. The Board approved the 2020 Internal Audit Programme at its meeting on 30 January.

2.2 Draft Financial Statements 2018

In advance of presentation to the Board for adoption, at its meeting on 8 March 2019 the committee conducted a review of:

- The draft Financial Statements for 2018
- The draft Statement of Internal Control for 2018 (second year of adoption of CoPGSB16)
- The Governance Statement and Board Members' Report 2018 (second year of adoption of CoPGSB16).

In its review of the financial statements the following was considered:

- Accounting policies, completeness of financial statements, anti-fraud policy and losses are properly recorded and accounted for
- Suitable processes are in place to ensure regularity, probity and propriety is achieved;
- Issues raised by the external auditor have been comprehensively and appropriately dealt with
- The financial statements present fairly the financial position of Inland Fisheries Ireland
- The comprehensiveness and meaningfulness of Inland Fisheries Ireland's Statement on Internal Control and review of the Letter of Representation before issue.

2.3 Risk Management

The ARC continued its risk management review work with members of the Senior Leadership Team (SLT) by inviting River Basin District (RBD) directors to meetings. RBD directors reported on and responded to queries in relation to risk management within their operational remit.

Key aspects of the risk framework were considered during the course of Committee meetings;

- Regular status updates obtained regarding most significant risk, fish farm (Corporate Risk 13)
- Consideration of Inland Fisheries Ireland's Corporate Risk Register at each meeting
- High-level review of various organisational risk registers at (May meeting):
  - Finance & Governance Risk Register (6 risks registered)
  - Logistics Risk Register (6 risks registered)
  - Communications Risk Register (15 risks registered)
  - Project Management Office (PMO) Risk Register (26 risks registered)
  - Salmon Management Risk Register (19 risks registered)
  - Health & Safety Risk Register (10 risks registered)
  - Data Protection Risk Register (6 risks registered)
  - Environmental Risk Register (8 risks registered)

- Obtained management assurance from Directors in respect of actions taken following internal audit review recommendations - e.g. Health & Safety / Eastern River Basin District.

2.5 Review of Effectiveness of the Audit & Risk Committee

In quarter 4 of 2018, the ARC completed a combined assessment of its effectiveness. The Committee implemented the recommendations of this review throughout 2019. See Appendix 2 for a record of this.

2.6 Other areas of consideration

- Update, review and adoption of the Committee's Terms of Reference (Charter) in May incorporating extended responsibilities regarding Supplementary Pensions.
- Review of the organisation's status in relation to its Benefit in Kind (BIK) liability with the Office of the Revenue Commissioners and payment of an outstanding balance due
- Review of the most recent Management Accounts at each meeting
- Review of the draft Management Assurance Statements for 2019 (a document that is signed off by all members of the Senior Leadership Team)
- Reviewed the Supplementary Pensions Quarterly Report
- Reviewed and provided feedback on the draft Guidance on Understanding and Declaring Conflicts of Interest (for Board members) in advance of approval by the Board
- Reviewed and provided feedback on Inland Fisheries Ireland's draft Anti-Fraud and Corruption Policy in advance of approval by the Board
- Reviewed the cost efficiency of holding Board meetings at Citywest and Athlone.

Comptroller & Auditor General

The ARC has a professional working relationship with the Office of the Comptroller and Auditor General (C&AG) with all significant audit findings communicated to the C&AG.

Although a representative of the C&AG was invited to meet with the ARC this did not occur in 2019.

The ARC reviewed the content of the Management Letter resulting from the audit of the 2018 Financial Statements by the C&AG at its meeting on 13 February. Management Responses were presented by the Executive and considered in detail by the committee in advance of presentation to the Board.

Priorities for 2020

- Review the Statement of Internal Control (SIC) and the Annual Financial Statements for 2019 (Q1)
- Comprehensive review of the organisation's Risk Management Framework (Q2 & Q3)
- Conduct a review of effectiveness of the ARC (Q2)
- Ongoing monitoring and review of cost saving, accountability and compliance measures
- Oversight of Inland Fisheries Ireland's compliance with the Code of Practice for the Governance of State Bodies 2016
- Adoption of an appropriate policy on the management of conflicts of interest
- Oversight of the progression of the organisation's Internal Communications strategy
- Oversight of the progression of the organisation's GDPR strategy
- Approve a risk-based Internal Audit Plan for 2021.

Conclusion

Progress has been made in relation to risk management, compliance, seeking assurance and accountability for taxpayers' money. The ARC is satisfied that, in general, there are adequate systems of control across the organisation and makes its recommendation in respect of same to the Board.

The members of the committee would like to thank the staff of Inland Fisheries Ireland for their professionalism and consistent commitment to improvement and progressing the governance of Inland Fisheries Ireland throughout the year.

Audited Financial Statements 2019

For the year ending
31 December 2019

Iascach Intíre Éireann
Inland Fisheries Ireland

Contents

General Information

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Governance Statement and Board Members' Report - 2019

The Board of Inland Fisheries Ireland was established under Section 6 of the Inland Fisheries Act 2010. The functions of the Board are set out in Section 7 of this Act. The Board is accountable to the Minister for Communications, Climate Action and Environment and is responsible for ensuring good governance and that the principal functions of the agency as set out under Section 7 are performed. The Board performs this task by setting strategic objectives and targets and taking strategic decisions on all key business issues. The regular day-to-day management, control and direction of Inland Fisheries Ireland are the responsibility of the CEO and the senior management team. The CEO and the senior management team must follow the broad strategic direction set out by the Board, and must ensure that all Board members have a clear understanding of the key activities and decisions related to the entity, and of any significant risks likely to arise. The CEO acts as a direct liaison between the Board and management of Inland Fisheries Ireland.

2.1 Governance

The work and responsibilities of the Board are set out in its Governance Policy 07 – 'Statement of Board Responsibilities'. Matters specifically reserved for Board decision are outlined in its Governance Policy 02 – 'Schedule of Decisions Reserved to the IFI Board of Directors'.

Standing items considered by the Board include:

- Declaration of interests
- Setting Board Strategy, in agreement with the Minister
- Reports from committees
- Financial reports/ management accounts
- Performance reports
- Reserved matters, and
- Risk

Section 46 of the Inland Fisheries Act 2010 requires the Board of Inland Fisheries Ireland to keep, in such form as may be approved by the Minister for Communications, Climate Action and Environment with consent of the Minister for Public Expenditure and Reform, all proper and usual accounts of money received and expended by it.

In preparing these financial statements, the Board of Inland Fisheries Ireland is required to:

- Select suitable accounting policies and apply them consistently;
- Make judgements and estimates that are reasonable and prudent;
- Prepare the financial statements on a going concern basis unless it is inappropriate to presume that it will continue in operation; and
- State whether applicable accounting standards have been followed, subject to any material departures disclosed and explained in the financial statements.

The Board is responsible for keeping adequate accounting records which discloses, with reasonable accuracy at any time, its financial position and enables it to ensure that the financial statements comply with **Section 46** of the Inland Fisheries Act 2010. The maintenance and integrity of the corporate and financial information on Inland Fisheries Ireland's website is the responsibility of the Board.

The Board is responsible for approving the annual plan and budget, this was completed at its meeting on 30 January 2019. An evaluation of the performance of Inland Fisheries Ireland by reference to the annual business plan was carried out at 6 of 11 meetings and the management accounts against budget were reported at all but two meetings of the Board. A budgetary review was undertaken by the Executive in June of 2019.

The Board is also responsible for safeguarding its assets and for taking reasonable steps for the prevention and detection of fraud and other irregularities. IFI's Anti-fraud Policy and Procedure was reviewed by the Executive, presented to the Audit & Risk Committee in November and following the application of feedback from the committee, was approved by the Board in December 2019.

The Board considers that the financial statements of Inland Fisheries Ireland give a true and fair view of the financial performance of the financial position of Inland Fisheries Ireland at 31 December 2019.

2.2 Board Structure

The Board consists of a Chairperson and nine ordinary members, seven of which are non-executive members, a staff nominee and the CEO. The Chairman, non-executive members of the Board and the staff nominee are appointed for a period of five years. The Board meets no less than six times a year. The table below outlines the details of members' appointment status during 2019.

Board member Listing

Position	Name	Appointed	Nomination
Chairman	Fintan Gorman*	10/09/2018	Ministerial
Ordinary Member	Martin McEnroe**	26/02/2014	Joint Oireachtas
Ordinary Member	Niall Greene**	01/07/2014	Ministerial
Ordinary Member	Frances Lucy	24/03/2015	Joint Oireachtas
Staff Nominee	Sean Coady	17/11/2015	Staff
Ordinary Member	Patrick Gibbons	13/01/2016	Joint Oireachtas
Ordinary Member	Bernadette Orbinski Burke	01/07/2016	Ministerial
Ordinary Member	Michael McGreal	22/03/2019	Ministerial
Ordinary Member	Seamus Boland	22/03/2019	Ministerial
Ordinary Member	Marie Louise Heffernan	01/05/2019	Joint Oireachtas
Ordinary Member	Fiona Walsh	12/07/2019	Ministerial
Executive	Ciaran Byrne	01/01/2010	CEO

* Second term of office (originally appointed 10 September 2013)
** Term of office ending in 2019: M. McEnroe (25 February 2019); N. Greene (30 June 2019)

The Board has established and currently operates one standing committee, two other sub-committees and a stakeholder representative forum as follows;

Audit and Risk Committee (Standing): comprises three Board members. The role of the Audit & Risk Committee (ARC) is to support the Board in relation to its responsibilities for issues of risk, control and governance and associated assurance. The ARC is independent from the financial management of the organisation. In particular the Committee ensures that the internal control systems including audit activities are monitored actively and independently. The ARC reports to the Board after each meeting, and formally in writing annually, in the form of the 'Annual Report of the Audit & Risk Committee'. The members of the ARC are; Professor Frances Lucy (Chairperson), Patrick Gibbons and Bernadette Orbinski Burke. There were four meetings of the ARC in 2019; the CEO and Head of Finance were invited to each of these meetings.

Salmon Committee: comprises three Board members. The members of this committee are Niall Greene (Chairperson), Sean Coady and Martin McEnroe. There were three meetings in 2019.

Fish Farm Working Group: comprises two Board members, four angling stakeholder representatives and two members of the senior management team. The Board members on this committee are Fintan Gorman (Chair) and Professor Frances Lucy.

2.3 Schedule of Attendance, Fees and Expenses

A schedule of attendance at the Board and committee meetings for 2019 is set out in Note 7 of the Financial Statements for 2019. This includes the fees and expenses received by each member: One Board member, Professor Frances Lucy, did not receive a Board fee under the One Person One Salary (OPOS) principle.

2.4 Key Personnel Changes in 2019

Two members reached the end of their term of office and four new members were appointed to the Board during the period.

2.5 Disclosures Required by the Code of Practice for the Governance of State Bodies (2016)

The Board is responsible for ensuring that Inland Fisheries Ireland has complied with the requirements of the Code of Practice for the Governance of State Bodies ('the Code'), as published by the Department of Public Expenditure and Reform in August 2016. The following disclosures are required by the Code.

Employee Short-term Benefits

There were 39 employee short-term benefits in excess of €60,000

See **Note 6** of the Financial Statements.

Consultancy Costs

Consultancy costs include the cost of external advice to management and exclude outsourced 'business-as-usual' functions. See Note 5a of the Financial Statements.

Travel and Subsistence Expenditure

Travel and subsistence expenditure is categorised as follows:

Remuneration and Other Pay Costs

	2019	2018
	€	€
Travel & subsistence - National *	1,030,513	948,959
Travel & subsistence – International	61,793	63,161
	1,092,306	1,012,120

*includes travel and subsistence of €27,623 paid directly to Board members in 2019. This figure was €33,417 in 2018. No international travel and subsistence payments were made for travel undertaken by Board members.

Legal Costs and Settlements

Legal Fees are for prosecution cases under fisheries legislation and corporate legal advice. Total legal costs in 2019 for prosecution cases were €233,424.

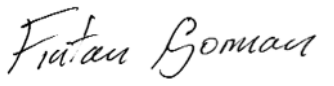
Hospitality Expenditure

	2019	2018
	€	€
Staff hospitality	9,391	3,436
Client hospitality	69	-
	9,460	3,436

Statement of Compliance

The Board has adopted the Code of Practice for the Governance of State Bodies (2016) and has put procedures in place to ensure compliance with the Code. Inland Fisheries Ireland was in full compliance with the Code of Practice for the Governance of State Bodies for the period 2019.

On Behalf of the Board of Inland Fisheries Ireland



Mr Fintan Gorman
Chairperson
Date 17th December 2020

Ard Reachtaire Cuntas agus Ciste
Comptroller and Auditor General

Report for presentation to the Houses of the Oireachtas

Inland Fisheries Ireland

Opinion on the financial statements

I have audited the financial statements of Inland Fisheries Ireland for the year ended 31 December 2019 as required under the provisions of section 46 of the Inland Fisheries Act 2010. The financial statements comprise

- the statement of income and expenditure and retained revenue reserves
- the statement of comprehensive income
- the statement of financial position
- the statement of cash flows and
- the related notes, including a summary of significant accounting policies.

In my opinion, the financial statements give a true and fair view of the assets, liabilities and financial position of Inland Fisheries Ireland at 31 December 2019 and of its income and expenditure for 2019 in accordance with Financial Reporting Standard (FRS) 102 — *The Financial Reporting Standard applicable in the UK and the Republic of Ireland*.

Basis of opinion

I conducted my audit of the financial statements in accordance with the International Standards on Auditing (ISAs) as promulgated by the International Organisation of Supreme Audit Institutions. My responsibilities under those standards are described in the appendix to this report. I am independent of Inland Fisheries Ireland and have fulfilled my other ethical responsibilities in accordance with the standards.

I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Report on information other than the financial statements, and on other matters

Inland Fisheries Ireland has presented certain other information together with the financial statements. This comprises the annual report, the governance statement and Board members' report and the statement on internal control. My responsibilities to report in relation to such information, and on certain other matters upon which I report by exception, are described in the appendix to this report.

I have nothing to report in that regard.

Andrew Harkness
For and on behalf of the
Comptroller and Auditor General
21 December 2020

Appendix to the report

Responsibilities of Board members

As detailed in the governance statement and Board members' report, the Board members are responsible for

- the preparation of financial statements in the form prescribed under section 10 of the Inland Fisheries Act 2010
- ensuring that the financial statements give a true and fair view in accordance with FRS102
- ensuring the regularity of transactions
- assessing whether the use of the going concern basis of accounting is appropriate, and
- such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Responsibilities of the Comptroller and Auditor General

I am required under section 10 of the Inland Fisheries Act 2010 to audit the financial statements of Inland Fisheries Ireland and to report thereon to the Houses of the Oireachtas.

My objective in carrying out the audit is to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement due to fraud or error. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with the ISAs, I exercise professional judgment and maintain professional scepticism throughout the audit. In doing so,

- I identify and assess the risks of material misstatement of the financial statements whether due to fraud or error; design and perform audit procedures responsive to those risks; and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- I obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal controls.
- I evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures.
- I conclude on the appropriateness of the use of the going concern basis of accounting and, based on the audit evidence obtained, on whether a material uncertainty exists related to events or conditions that may cast significant doubt on Inland Fisheries Ireland's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my report. However, future events or conditions may cause Inland Fisheries Ireland to cease to continue as a going concern.
- I evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

Information other than the financial statements

My opinion on the financial statements does not cover the other information presented with those statements, and I do not express any form of assurance conclusion thereon.

In connection with my audit of the financial statements, I am required under the ISAs to read the other information presented and, in doing so, consider whether the other information is materially inconsistent with the financial statements or with knowledge obtained during the audit, or if it otherwise appears to be materially misstated. If, based on the work I have performed, I conclude that there is a material misstatement of this other information, I am required to report that fact.

Reporting on other matters

My audit is conducted by reference to the special considerations which attach to State bodies in relation to their management and operation. I report if I identify material matters relating to the manner in which public business has been conducted.

I seek to obtain evidence about the regularity of financial transactions in the course of audit. I report if I identify any material instance where public money has not been applied for the purposes intended or where transactions did not conform to the authorities governing them.

I also report by exception if, in my opinion,

- I have not received all the information and explanations I required for my audit, or
- the accounting records were not sufficient to permit the financial statements to be readily and properly audited, or
- the financial statements are not in agreement with the accounting records.

Statement of Internal Control

4.1 Scope of Responsibility

On behalf of Inland Fisheries Ireland, I acknowledge the Board's responsibility for ensuring that an effective system of internal control is maintained and operated. This responsibility takes account of the requirements of the Code of Practice for the Governance of State Bodies (2016).

4.2 Purpose of the System of Internal Control

The system of internal control is designed to manage risk to a tolerable level rather than to eliminate it. The system can therefore only provide reasonable and not absolute assurance that assets are safeguarded, transactions authorised and properly recorded, and that material errors or irregularities are either prevented or detected in a timely way.

The system of internal control, which accords with guidance issued by the Department of Public Expenditure and Reform (DPER), has been in place in Inland Fisheries Ireland for the year ended 31 December 2019 and up to the date of approval of the financial statements.

4.3 Capacity to Handle Risk

Inland Fisheries Ireland's ARC comprises of three Board members, where members' skills sets incorporate; governance, legal, financial and audit expertise. The ARC met four times in 2019.

Inland Fisheries Ireland has outsourced its internal audit function, and the Internal Auditor conducts a programme of work agreed with the ARC and approved by the Board.

The ARC has developed a Risk Management Policy which sets out the risk management processes in place and details the roles and responsibilities of staff in relation to risk, Inland Fisheries Ireland has also developed a Statement of Risk Appetite. The policy has been issued to all senior staff who with their teams are expected to work within this policy, to ensure that emerging risks and control weaknesses are notified and addressed accordingly, and to assume responsibility for risks and controls within their own area of work.

4.4 Risk and Control Framework

Inland Fisheries Ireland has implemented a risk management system which identifies and reports key risks and the management actions being taken to address and, to the extent possible, to mitigate those risks.

A risk register is in place which identifies the key risks facing Inland Fisheries Ireland and these have been identified, evaluated and graded according to their significance. The register is reviewed by the ARC on a quarterly basis. The outcome of these assessments is used to plan and allocate resources to ensure risks are managed to an acceptable level.

The risk register details the controls and actions needed to mitigate risks and responsibility for operation of controls assigned to specific staff, I confirm that a control environment containing the following elements is in place;

- Procedures for all key business processes have been documented;
- Financial responsibilities have been assigned at management level;
- There is an appropriate budgeting system with an annual budget which is kept under review by senior management;
- There are systems aimed at ensuring the security of the information and communication technology systems;
- There are systems in place to safeguard assets; and
- Control procedures over grant funding to applicants have been implemented, ensuring adequate approval of grants and monitoring and review of grantees to ensure grant funding has been applied for the purpose intended.

4.5 Ongoing Monitoring and Review

Formal procedures have been established for monitoring control processes and control deficiencies are communicated to those responsible for taking corrective action and to management and the Board. I confirm that the following ongoing monitoring systems are in place:

- Key risks and related controls have been identified and processes have been put in place to monitor the operation of those key controls and report any identified;
- Reporting arrangements have been established at all levels where responsibility for financial management has been assigned; and
- There are regular reviews by senior management of periodic and annual performance and financial reports which indicate performance against budgets/ forecasts.

4.6 Procurement

I confirm that Inland Fisheries Ireland has procedures in place to ensure compliance with current procurement rules and guidelines and that during 2019 Inland Fisheries Ireland complied with those procedures.

4.7 Review of Effectiveness

I confirm that Inland Fisheries Ireland has procedures to monitor the effectiveness of its risk management and control procedures. Inland Fisheries Ireland's monitoring and review of the effectiveness of the system of internal financial control is informed by the work of the internal and external auditors, the ARC which oversees their work, and the senior management within Inland Fisheries Ireland is responsible for the development and maintenance of the internal financial control framework.

I confirm that the Board concluded an annual review of the effectiveness of the internal controls for 2019.

4.8 Internal Control Issues

No weaknesses in internal control were identified in relation to 2019 that require disclosure in the financial statements.

There was an error in interpretation of circular 18/2010 issued in 2010 to reduce the pay-scales of staff being recruited in the service has led to an underpayment of staff of €200,168 including Employer PRSI. The circular was aimed at entry level grades of staff but was interpreted by IFI as new entrants to the service.

The circular should only have applied to administration staff up to Executive Officer Grade and field staff up to Fishery Officer Grade, IFI applied the deduction across the full range of grades to anyone entering the service since 2010, hence leading to an underpayment of €200,168 including Employer PRSI. This amount has been accrued in the 2019 Financial Statements.

BIK Revenue Settlement

IFI sought advice from the Revenue Commissioners on the treatment of Benefit in Kind in certain circumstances. A ruling was made that the rationale for staff taking vehicles home did not meet the criteria set out in the tax code. As a result, in November 2019 a payment was made to the Revenue Commissioners for €277,659 including interest of €18,108. The settlement amount included €206,261 in respect of 2018 and this amount was accrued in the 2018 financial statements. IFI have taken steps to ensure compliance with the Revenue Commissioners' ruling, vehicles are now parked at a base or designated lock up.

On Behalf of the Board of Inland Fisheries Ireland

Mr. Fintan Gorman,
Chairperson
Date 17 December 2020

Statement of Income and Expenditure and Retained Revenue Reserves for the 12 months 31 December 2019

	Notes	2019		2018	
		€	€	€	€
Income					
State and EU Funding					
Oireachtas Grants	**2**	31,259,559		29,699,199	
Less Single Pension Scheme contributions remitted	**14a**	(124,210)		(95,681)	
Net deferred funding for pensions	**14c**	3,688,712	34,824,061	3,176,660	32,780,178
Other Income Department of Social Protection			86,827		151,000
Other	**3**		3,543,247		3,102,827
Total Other Income			**3,630,074**		**3,253,827**
Total Income			**38,454,135**		**36,034,005**
Expenditure					
Administration	**4**		6,296,855		5,856,141
Operations	**5**		31,053,579		27,560,637
			37,350,434		33,416,778
Surplus / (Deficit) for the Year before Appropriations			1,103,701		2,617,227
Transfer from / (to) Capital Account	**12**		(1,823,316)		(1,369,910)
Surplus / (Deficit) for the Year after Appropriations			**(719,615)**		**1,247,317**

Statement of Income and Expenditure and Retained Revenue Reserves for the 12 months 31 December 2019 (Continued)

Balance Brought Forward at 01 January	8,123,051	6,875,734
Balance Carried Forward at 31 December	**7,403,436**	**8,123,051**

The Statement of Cash Flows and notes 1 to 18 form part of these financial statements.
On Behalf of the Board of Inland Fisheries Ireland

Mr. Fintan Gorman - Chairperson
17th December 2020

Patrick Gibbons - Board Member
17th December 2020

Statement of Comprehensive Income for the 12 Months to 31 December 2019

	Notes	2019	2018
		€	€
Surplus / (Deficit) for the Year before Appropriations		1,103,701	2,617,227
Experience gains on retirement benefit obligations		2,489,000	2,005,000
Change in assumptions underlying the present value of retirement benefit obligations		(15,225,000)	(949,000)
Total actuarial gain/(loss) in the year	**14b**	(12,736,000)	1,056,000
Adjustment to deferred retirement benefits funding		12,736,000	(1,056,000)
Other Comprehensive Income for the year		1,103,701	2,617,227

The Statement of Cash Flows and notes 1 to 18 form part of these financial statements.
On Behalf of the Board of Inland Fisheries Ireland

Mr. Fintan Gorman - Chairperson
17th December 2020

Patrick Gibbons - Board Member
17th December 2020

Statement of Financial Position as at 31 December 2019

	Notes	2019	2018
		€	€
Fixed Assets			
Property, plant and equipments	**9**	21,716,312	19,892,996
Current Assets			
Inventory		344,853	383,591
Cash and cash equivalents	**16**	14,905,070	16,312,857
Receivables	**10**	953,950	438,550
		16,203,873	17,134,998
Current liabilities (amounts falling due within one year)			
Payables	**11**	8,800,437	9,011,947
		8,800,437	9,011,947
NET CURRENT ASSETS/(LIABILITIES)		7,403,436	8,123,051
TOTAL ASSETS LESS CURRENT LIABILITIES BEFORE PENSIONS		29,119,748	28,016,047
Deferred retirement benefit funding asset	**14c**	138,159,675	121,734,963
Retirement benefit obligations	**14b**	(138,159,675)	(121,734,963)
TOTAL ASSETS LESS CURRENT LIABILITIES		29,119,748	28,016,047
NET ASSETS/(LIABILITIES)		29,119,748	28,016,047
Reserves - representing Net Assets Transferred to Inland Fisheries Ireland			
Capital account	**12**	21,716,312	19,892,996
Surplus on Income and Expenditure and retained Revenue Reserves		7,403,436	8,123,051
		29,119,748	28,016,047

Statement of Financial Position as at 31 December 2019 (Continued)

The Statement of Cash Flows and notes 1 to 18 form part of these financial statements.
On Behalf of the Board of Inland Fisheries Ireland

Mr. Fintan Gorman - Chairperson
17th December 2020

Patrick Gibbons - Board Member
17th December 2020

Statement of Cashflows for the 12 Months to 31 December 2019

	2019	2018
	€	€
Net Cash Flows from Operating Activities		
Excess Income over Expenditure	1,103,701	2,617,227
Depreciation and Impairment of Fixed Assets	2,130,088	1,669,400
(Increase)/Decrease in Receivables	(515,400)	893,966
Increase/(Decrease) in Payables	(211,510)	1,188,483
(Profit) / Loss on sale of fixed assets	(276,792)	(86,297)
Net interest	23,016	19,054
(Increase)/Decrease in Inventory	38,738	(43,648)
Net Cash Inflow/(Outflow) from Operating Activities	**2,291,841**	**6,258,185**
Cash Flows from Investing Activities		
Payments to acquire Property, Plant & Equipment	(3,966,484)	(3,040,630)
Proceeds from the disposals of Property Plant & Equipment	289,872	87,617
Net Cash Inflow/(Outflow) from Investing Activities	**(3,676,612)**	**(2,953,013)**
Cash Flows from Financing Activities		
Net interest	(23,016)	(19,054)
Net Cash Inflow/(Outflow) from Financing Activities	**(23,016)**	**(19,054)**
Net Increase / (Decrease) in cash and cash equivalents	**(1,407,787)**	**3,286,118**

Statement of Cashflows for the 12 Months to 31 December 2019 (Continued)

	2019	2018
	€	€
Reconciliation of net Cash Inflow/(Outflow) to movement in net funds		
Increase / (Decrease) in cash	(1,407,787)	3,286,118
Cash and cash equivalents at the beginning of the year	16,312,857	13,026,739
Cash and cash equivalents at the end of the year	**14,905,070**	**16,312,857**

The Statement of Cash Flows and notes 1 to 18 form part of these financial statements.

On Behalf of the Board of Inland Fisheries Ireland

Mr. Fintan Gorman - Chairperson
17th December 2020

Patrick Gibbons - Board Member
17th December 2020

Notes to the Financial Statements For the year ended 31 December 2019

1. Accounting Policies

The basis of accounting and significant accounting policies adopted by Inland Fisheries Ireland are set out below. They have all been applied consistently throughout the year and for the preceding year.

a) General Information

Inland Fisheries Ireland was set up under the Fisheries Act 2010 with a head office at 3044 Lake Drive, Citywest Business Campus, Dublin 24, D24 Y265.

Inland Fisheries Ireland primary objectives are to protect, manage and conserve Ireland's inland fisheries resource.

Inland Fisheries Ireland is a Public Benefit Entity (PBE).

b) Statement of Compliance

The financial statements of Inland Fisheries Ireland for the year ended 31 December 2019 have been prepared in accordance with FRS 102, the financial reporting standard applicable in the UK and Ireland issued by the Financial Reporting Council (FRC), as promulgated by Chartered Accountants Ireland.

c) Basis of Preparation

The financial statements have been prepared under the historical cost convention, except for certain assets and liabilities that are measured at fair values as explained in the accounting policies below. The financial statements are in the form approved by the Minister for Communications, Climate Action and Environment with the concurrence of the Minister for Public Expenditure and Reform under the Inland Fisheries Act 2010. The following accounting policies have been applied consistently in dealing with items which are considered material in relation to Inland Fisheries Ireland's financial statements.

d) Revenue

Oireachtas Grants

Income from Oireachtas Grants is accounted for on a cash receipts basis.

Income from the Department of Culture, Heritage, and the Gaeltacht under its Rural Recreation scheme is accounted for on an accruals basis.

Income from the Department of Communications, Climate Action and Environment in respect of National Strategy for Angling Development (NSAD) and the Eel Fisherperson Support Scheme are accounted for on an accruals basis.

All other income received is accounted for on an accruals basis.

Refunds of grants paid

Grants paid become refundable in certain circumstances, such as liquidation/dissolution of the recipient company, or if the conditions of the grant are not met. Grant refunds are recognised when it is probable that the money will be received by Inland Fisheries Ireland and the amount can be estimated reliably; therefore they are accounted for on an accruals basis.

Interest income

Interest income is recognised on an accruals basis using the effective interest rate method.

Other Revenue

Other revenue is recognised on an accruals basis except for Conservation fund, fines & forfeitures, sale of publications and Freedom of Information request fees which are reported on a cash received basis.

e) Capital Account

The Capital Account represents the unamortised amount of income used to purchase fixed assets.

e) Property, Plant and Equipment

Property, plant and equipment are stated at cost less accumulated depreciation, adjusted for any provision for impairment. Depreciation is provided on all property, plant and equipment, other than freehold land and artwork, at rates estimated to write off the cost less the estimated residual value of each asset on a straight line basis over their estimated useful lives, as follows:

(i)	Buildings and Hatcheries	2%
(ii)	Motor Vehicles	20%
(iii)	Field Equipment	25%
(iv)	Laboratory Equipment	33⅓%
(v)	Boats	10%
(vi)	Trailers	10%
(vii)	Engines	20%
(viii)	Furniture and Office Equipment	20%
(ix)	Computers	33⅓%

Residual value represents the estimated amount which would currently be obtained from disposal of an asset, after deducting estimated costs of disposal, if the asset were already of an age and in the condition expected at the end of its useful life.

If there is objective evidence of impairment of the value of an asset, an impairment loss is recognised in the Statement of Income and Expenditure and Retained Revenue Reserves in the year.

f) Inventory

Inventory consists of goods for resale, and is recognised in the financial statements at the lower of Cost and Net Realisable Value (NRV). Cost is calculated on a first-in-first-out (FIFO) basis and includes all purchase costs. NRV is the selling price (actual or estimated) less all necessary completion costs. Stock in the fish farm is calculated with an assumed mortality rate of 60%.

g) Receivables

Receivables are recognised at fair value, less a provision for doubtful debts. The provision for doubtful debts is a specific provision, and is established when there is objective evidence that Inland Fisheries Ireland will not be able to collect all amounts owed to it. All movements in the provision for doubtful debts are recognised in the Statement of Income and Expenditure and Retained Revenue Reserves.

h) Operating Leases

Rental expenditure under operating leases is recognised in the Statement of Income and Expenditure and Retained Revenue Reserves over the life of the lease. Expenditure is recognised on a straight-line basis over the lease period, except where there are rental increases linked to the expected rate of inflation, in which case these increases are recognised when incurred. Any lease incentives received are recognised over the life of the lease.

i) Employee Benefits

Short-term Benefits

Short term benefits such as holiday pay are recognised as an expense in the year, and benefits that are accrued at year-end are included in the Payables figure in the Statement of Financial Position.

Retirement Benefits

Inland Fisheries Ireland previously established its own defined benefit pension scheme, funded annually on a pay-as-you-go basis from monies provided by the Department of Communications, Climate Action and Environment and from contributions deducted from staff members' salaries which are retained. Inland Fisheries Ireland also operates the Single Public Services Pension Scheme ("Single Scheme"), which is a defined benefit scheme for pensionable public servants appointed on or after 1 January 2013. Single Scheme members' contributions are paid over to the Department of Public Expenditure and Reform (DPER).

Pension costs reflect pension benefits earned by employees, and are shown net of staff pension contributions. An amount corresponding to the pension charge is recognised as income to the extent that it is recoverable, and offset by grants received in the year to discharge pension payments.

Actuarial gains or losses arising on scheme liabilities are reflected in the Statement of Comprehensive Income, and a corresponding adjustment is recognised in the amount recoverable from the Department of Communications, Climate Action and Environment.

The financial statements reflect, at fair value, the assets and liabilities arising from Inland Fisheries Ireland's pension obligations and any related funding, and recognises the costs of providing pension benefits in the accounting periods in which they are earned by employees. Retirement benefit scheme liabilities are measured on an actuarial basis using the projected unit credit method.

j) Critical Accounting Judgements and Estimates

The preparation of the financial statements requires management to make judgements, estimates and assumptions that affect the amounts reported for assets and liabilities as at the balance sheet date and the amounts reported for revenues and expenses during the year. However, the nature of estimation means that actual outcomes could differ from those estimates. The following judgements have had the most significant effect on amounts recognised in the financial statements.

Impairment of Property, Plant and Equipment

Assets that are subject to amortisation are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less cost to sell and value in use.

For the purpose of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash flows (cash generating units). Non-financial assets that suffered impairment are reviewed for possible reversal of the impairment at each reporting date.

Depreciation and Residual Values

The Directors have reviewed the asset lives and associated residual values of all fixed asset classes, and in particular, the useful economic life and residual values of fixtures and fittings, and have concluded that asset lives and residual values are appropriate.

Provisions

Inland Fisheries Ireland makes provisions for legal and constructive obligations, which it knows to be outstanding at the period end date. These provisions are generally made based on historical or other pertinent information, adjusted for recent trends where relevant. However, they are estimates of the financial costs of events that may not occur for some years. As a result of this and the level of uncertainty attaching to the final outcomes, the actual out-turn may differ significantly from that estimated.

Retirement Benefit Obligation

The assumptions underlying the actuarial valuations for which the amounts recognised in the financial statements are determined (including discount rates, rates of increase in future compensation levels, mortality rates and healthcare cost trend rates) are updated annually based on current economic conditions, and for any relevant changes to the terms and conditions of the pension and post-retirement plans.

The assumptions can be affected by:

(i) the discount rate, changes in the rate of return on high-quality corporate bonds

(ii) future compensation levels, future labour market conditions

Notes to the Financial Statements for the 12 months to 31 December 2019

2 Oireachtas Grants

The Oireachtas Grants voted to IFI from Vote 29 Communications, Climate Action and Environment, Sub Head E3 Inland Fisheries as shown in the financial statements consist of:

	2019	2018
Inland Fisheries Ireland	€	€
Current Expenditure Grant	28,027,736	25,246,000
Current Expenditure Grant - NSAD	576,605	650,146
Capital Expenditure Grant	2,655,218	3,803,053
	31,259,559	**29,699,199**

3 **Other Income**			2019 €	2018 €
Contract work			971,337	700,573
Fish Farm income			352,864	303,359
Permit Income			586,628	558,791
Licence Income				
Rod		462,045		
Commercial Fishing		34,617		
Part X Dealers		35,455		
State Fisheries		74,975	607,092	594,632
Salmon Conservation Funding			388,324	202,516
Fines & Forfeitures	(a)		124,531	63,283

Notes to the Financial Statements for the 12 months to 31 December 2019

3	**Other Income (Continued)**		
	Fishery Rates	234,318	229,832
	Department of Social Protection - Community Employment	86,827	151,000
	Profit (Loss) on Sale of Fixed Assets	276,792	86,297
	Department of Culture, Heritage and Gaeltacht - Rural Recreation Fund	-	345,131
	Miscellaneous	1,361	18,413
		3,630,074	**3,253,827**

(a) During 2019 amounts, totalling €22,065 were paid from the Communications, Climate Action and Environment Vote under Section 315(3) of the Fisheries (Consolidation) Act 1959. These are included in Fines and Forfeitures (2018: € 11,667).

Notes to the Financial Statements for the 12 months to 31 December 2019

		Notes		
			2019	2018
4	Administration	6	€	€
	Staff costs and Board Members' fees	8e	4,563,627	4,085,854
	Office expenses		332,740	302,495
	Bank interest		24,088	20,126
	Advertising & public information		83,036	79,995
	Publicity & promotion		160,799	178,850
	Professional fees		229,486	229,810
	Audit fee		33,000	30,000
	Board expenses		32,752	33,978
	Legal Fees		31,399	51,734
	Insurance		51,540	42,891
	Depreciation	9	432,164	448,633
	Computer Expenditure	8d	156,122	156,690
	Miscellaneous	8b	111,119	107,286
	Bad debt provision	8b	54,983	87,799
			6,296,855	**5,856,141**

Notes to the Financial Statements for the 12 months to 31 December 2019

		Notes		
			2019	2018
5	Operations		€	€
	Staff costs	**6**	21,643,066	20,603,140
	Office expenses	**8e**	633,598	613,122
	Safety		708,652	375,861
	Training		421,464	216,941
	Legal Fees		251,704	179,483
	Professional fees		1,799,244	615,534
	Repairs & maintenance	**8e**	97,725	87,207
	Field supplies		337,762	243,782
	Development Works	**8c**	364,395	467,373
	Development Supplies	**8c**	790,400	652,345
	Running & upkeep of vehicles & boats	**8a**	1,346,675	1,281,735
	Laboratory expenses		39,957	57,397
	Purchase of fish & fish food		151,373	140,968
	Insurance		267,005	239,645
	Depreciation	**9**	1,697,924	1,220,767
	Dilapidations	**8b**	-	125,000
	Miscellaneous	**8b**	286,393	262,004
	Computer Expenditure	**8d**	159,549	123,856
	Licence and permit commission		56,693	54,477
			31,053,579	**27,560,637**
	Total expenditure		**37,350,434**	**33,416,778**

Notes to the Financial Statements for the 12 months to 31 December 2019

5a

	2019	2017
Consultancy Costs - Detail	€	€
Business Improvement	98,520	112,985
Financial	76,898	74,429
HR/Pension	93,300	102,702
Legal Fees	283,104	230,867
Consultant Engineer	33,875	31,269
Eel Survey	24,100	71,660
Eel Support Scheme payments *	1,325,340	-
Environmental Consultant	97,461	115,745
Medical Services	29,973	20,714
Veterinary Services	18,434	14,553
Lice Tracking	33,558	104,738
Other	38,979	46,591
Other Capital	103,853	23,647
PR / Marketing	124,952	128,342
Total	**2,382,347**	**1,078,242**

* The Department of Communication, Climate Action and the Environment offers a restitution payment via the Eel Fisherpersons Support Scheme to former eel fisherpersons who were licenced/permitted to engage with the commercial eel fishery in 2007.

Notes to the Financial Statements for the 12 months to 31 December 2019

6 Remuneration and Other Pay Costs

			2019	2018
			€	€
6a	Salaries & wages *		19,051,688	18,064,168
	Board Members fees	7	61,534	51,852
	Travel & subsistence - National		1,030,513	915,542
	Travel & subsistence - International		61,793	63,161
	Pension costs	14a	6,001,165	5,594,271
			26,206,693	**24,688,994**

Included in salaries and wages are:

- amounts totalling €1.247m paid to 269 staff (2018: €1.244m paid to 256 staff) in relation to unsocial hours payments

- No termination benefits were paid in 2019

	2019	2018
Number of employees	**Number**	**Number**
Managerial & clerical	67	65
Research / technical	253	243
Other	1	1
Total Staff	**321**	**309**

Notes to the Financial Statements for the 12 months to 31 December 2019

6b Range of salary short term employee benefits

From	To	2019	2018
€60,000	€69,999	36	22
€70,000	€79,999	3	1
€80,000	€89,999	9	10
€90,000	€99,999	1	-
€100,000	€109,999	4	4
€110,000	€119,999	-	-
€120,000	€129,999	-	-
€130,000	€139,999	-	-
€140,000	€149,999	-	1
€150,000	€159,999	-	-
€160,000	€169,999	-	-
€170,000	€179,999	1	-

Note: for the purposes of this disclosure, short term employee benefits in relation to services rendered during the reporting period include salary, overtime, allowances and other payments made on behalf of the employee, but exclude employer's prsi

6c Aggregate Employee Benefits	2019	2018
	€	€
Staff salary and short-term benefits Permanent Staff	16,475,239	14,846,437
Staff salary and short-term benefits Contract Staff	960,491	856,873
Retirement benefit costs	6,001,165	5,594,271
Employer contribution to social welfare	1,670,553	1,581,087
	25,107,448	**22,878,668**

Notes to the Financial Statements for the 12 months to 31 December 2019

6d	Staff Short-Term Benefits	2019	2018
		€	€
	Basic Pay	14,645,393	14,211,872
	Overtime	14,734	14,994
	Allowances	1,302,477	1,292,387
		15,962,604	**15,519,253**

***Salaries and wages**
Benefit in kind

Following legal tax advice, IFI agreed a liability for 2018 of €192,151 plus interest of €14,110 Total €206,261. A liability of €71,397 including interest (€3,998) was established for 2019, up to 31.10.19. Vehicles are now parked at a base or designated lock-up and IFI have taken steps to ensure compliance with Revenue going forward. Two areas are awaiting Revenue approval, however the full potential liability has been included in the agreement. The key issues in dispute were rostered and scheduling of staff call outs.

Notes to the Financial Statements for the 12 months to 31 December 2019

6e Key Management Personnel

Key management personnel in Inland Fisheries Ireland consists of the members of the Board, the Chief Executive Officer, Head of Finance & Logistics, Head of Operations, Head of Business Development, Head of Research & ICT and Head of Human Resources. The total value of employee benefits for key management personnel is set out below:

	2019	2018
	€	€
Salary	736,179	680,590
Allowances	-	-
Termination Benefits	-	-
Health Insurance	-	-
	736,179	**680,590**

This does not include the value of retirement benefits earned in the period. The key management personnel with the exception of the Board Members are members of Inland Fisheries Ireland pension scheme and their entitlements in that regard do not extend beyond the terms of the model public service pension scheme.

6f Chief Executive Officer's Remuneration

The Chief Executive's remuneration comprised of:

	2018	2017
	€	€
Basic Annual Salary	148,909	141,184
Arrears	21,833	-
Employer PRSI	17,116	14,055
Total	**187,859**	**155,240**

The CEO is a member of Inland Fisheries Ireland pension scheme and his entitlements do not extend beyond the standard entitlement in the model public sector defined benefit superannuation scheme. The value of retirement benefits earned in the period is not included here. The CEO received recoupment of travel and subsistence of €9,640 in 2019 (2018: €9,191). There were no payments made to Dr. Ciaran Byrne, Chief Executive Officer, under performance related pay schemes in the period. €21,883 arrears were paid to the CEO in 2019. Annual Salary is €159,729.

Notes to the Financial Statements for the 12 months to 31 December 2019

7 The following amounts were paid to Board members for the 12 months ended 31 December 2019

	Board	Audit & Risk Committee	Salmon Committee	Mileage & Subsistence	Fees & Remuneration
	2019	**2019**	**2019**	**2019**	**2019**
Number of Meetings					
Fintan Gorman (Chairperson) [E]	11			10,535	11,970
Prof Frances Lucy [A,E]	10	4		1,879	-
Martin McEnroe [C,D]	1		2	812	1,160
Niall Greene [D]	5		3		3,848
Sean Coady [C,D,F]	11		3	5,349	8,455
Patrick Gibbons [A,C]	11	4		690	7,695
Bernadette Orbinski Burke [A]	9	4		324	7,695
Seamus Boland	7				5,982
Michael McGreal	8			3,025	5,982
Marie Louise Heffernan	8			5,011	5,130
Fiona Walsh	5				3,617
				27,625	**61,534**

Notes to the Financial Statements for the 12 months to 31 December 2019

The following amounts were paid to Board members for the 12 months ended 31 December 2018

Board	Mileage & Subsistence	Fees & Remuneration	Meetings Attended
	2018	**2018**	**2018**
Fintan Gorman (Chairperson) [A,E]	10,616	11,970	12
Prof Frances Lucy [A,E]	3,723	-	16
Martin McEnroe [C,D]	4,603	7,695	18
Niall Greene [D]	816	7,695	12
Sean Coady [C,D,F]	5,633	8,449	17
Patrick Gibbons [A,C]	360	7,695	16
Bernadette Orbinski Burke [A]	1,117	7,695	14
Fidelma McGuirk [B,D]	6,549	653	-
	33,417	**51,852**	

The total number of meetings held in 2019 was 18 (2018: 27 meetings)

Prof Frances Lucy did not receive a Board fee under the One Person One Salary principle (OPOS) Some members also serve on Board Subcommittees:

A denotes Audit & Risk Sub Committee
B Resigned from the Board 31st January 2018
C denotes Protection Sub Committee
D denotes Salmon Sub Committee
E denotes Fish Farm Working Group
F Sean Coady is the staff representative on the Board and his fee shown above includes Employer PRSI.

Notes to the Financial Statements for the 12 months to 31 December 2019

		2019	2018
		€	€
8a	Running & upkeep of vehicles & boats		
	Vehicle Insurance	102,580	120,851
	Vehicle repairs & maintenance	280,088	324,806
	Vehicle fuel	457,577	492,602
	Boat Insurance	43,596	30,509
	Boat repairs & maintenance	111,438	177,568
	Boat fuel	36,242	32,980
	Covert Car Hire	2,509	6,591
	Storage of Boats & Vehicles	8,556	1,727
	Other running costs	304,089	94,101
		1,346,675	**1,281,735**

Notes to the Financial Statements for the 12 months to 31 December 2019

		2019	2018
		€	€
8b	**Miscellaneous**		
	Magazines / periodicals	3,904	1,826
	Meeting Expenses	48,304	26,130
	Courier	9,225	7,227
	Facilities Expenditure	67,166	73,812
	Fish Vaccines	2,761	4,808
	Hatchery Costs	35,935	41,482
	Domestic supplies	20,878	23,561
	Cleaning	53,175	54,527
	Security	46,223	29,997
	Equipment repairs & maintenance	59,580	65,573
	Bad Debts Provision	54,983	87,799
	Bad Debts Write Off	-	-
	Equipment under €500	39,906	36,911
	Dilapidations *	-	125,000
	Sundry	10,455	3,436
		452,495	**582,089**

* Lease on Swords warehouse was terminated at break clause in 2018. Dilapidations were a condition of the lease.

Notes to the Financial Statements for the 12 months to 31 December 2019

		2019	2018
		€	€
8c	**Development Expenditure**		
	Sub-contract / plant hire	360,858	396,248
	Development supplies	790,400	652,345
	Rehabilitation Works	3,537	47,742
	Angling Works	-	23,383
		1,154,795	**1,119,718**
8d	**Computer Expenditure**		
	Computer consumables	10,010	6,766
	Computer software	114,621	66,654
	Computer Maintenance & Licencing	191,040	207,126
		315,671	**280,546**
8e	**Office expenses**		
	Printing & stationery	83,162	72,318
	Postage & telephone	88,814	90,842
	Mobile phones & Broadband & Antennae Masts & Off-Site Communication	313,538	267,154
	Rent & rates	103,179	119,734
	Heat & light	247,872	278,109
	Repairs & maintenance	227,498	174,667
		1,064,063	**1,002,824**

Notes to the Financial Statements for the 12 months to 31 December 2019

9 Property, Plant & Equipment

	Land, buildings, fisheries & hatcheries	Motor vehicles	Boats & engines	Field & lab equip. incl Trailers	Furniture, office equip. & computers	Total
	€	€	€	€	€	€
Cost or valuation						
At 1 Jan 2019	20,945,219	5,208,221	5,563,823	5,882,122	2,781,959	40,381,344
Reclass 1 Jan 2019	-	-	(24,960)	24,960	-	0
Additions for year	410,531	1,904,762	1,325,517	196,448	129,226	3,966,484
Disposals for year	-	(1,559,421)	(309,416)	(74,513)	(58,715)	(2,002,065)
At 31 December 19	**21,355,750**	**5,553,562**	**6,554,964**	**6,029,017**	**2,852,470**	**42,345,763**
Depreciation						
At 1 Jan 2019	4,671,503	4,902,934	3,137,054	5,204,888	2,571,969	20,488,348
Reclass 1 Jan 2019	-	-	(3,702)	3,702	-	0
Charge for year	421,804	658,968	590,029	302,786	156,501	2,130,088
Disposals for year	-	(1,559,421)	(307,683)	(63,166)	(58,715)	(1,988,985)
At 31 December 19	**5,093,307**	**4,002,481**	**3,415,698**	**5,448,210**	**2,669,755**	**20,629,451**
Net Book Value						
At 1 January	16,273,716	305,287	2,426,769	677,234	209,990	19,892,996
Net Movement for the year	(11,273)	1,245,794	712,497	(96,427)	(27,275)	1,823,316
At 31 December	**16,262,443**	**1,551,081**	**3,139,266**	**580,807**	**182,715**	**21,716,312**

Notes to the Financial Statements for the 12 months to 31 December 2019

9 Property, Plant & Equipment (continued)

In Respect of Prior Year

	Land, buildings, fisheries & hatcheries	Motor vehicles	Boats & engines	Field & lab equip. incl Trailers	Furniture, office equip. & computers	Total
	€	€	€	€	€	€
Cost or valuation						
At 1 Jan 2018	20,887,617	5,807,544	3,180,103	5,521,834	2,698,109	38,095,207
Reclass 1 Jan 2018	-	-	(37,958)	37,958	0	(0)
Additions for year	57,602	-	2,450,623	405,435	126,970	3,040,630
Disposals for year	0	(599,323)	(28,945)	(83,105)	(43,120)	(754,493)
At 31 December 18	**20,945,219**	**5,208,221**	**5,563,823**	**5,882,122**	**2,781,959**	**40,381,344**
Depreciation						
At 1 Jan 2018	4,260,422	5,121,786	2,856,825	4,990,419	2,342,669	19,572,121
Reclass 1 Jan 2018	-	-	(3,267)	3,264	0	(3)
Charge for year	411,081	380,470	312,436	293,001	272,412	1,669,400
Disposals for year	0	(599,322)	(28,940)	(81,796)	(43,112)	(753,170)
At 31 December 18	**4,671,503**	**4,902,934**	**3,137,054**	**5,204,888**	**2,571,969**	**20,488,348**
Net Book Value						
31 December 2017	16,627,195	685,758	323,278	531,415	355,440	18,523,086
Net Book Value						
31 December 2018	**16,273,716**	**305,287**	**2,426,769**	**677,234**	**209,990**	**19,892,996**

Notes to the Financial Statements for the 12 months to 31 December 2019

10 Analysis of receivables

	2019	2018
	€	€
Trade debtors etc.	1,188,637	783,622
Accrued Income	18,008	16,984
Bad debt provision	(494,979)	(439,996)
Other prepayments	242,284	77,940
	953,950	**438,550**

Notes to the Financial Statements for the 12 months to 31 December 2019

11 Analysis of payables

	2019	2018
	€	€
Deferred Income		
Deferred Contract income	104,300	119,870
Department Culture, Heritage and the Gaeltacht - Rural Recreation Fund	171,885	171,885
National Strategy for Angling Development	944,942	1,521,480
Eel Hardship Scheme	1,011,067	1,200,000
Total Deferred Income	**2,232,194**	**3,013,235**
Funds held in trust		
Salmon Conservation Fund	3,412,230	3,374,955
Trade creditors and accruals	3,156,014	2,623,757
	8,800,438	**9,011,947**

Salmon Conservation Funds are generated from the sale of salmon angling and commercial fishing licences. The revenue generated from the Salmon Conservation Fund is reinvested to promote the recovery of our salmon stocks and habitats taking into account project feasibility, funding availability and value for money considerations.

The Fund is being managed by Inland Fisheries Ireland and is accounted for as a Creditor on the statement of financial position. Where Inland Fisheries Ireland incurs direct expenditure on projects related to Fund activities it is reimbursed from the Fund. IFI's direct expenditure is charged to the Income and Expenditure and retained revenue reserves. Reimbursement from the Fund is accounted for by Inland Fisheries Ireland as Other Income (Note 3) on a cash receipts basis. All other transactions in relation to the Fund, including payments to third parties, are accounted for as movements in the Creditors figure.

Notes to the Financial Statements for the 12 months to 31 December 2019

11 Analysis of payables (Continued)

Transactions in relation to the Salmon Conservation Fund in 2019 are disclosed below.

	2019	2018
	€	€
Opening Balance	3,374,955	3,155,750
Receipts	477,010	468,939
Interest earned	571	1,033
Expenditure		
Insurance SCF Employer and Public Liability	(7,086)	(7,599)
To third parties	(44,896)	(40,652)
To IFI*	(388,324)	(202,516)
Closing Balance	**3,412,230**	**3,374,955**

* Accounted for by IFI as Other Income.

Notes to the Financial Statements for the 12 months to 31 December 2019

	Deferred Contract Income	Rural Recreation Fund	NSAD	Eel Fisherpersons Support Scheme	Total
	A	B	C	D	
Opening Balance	119,870	171,885	1,521,480	1,200,000	3,013,235
Receipts in year	27,355	-	-	1,200,000	1,227,355
Released to Income and Expenditure	(42,925)	-	(576,538)	(1,388,933)	(2,008,396)
Closing Balance	**104,300**	**171,885**	**944,942**	**1,011,067**	**2,232,194**

A Licence Income, Genetic Trout Study in the case of contract income

B The Department of Culture, Heritage and the Gaeltacht provides funding fom the Rural Recreation Fund to develop key angling projects in rural areas

C The Department of Communication, Climate Action and the Environment provides funding for any individual, angling club etc. with an interest in the development and improvement in Irish angling and/or fisheries under the National Strategy for Angling Development (NSAD).

D The Department of Communication, Climate Action and the Environment offers a restitution payment via the Eel Fisherpersons Support Scheme to former eel fisherpersons who were licenced/permitted to engage with the commercial eel fishery in 2007.

Notes to the Financial Statements for the 12 months to 31 December 2019

12 Capital account

	2019	2018
	€	€
Balance at 1 Jan	19,892,996	18,523,086
Transfer (to) / from Income and Expenditure and retained revenue reserves		
To fund fixed asset purchases	3,966,484	3,040,630
Amount Released on Disposal of Fixed Assets	(13,080)	(1,323)
Amortisation in line with asset depreciation	(2,130,088)	(1,669,397)
	1,823,316	1,369,910
Balance	**21,716,312**	**19,892,996**

13 Related Party Disclosures

Inland Fisheries Ireland adopts procedures in accordance with the guidelines issued by the Department of Public Expenditure and Reform covering the personal interests of Board members. In the normal course of business, Inland Fisheries Ireland may approve grants or enter into other contractual arrangements with entities in which Inland Fisheries Ireland Board members are employed or are otherwise interested.

In cases of potential conflict of interest, Board members do not receive Board documentation or otherwise participate in or attend discussions regarding these transactions. A register is maintained and available on request of all such instances.

There were no 3rd party disclosures in 2019.

Notes to the Financial Statements for the 12 months to 31 December 2019

14 Retirement Benefit Costs

a	Analysis of total Retirement benefit costs charged to the Statement of Income and Expenditure and Retained Revenue Reserves		
	Current service costs	4,148,000	4,048,000
	Interest on retirement benefit scheme liabilities	2,508,000	2,162,000
	Employee contributions - Non Single Pension Scheme	(530,625)	(520,048)
	Employee contributions - Single Pension Scheme	(124,210)	(95,681)
		6,001,165	5,594,271
b	Movement in Net retirement benefit obligations during the financial year		
	Net retirement benefit obligation at 1 January	(121,734,963)	(119,614,303)
	Current Service Cost	(4,148,000)	(4,048,000)
	Interest Costs	(2,508,000)	(2,162,000)
	Experience gains on retirement benefit obligations	2,489,000	2,005,000
	Change in assumptions underlying the present value of retirement benefit obligations	(15,225,000)	(949,000)
	Total actuarial gain/(loss) in the year	(12,736,000)	1,056,000
	Pensions paid in the period	2,967,288	3,033,340
	Net retirement benefit obligation at 31 December	(138,159,675)	(121,734,963)

Notes to the Financial Statements for the 12 months to 31 December 2019

14 Retirement Benefit Costs (Continued)

c Deferred Funding for Pensions

Inland Fisheries Ireland recognises these amounts as an asset corresponding to the unfunded deferred liability for retirement benefits on the basis of the set of assumptions described above and a number of past events. These events include the statutory basis for the establishment of the pension scheme, and the policy and practice currently in place in relation to funding public service pensions including contributions by employees and the annual estimates process. Inland Fisheries Ireland has no evidence that this funding policy will not continue to meet such sums in accordance with current practice.

The Net Deferred Funding for retirement benefits recognised in the statement of Income and Expenditure and retained revenue reserves was as follows:

	2019	2018
	€	€
Funding Recoverable in respect of current year Retirement benefit costs	(6,656,000)	(6,210,000)
State Grant applied to pay retirement benefits	2,967,288	3,033,340
	(3,688,712)	(3,176,660)

The deferred funding asset for retirement benefits as at 31 December 2019 amounted to €138,159,676 (31 December 2018: €121,734,963)

Notes to the Financial Statements for the 12 months to 31 December 2019

		2019	2018	2017	2016	2015
		€	€	€	€	€
d	History of defined benefit obligations					
	Defined benefit obligations	(138,159,675)	(121,734,963)	(119,614,303)	(113,391,679)	(99,923,467)
	Experience gains / (losses) on defined benefit scheme liabilities	2,489,000	2,005,000	(917,000)	1,114,000	6,499,000
	Percentage of Scheme Liabilities	2%	2%	-1%	1.0%	7%

Notes to the Financial Statements for the 12 months to 31 December 2019

14 Retirement benefit costs Cont.

e The total amount recognised in the Statement of Comprehensive Income amounts to €12,736,000 (Experience gain/loss €2,489,000 and changes in assumptions -€15,225,000)

f General Description of the Scheme

The pension scheme is a defined benefit final salary pension arrangement with benefits and contributions defined by reference to current "model" public sector scheme regulations. The scheme provides a pension (eightieths per year of service), a gratuity or lump sum (three eightieths per year of service) and spouse's and children's pensions. Normal Retirement Age is a member's 65th birthday and pre 2004 members have an entitlement to retire without actuarial reduction from age 60. Pensions in payment (and deferment) normally increase in line with general public sector salary inflation.

Section 50 of the Inland Fisheries Act states - "The pension payments and other superannuation liabilities of Inland Fisheries Ireland in respect of their former employees become on the establishment day the liabilities former employees become on the establishment day the liabilities"

The valuation used for FRS102 disclosures has been based on a full actuarial valuation 31 December 2019 by a qualified independent actuary taking account of the requirements of the FRS in order to assess the scheme liabilities at 31 December 2019 of IFI.

The principal actuarial assumptions were as follows:	**31.12.19**	**31.12.18**
Rate of increase in salaries	2.90%	3.00%
Rate of increase in pensions in payment	1.40%	1.50%
Rate of pensions increases - Superannuation Scheme	1.90%	2.00%
Rate of pensions increases - SPSPS	1.40%	1.50%
Discount Rate	1.20%	2.05%
Inflation Rate	1.40%	1.50%

The mortality basis adopted allows for improvements in life expectancy over time, so that life expectancy at retirement will depend on the year in which a member attains retirement age (age 65.) The table below shows the life expectancy for members attaining age 65 in 2020, 2040.

Notes to the Financial Statements for the 12 months to 31 December 2019

14 Retirement benefit costs (Continued)

Year of attaining age 65	2020	2040
Life expectancy - male	21.3	22.9
Life expectancy - female	23.9	25.4

15 Lease Commitments

a Lease commitment payable after five years relates to a warehouse on Ballysimon Road, Limerick

At 31 December 2019 Inland Fisheries Ireland had the following future minimum lease payments under non-cancellable operating leases for each of the following periods:

	€000's
Payable within one year	43
Payable within two and five years	147
Payable after five years	37
	227

Operating lease payments recognised as an expense were € 44,509 (2018: € 77,161)

15 Capital Commitments

Capital Commitments of € 384,115 primarily for Vehicles delivered early 2020

16 Cash and cash equivalents

Included in IFI's year end bank balances of € 14.9 million are amounts of € 5.32 million being monies received but deferred at year end in respect of the Salmon Conservation Fund, the Rural Recreation Fund, the National Strategy for Angling Development and the Eel Fisherpersons Support Scheme. These monies are restricted for use on these projects.

The following funds are held by IFI and will be distributed when projects are complete - Salmon Conservation Fund €3.412 million, National Strategy for Angling Development € 945K, Rural Recreation Fund € 172K and Eel Fisherpersons Support Scheme €687K. In addition there is deferred income of 104K.

Notes to the Financial Statements for the 12 months to 31 December 2019

17 Events after the reporting date

The Board recognises that the Covid-19 pandemic is a significant event which has occurred since the reporting date. The Board is taking the situation seriously and is monitoring the situation, in conjunction with management, on an ongoing basis. The business continues to operate with measures in place to protect staff and Inland Fisheries Ireland stakeholders. Staff are working remotely and services continue to be provided. To date, the operations and most of the entity's activities are being maintained while adjusting to the different way in which the business is being delivered. While Inland Fisheries ireland is unable to reliably predict the impact of Covid-19 on its cash flows, the performance and operations of Inland Fisheries Ireland are being monitored closely and regular cash flow forecasts are provided to the Board and to our parent department Department of Communications, Climate Action and Environment.

Going concern - The Board considers that, as the entity provides a public service that is funded by moneys provided by the Exchequer, via its parent department Department of Communications, Climate Action and Environment, it is appropriate to prepare these financial statements on a going concern basis.

18 Approval of Financial Statements

The financial Statements were approved by the IFI Board on the 17th December 2020.