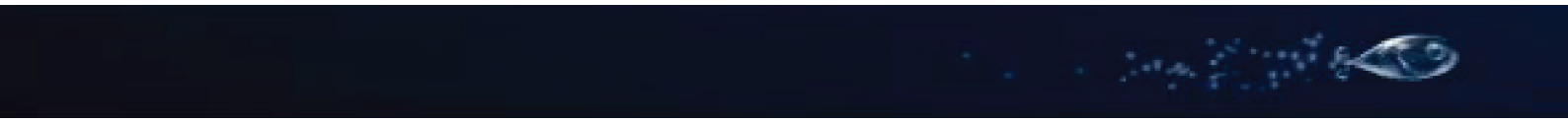
Iascach Intíre Éireann
Inland Fisheries Ireland

Inland Fisheries Ireland

Annual Report

2017



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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 IFI are to:

(a) Promote, support, facilitate and advise the Minister on the conservation, protection, management, marketing, development and improvement of inland fisheries, including sea angling.

(b) Develop and advise the Minister on policy and national strategies relating to inland fisheries including sea angling, and

(c) To ensure implementation and delivery of policy and strategies developed under (b) as agreed with the Minister.

Chairman's Foreword

It gives me great pleasure to present the Annual Report 2017 for Inland Fisheries Ireland (IFI). In line with its principal functions set out under the Inland Fisheries Act 2010; which are to conserve, protect, manage, promote and develop Ireland's inland fisheries and sea angling resources, this report provides an overview of the work undertaken and main achievements over the year.

Fisheries Protection

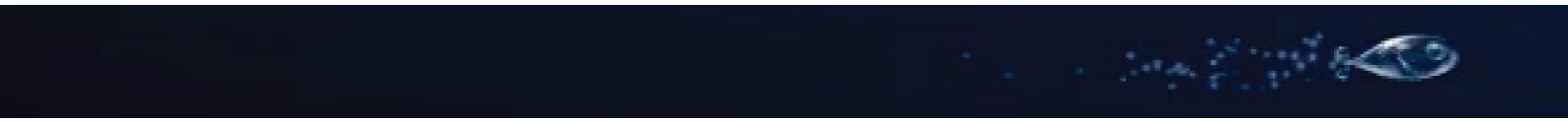
The environment in which our protection staff operate continues to be demanding and challenging. The safety of staff and the mitigation of risk continue to be paramount while staff strive to protect fish stocks in often hostile conditions. In the course of a review of the Inland Fisheries Act 2010 undertaken by the Department of Communications, Climate Action and Environment (DCCAE), and following legal advice, Department officials advised IFI that IFI may not have explicit power to prosecute summary offences under the 2010 Act. The Department advised that amending legislation would have to be drafted as a matter of priority. This impacted adversely on the protection function for a period in 2017 and was a source of frustration for protection staff. The Board acknowledges the sterling efforts of Minister of State Kyne, his officials in DCCAE and the Oireachtas in quickly rectifying the situation.

Sea-going RIB (Rigid Inflatable Boat) Fleet

The protection of dwindling salmon stocks is a core priority for IFI staff, management and the board. The age and poor condition of the current RIB fleet coupled with the necessity to operate twin RIB patrols impeded the optimum use of resources. Minister of State Kyne was convinced of the necessity to update and modernise the RIB fleet and secured Government funding to purchase a fleet of new sea going RIBs. The new Marine Survey Office (MSO) Approved RIBs will meet best modern standards in safety and operational efficiency and will enable IFI to operate single RIB patrols. This will enable a much more efficient and cost effective use of resources and will enhance the protection of our priceless salmon stocks. The first of the new RIBs will be delivered shortly and the others will follow in quick succession.

Angling Development

The National Strategy for Angling Development (NSAD) envisaged an investment of €5m per annum over a five year period to enhance and develop our angling product and facilities. The ambitious plan envisages increasing the value of angling tourism by €90m over the five years and significantly increasing employment in the sector. Minister of State Kyne secured €1.5m for the NSAD in 2017 to augment the €0.5m allocated in 2016. In an effort to make this funding more accessible to angling groups IFI hosted a number of road show stakeholder meetings around the country and a fully integrated and transparent grant application system went online in September. 115 projects were offered funding from the current allocation.



Infrastructure Improvement

IFI is currently engaged in an on-going programme to ensure that the extensive stock of angling structures (primarily stands and stiles) is being repaired or replaced with more durable and long lasting material. IFI staff is undertaking some of these projects and other projects are sub-contracted.

Aquaculture Facilities

IFI's outdated and inefficient aquaculture facilities continue to be a cause of concern and a major drain on scarce resources. During 2017, IFI engaged with trout angler representatives to work towards arriving at a solution that will ensure a reliable supply of high quality fish to angling clubs and fisheries at a cost that is viable and sustainable for IFI in the context of public funds. Investment in a modern, efficient facility is currently moving towards the planning stage.

Engagement with Stakeholders

IFI seeks to engage positively with all its stakeholders via its website; 7 regional public offices; uniformed staff in the field; grant funding programmes; education and outreach programmes; public meetings; trade shows; joint working groups with angling representatives and the National Inland Fisheries Forum.

Vehicle Fleet Management

The vehicle fleet continues to be one of IFI's major costs; it's safe, efficient and cost-effective operation is a major priority. IFI appointed a dedicated logistics manager in 2017 to ensure that the organisation minimises risk in this area, achieves regulatory compliance, maintains the highest safety standards and is cost efficient. The national vehicle maintenance and trailer contracts are a major step forward in ensuring uniformity and consistency in standards.

Property Rationalisation

The large number of unused or underutilised bases around the country (a legacy of the Regional Board structure and previous organisational array) continues to be a drain on resources. Heating, lighting, insurance, security and maintenance costs are considerable. The process of property rationalisation is progressing while ensuring that staff are deployed in suitable fit for purpose premises.

Agency Funding

It is worth noting that IFI's own resource funds are being expended each year to meet the pay costs. The Board has indicated its concerns that this is becoming unsustainable in the short to medium term. While an additional €570,000 was provided by the Department in 2017 to fund the pay gap is most welcome, nevertheless the funding of the organisation continues to be challenging.

Following the launch of the new Code of Practice for the Governance of State Bodies 2016, IFI has taken steps to ensure its compliance in 2017 and thereafter. An external review of the effectiveness of the Board of IFI was conducted during in 2017 and recommendations from this exercise have been keenly adopted by the Board.

I wish to express profound regret on behalf of the board on the sad death in August of valued board member, PJ Nally.

I also wish to express sincere thanks to Fidelma McGuirk for her services to the board prior to her resignation on January 31st, 2018.

I would like to extend my gratitude to the Minister of State for Communications, Climate Action and Environment, Seán Kyne T.D. and the officials from his Department for their continued support, encouragement and commitment.

Finally, I wish to extend my sincere thanks to all the staff in IFI for their enduring dedication to their work in delivering on the challenging objectives of the organisation.

Fintan Gorman
Chairman
April 2018

Chief Executive Officer's Introduction

I am delighted to introduce the 2017 annual report of the activities of IFI. This report sets out at a high level the main activities undertaken by the IFI in 2017.

2017 was, in many mays a challenging, yet successful year for IFI. Again, it was the staff who have worked tirelessly to ensure the organisation's core objectives of conserving, developing, and protecting our inland fisheries and sea angling resource were achieved. Whether the issue was focusing in illegal fishing, of which a significant number of incidents were detected in 2017 or developing fisheries infrastructure, or promoting and supporting international angling competitions the staff of IFI undertook their work with a passion and zeal which is hard to match. For this I am very grateful to one and all.

Dr Ciaran Byrne
CEO
April 2018

IFI Board

Mr Fintan Gorman	Chairman
Mr Martin McEnroe	Board member
Mr Niall Greene	Board member
Prof Frances Lucy	Board member
Mr Sean Coady	Board member (Executive – Staff Representative)
Ms Patrick Gibbons	Board member
Ms Bernadette Orbinski Burke	Board member
Ms Fidelma McGuirk	Board member

IFI Management Team

Dr Ciaran Byrne	Chief Executive Officer (and Executive 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

River Basin District Directors

Mr Brian Beckett	IFI Dublin	(Eastern River Basin District – ERBD)
Mr David McInerney	IFI Clonmel	(South Eastern River Basin District – SERBD)
Mr Sean Long	IFI Macroom	(South Western River Basin District – SWRBD)
Ms Amanda Mooney	IFI Limerick	(Shannon River Basin District – ShRBD)
Dr John Conneely	IFI Galway Ballina	(Western River Basin District – WRBD)
Dr Milton Matthews	IFI Ballyshannon	(North Western River Basin District – NWRBD)

Directors

Mr Ian Carroll	ICT Manager
Ms Shona Roche	Programme Director - National Strategy for Angling Development
Mr Michael Burke	Logistics Manager

Protection

IFI is responsible for the protection and conservation of Ireland's fisheries resource, the fish and their habitats in all inland waterways and out to a twelve mile limit offshore. The species protected comprise all freshwater fish species including migratory fish such as salmon, sea trout, eel as well as lamprey and other important conservation species including Arctic char and shad. IFI is also responsible for protecting and licensing wild oyster fishing and through a Memorandum of Understanding (MOU) with the Sea Fisheries Protection Association (SFPA) the organisation enforces bass fisheries legislation.

In addition to enforcing the provisions of the Fisheries Acts 1959 to 2010, IFI is empowered to enforce the Water Pollution Acts 1977 & 1990 when discharges to fisheries sensitive waters lead to a deterioration in water quality and on occasion fish kills.

Key Milestone 2017 – RIBs

In 2017 IFI completed a comprehensive consultation followed by a tendering process for a major contract of the provision of a new state of the art maritime protection Rigid Inflatable Boat (RIB) fleet. Following the tendering process and sea trials of a range of vessels the contract was awarded to Delta Power Group, in the United Kingdom. The new RIB fleet will be built to an exacting standard required by the Marine Survey Office (MSO) of the Department of Transport, Tourism and Sport called "Inland Fisheries Ireland operated Offshore RIBs – Equivalency Rules for Construction and Operation" – this standard is tightly aligned to the existing passenger boat regulations which are provided for in legislation. The construction of the boats requires stage inspections by the MSO to ensure that IFI obtains a high quality boat with a lifespan of 15 years for off-shore use. The vessels will be rated for a top speed of 30 knots when fully laden with a hull built to a P5 standard and a P6 fit out – (these relate to standards in the passenger boat regulations of the Department of Transport, Tourism and Sport).

The tender was for delivery of an initial single boat, with up to 12 to be provided over the course of the contract. The first boat is due for delivery in May 2018.

IFI continues to maximise the return on State investment in the protection and conservation of the fisheries resource by developing innovative protection and environmental practices. The encrypted digital Tetra radio system was successfully rolled out to a larger contingent of field staff during the summer of 2017. To date Tetra continues to provide an efficient, resilient, and secure communication service which greatly enhances the functionality of the protection function for land, sea and inshore watercourses and is a significant safety aid to field staff particularly in remote locations.

The Operations Division consists of a Head of Function and six River Basin District (RBD) Directors who are regionally based around the country, within this structure there are 230 staff.

Protection of our Fisheries Resource

The National Fisheries Protection Plan was implemented in 2017. The objective of the plan was to assess the risks to fisheries and allocate adequate resources to mitigate these risks. In applying the Fisheries Protection Plan, IFI aimed to protect the species most at risk during specific seasons and covered salmon, trout, sea trout, conservation species, bass, coarse fish including pike, oysters and eels. Emphasis was placed on monitoring known poaching 'hotspots' with protection efforts enhanced at vulnerable times.

A diverse range of methods were used for anti-poaching patrols including boats, kayaks, Personal Water Craft (PWCs), all-terrain vehicles, bicycles, vehicles and foot patrols. In addition to the use of traditional patrol methods, the availability of advanced surveillance equipment including night vision scopes, infra-red heat sensing scopes and enhanced optical surveillance have proven instrumental in the apprehension of a number of illegal operators.

Patrol Hours - National Breakdown for 2017

In 2017 over 187,000 hours were dedicated to safeguarding Ireland's fisheries resource. During the year, **104,006** hours were dedicated to patrolling rivers with protection activity peaking in Quarter 3 when 30,686 man hours were utilised patrolling rivers nationwide. A total of **33,370** hours were dedicated to patrolling lakes with the greatest activity taking place in Quarter 2 with **9,178** hours being recorded for this period. Hours committed to patrolling coastal, estuary and sea areas totalled **42,748.**

Hours on Anti-Poaching Patrols	2017 Total	2016 Total
Hours on Anti-Poaching **Lake** Patrols	**33,370**	**37,263**
Hours on Anti-Poaching **River** Patrols	**104,006**	**108,186**
Hours on Anti-Poaching **Sea** Patrols	**6,078**	**6,197**
Hours of Anti- Poaching **Coastal/Estuary** Patrols	**36,670**	**36,759**
*Hours on Anti-Poaching **Bass** Patrols	**7,302**	**-**
Total	**187,426**	**188,405**

*Recording of hours specific to bass patrols commenced in July 2017

Patrol Method	2017	2016
No of Boat Patrols	873	1,151
No of Kayak Patrols	190	188
No of PWC Patrols	30	37
No of Quad Patrols	18	84
No of Bicycle Patrols	489	363
No of Vehicle Patrols (and foot patrols)	29,899	29,357
No of Air Corp Patrols completed	2	0
Total Patrols	**31,501**	**31,180**

The notable decrease in boat patrols during 2017 is due to part of the boat fleet being taken out of service. There is a reduction in quad bike patrols service issues, lack of accessibility and training related issues. Staff resources were diverted to other priority intelligence related protection campaigns.

Inspections of Licence Holders/Regulatory Compliance Checks

35,630 inspections of recreational anglers and licence holders were carried out. 675 spot checks were completed on Fish Dealers and Restaurants/Hotels/Guesthouses for regulatory compliance. This marks an increase of 61 compliance checks on 2016 figures.

Inspections of Licence Holders	2017	2016
Inspections of Commercial Salmon & Sea Trout Licence holders	1,375	969
Inspections of Recreational Anglers for Licence and/or Permit	17,448	16,499
Inspections of other Anglers	15,506	19,511
Bass anglers checked for compliance with fisheries legislation and regulations*	1,301	0
Total	**35,630**	**36,979**

*www.fisheriesireland.ie/Press-releases/new-eu-regulations-for-irish-seabass-fishery.html

Compliance Checks	2017	2016
No. of Fish Dealers Checked	375	320
No. of Restaurants/Hotels/Guesthouses Checked	300	294
Total	**675**	**614**

For licences and permit sales nationally see Appendix I Fishing Licences and RBD Managed Fisheries 2017.

Seized Items

An extensive variety and number of illegal items were seized during 2017 ranging from fishing rods, dinghies, spears, hand lines and nets. In total 647 illegal fishing items were seized which included 264 nets measuring 14,055 m.

Seized Items	2017	2016
Total Number of Nets	264	301
Total Fish	184	818
Total Rods Seized	114	204
Other items	85	164
Total Number of Items Seized	**647**	**1,487**

Location and Length of Nets	2017	2016
No of Nets at Sea	54	8
No of Nets in Freshwater	145	170
No of Nets in Estuaries	65	123
Total Length of Net (metres)	**14,055**	**14,782**

IFI was very successful in detecting illegal eel fishing equipment in 2016, a significant number of fyke nets were seized, as a result of these successful protection patrols, there were fewer units seized in freshwater in 2017.

Prosecutions

In 2017, **82** prosecutions cases were initiated for breaches of fisheries and environmental legislation. This marks a decrease on the 2016 figures of 103 prosecution cases.

Prosecutions	Total
No of Prosecutions **initiated** for Fisheries Offences	**66**
No of Prosecutions **initiated** for Environmental Offences	**16**
No. of Prosecutions **concluded** for Fisheries Offences	**14**
No. of Prosecutions **concluded** for Environmental Offences	**8**

Early in 2017 IFI was informed by the DCCAE that its power to undertake prosecutions had not, on the advice of the Attorney General, been adequately transferred in the 2010 Inland Fisheries Act. As a consequence IFI withdrew all legal cases before the courts at the time and no further prosecutions were commenced (under the Fisheries Acts) until amending legislation was signed by the President in July 2017. 128 Fixed Charge Penalty Notices (FCP) were issued for breaches of the Fisheries Acts, regulations or Bye laws - again these could not be issued without the power to prosecute. This represents a reduction of 28 when compared to figures for 2016. Some 343 anglers received cautions from fisheries staff where very minor breaches were detected.

The Environment and Fish

Water Quality/Pollution

In 2017, a wide range of environmental issues were assessed to establish their impact on water quality and fisheries habitats. 26,726 inspections were carried out with a significant increase in the number of habitat inspections, which increased from 14,193 in 2016 to 18,244 in 2017. During this period, there were 16 prosecution cases initiated for environmental offences and 8 prosecutions concluded. The variance in habitat inspections between 2017 and 2016 may be attributable to the loss of the power of IFI to prosecute fisheries offences under the 2010 Act. However, IFI still retained the power to prosecute for **environmental** offences under the water pollution acts. Hence, the focus switched to inspections for pollution in habitats.

Environmental Inspections	2017	2016
Agricultural Inspections	1,511	1,553
Industrial Inspections	956	660
Wastewater and Water Treatment Plants Inspections	2,379	1,994
Civil Engineering/Infrastructure Inspections	2,999	2,651
Forestry Inspections	637	810
Habitat Inspections	18,244	14,193
Total	**26,726**	**21,861**

Fish Kills

In 2017, there were 14 reported incidents of fish kills around the country, four fish kills were caused by municipal works and three were attributed to disease and natural causes. There were approximately 2,123 fish causalities recorded with 7,800 metres of river being affected. The number of fish kills has decreased significantly from 2016 when there were 31 reported incidents of fish kills. In many instances, water levels and temperatures have a major influence on fish kill statistics.

See Appendix II Fish Kills Reported by Location 2017 and Appendix III Fish Kills Reported Origin by District. 2017.

Planning, Licensing & Compliance Projects

As a statutory consultee IFI is notified by Local Authorities and other agencies on certain planning matters where there is a possible impact on the fisheries resource. Beyond local pre-planning and planning a constant demand exists for input to Local Authority Development Plans, screening and scoping of Strategic Environmental Assessments (SEA) relating to major plans and national policies,

IFI personnel monitored infrastructural works ranging from flood relief schemes, major road projects, bridge repairs, as well as upgrades and replacement of existing wastewater treatment plants amongst other developments. IFI continues to work closely with the relevant parties on all stages from design through to construction to ensure habitat protection, control of pollution and conservation of the fisheries resource with the overall goal of securing a future for fish. In 2017, 6,402 planning/licensing proposals were reviewed by IFI.

Flood Relief Schemes

IFI liaised with the relevant agencies in relation to a number of major flood relief schemes nationwide. Some of the significant works include the Dunkellin River and Aggard Stream Flood Relief Scheme (Co. Galway) and the Office of Public Works (OPW) Clare River Flood Relief Scheme (Co. Galway) and the major infrastructural drainage programme in Bandon (Co. Cork).

The Dunkellin River and Aggard Stream Flood Relief Scheme provides for flood relief works along the main channel of the Dunkellin River from Craughwell to Kilcolgan (over 11km) and along the Aggard Stream which runs from the townland of Cregaclare (near Ardrahan) to its outfall at the confluence of the Dunkellin and Craughwell Rivers (over 7.5km).

OPW flood relief works on the Clare River upstream of Claregalway

IFI was also an active participant in the Crossmolina Flood Action Group, a multi-agency and community group which met regularly during 2017 to review progress on plans to help prevent future flooding of Crossmolina (Co. Mayo) by the Deel River, which flows through the town.

IFI maintained ongoing contact with the contractor on the Skibbereen Flood Relief Scheme (Co. Kerry) to minimise the impacts on fisheries. The works involve the construction of flood walls by means of sheet piling in the Caol Stream in Skibbereen and culverting a section of a tidal tributary stream of the River Ilen.

Bandon Flood Relief Scheme

The Bandon Flood Relief Scheme, being undertaken by Cork County Council, is the largest river dredging project underway in Europe at present, entailing the removal of 60,000 tonnes of rock. In-stream dredging work commenced in May at the lowest extent of the scheme and progressed ahead of schedule up-stream to the town until September with ancillary works continuing throughout the winter. Significant progress was made in respect of the main channel dredging; grouting of Bandon Bridge, removal of the pedestrian footbridge and construction of in-river footings for the replacement footbridge were completed. The final year programme of in-stream works will commence in May of 2018.

Roads

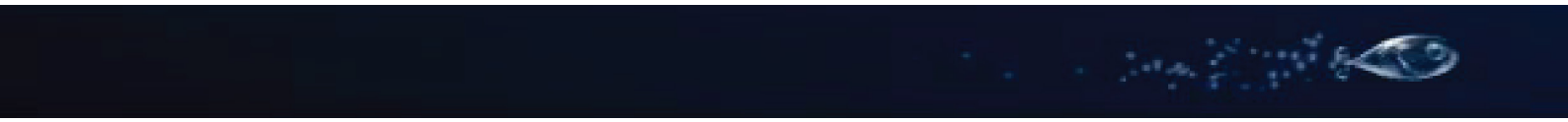
There were a number of significant road projects in 2017, which required inputs from IFI with regard to fisheries rehabilitation. On the N17/18 Gort to Tuam Motorway project, IFI staff inspected the culverting of Cloonkeen Stream, a brown trout spawning tributary and eel habitat which is part of the Clare River system near Tuam (Co. Galway).

In relation to the realignment of the N26 Foxford to Swinford road at Cloongullane, IFI was opposed to the proposed installation of a culvert over the Swinford River and recommended a clear span bridge to protect salmon spawning.

In relation to the realignment of the N26 Foxford to Swinford road at Cloongullane, IFI was opposed to the proposed installation of a box culvert over the Swinford River and recommended a clear span structure to protect salmon spawning. The matter was considered at an An Bord Pleanála (ABP) oral hearing, which IFI attended and a decision is pending

Bridges

IFI staff continued to liaise closely with relevant Local Authorities and contractors in relation to a variety of infrastructural programmes with regard to bridge replacement and restoration.



In the North Western River Basin District (NWRBD), IFI environmental staff reviewed method statements for bridge projects on the River Erne (Co.s Cavan, Fermanagh and Donegal) carried out regular on-site inspections to safeguard fish passage and the preservation of water quality and fish habitat. In certain instances, this involves electrofishing to monitor fish stocks and where necessary, transferring fish from construction sites.

Recently completed works at Coolmucky Bridge on the Bride River, Farnanes (Co. Cork) resulted in a substantial improvement in opportunities for fish passage to the upper reaches of the catchment.

The Bride River is one of the principal spawning tributaries of the River Lee system and its importance is accentuated by the fact that it enters the River Lee downstream of the ESB dams at Carrigadrohid and Inniscarra (Co. Cork). Coolmucky Bridge was constructed on an apron which restricted upstream fish migration to a limited flow window. However, works carried out by Cork County Council introduced the replacement of this apron with a natural riverbed, which allows for unlimited fish passage.

Treatment Plants

A significant programme of capital investment has been undertaken by Irish Water in relation to provision of upgraded Waste Water Treatment Plant (WWTP) and Water Treatment Plant (WTP) infrastructure over recent years. Works completed in 2017 included Dungloe and Glenties WWTPs (Co. Donegal). New wastewater treatment facilities are nearing completion at both Glencolmcille and Bundoran with a further upgrade earmarked for Kilmacrennan currently at the planning stage (Co. Donegal). These projects, involving regular liaison and site inspection by IFI staff, will provide critical infrastructure for the long-term protection of the fisheries and water resource.

IFI has been liaising with Irish Water on the proposed upgrade of the Lee Road Water Treatment Plant, in Cork City. While no overall abstraction increase is proposed a substantial upgrade and modernization of on-site infrastructure is envisaged. IFI has held discussions with the applicant with a view to the inclusion of an improved intake structure as part of the works.

RESEARCH & ICT

National Research Survey Programme - Lakes & Rivers and National Coarse Fish and Pike Programme

IFI's National Research Survey Programme Lakes and Rivers team (NRSP-L&R) was set up in 2015 as part of a restructuring exercise within the Research and Development Division. In 2016, the national coarse fish and pike (NRSP-NCFP) remit was added to the team.

The main functions of the NRSP team are to provide expertise in terms of sampling methodologies and field support to a number of research programmes and carry out research and monitoring in lakes and rivers in the areas of; brown trout, coarse fish and pike, Water Framework Directive (WFD) (including Arctic char). Method intercalibration and hydroacoustic development also comes under the jurisdiction of the team.

The NRSP team are also doing opportunistic sampling in many waterbodies to collect genetic and other information/samples which could be useful for other programmes (e.g. eel data, sea trout data, etc.).

Water Framework Directive Fish Monitoring (including Arctic char research)

In 2007, IFI 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 European Union (EU) WFD (which was transposed into Irish legislation- 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 developed by IFI encompasses over 300 water bodies, (rivers, lakes and transitional water bodies (estuaries and lagoons)). Information collected in each survey is used to assign an '**ecological status**' to each water body, ranging from high status to bad status.

Since 2015, the NRSP team have responsibility for WFD fish monitoring in lakes and rivers only, but provide support in the form of staff and expertise to the transitional water (TRaC) survey programme. 18 lakes and 16 river sites from the WFD surveillance monitoring programme were surveyed during 2017 and fish ecological status assigned. In addition, fish ecological status has been calculated for the lakes and rivers sites surveyed for IFI purposes, such as IFI's brown trout, coarse fish and pike and Arctic char research programmes. The WFD surveys also provided information for the latter IFI research programmes.

Reports for all water bodies surveyed in 2017 are underway and will be published on the WFD fish website (www.wfdfish.ie).

Rivers

In addition to the WFD surveillance monitoring a total of 201 rivers sites were surveyed in 35 catchments during 2017, for various purposes, e.g. brown trout research, fish kill recovery assessment, method intercalibration, pressure assessment, etc.

Twelve fish species including sea trout were recorded on 221 surveys (WFD and IFI research) in 2017. No fish were recorded at eight sites. Brown trout was the most common species recorded at 90% of sites, followed by salmon (49%).

Lakes

Six lakes were surveyed in addition to those surveyed for WFD purposes, with the aim of compiling information on age structure, diet, growth rate, abundance, for brown trout, coarse fish and pike and Arctic char research, to inform conservation and management measures.

A total of 15 fish species (sea trout are included as a separate 'variety' of trout) and three types of hybrid were recorded in all 24 lakes surveyed (WFD and IFI research) during 2017. Eel was the most common fish species recorded, occurring in 87.5% of the lakes surveyed. This was followed by brown trout, perch, pike, roach x bream hybrids, roach and salmon, which were present in 83.3%, 58.3%, 50.0%, 41.6%, 37.5% and 33.3% of lakes respectively. Where bream were recorded, roach, and their hybrid were also generally found. No roach or bream were recorded in Derrybrick Lough, Co. Cavan on this occasion. While bream has not been recorded since 2008, roach has been recorded in the four previous surveys of the lake conducted between 2005 and 2014. However, roach x bream hybrids were captured. The reason for the absence of roach is unknown. In general, salmonids were the dominant species in lakes in the north-west, west and south-west of the country. Sea trout were captured in three lakes: Lough Beagh (Co. Donegal), Carrowmore Lake (Co. Mayo) and Glencullin Lough (Co. Mayo). Arctic char were recorded in six lakes; Lough Melvin (Co. Leitrim / Fermanagh), Lough Beagh (Co. Donegal), Lough Talt (Co. Sligo), Lough Acoose (Co. Kerry), Lough Caragh (Co. Kerry) and Lough Leane (Co. Kerry).

In addition to the standard fish stock surveys for the WFD, hydroacoustic surveys were successfully completed in the pelagic zone (mid water away from shore) of Loughs Melvin and Leane.

Method Intercalibration (lakes and rivers)

In 2017, IFI examined new sampling techniques to cover WFD and other fish monitoring programmes more effectively. A standard sampling method for lakes was trialled to assess fish stocks in designated waterbodies to cover more than one research objective. Additionally Lough Sheelin (Co. Westmeath/ Cavan) was surveyed in spring (March) and summer (July) to compare temporal changes in the sampling method used. The data from these trials will be analysed and reported on in early 2018.

Brown Trout Research Programme

Lakes

As part of IFI's national brown trout lake fisheries programme six lakes were surveyed to assess the status of their brown trout stocks, Loughs Derravaragh (Co. Westmeath), Ennell (Co. Westmeath), Gill (Co. Sligo), Leane (Co. Kerry), Melvin (Co. Leitrim /Fermanagh) and Sheelin (Co.s Cavan /Westmeath /Meath). Reports will be available here when published; http://www.fisheriesireland.ie/Research/ recent-publications.html

Brown trout genetics conference

IFI hosted a one-day conference in October 2017, entitled "Understanding brown trout – genes, ecology and citizen science". Information from a collaborative three-year project (2014 to 2017) between IFI and Queens University Belfast (QUB) was presented. The project examined the genetic diversity of brown trout in selected Dublin rivers, the Moy catchment and the middle Shannon and Lough Ree catchments. Information from other IFI commissioned genetic studies was also presented (e.g. Corrib and Sheelin catchments) on the day. Guest speakers included Professor Emeritus Andy Ferguson (QUB), Professor Thomas Quinn (University of Washington) and Dr Nigel Milner (Bangor University). Reports and scientific publications from the project will be available in 2018 here; http://www.fisheriesireland.ie/Research/recent-publications.html

Coarse Fish and Pike Programme

A coarse fish and pike programme was established in 2015. The programme aims to draw upon existing data sets (e.g. WFD monitoring lakes and rivers), which will be complemented with additional fish stock surveys and sampling based on a matrix of sites incorporating a range of lake typologies. The collection of stock data and general ecological species specific biological information will address knowledge gaps and better inform management strategies in the future. Surveys of fish stocks were conducted on seven coarse fisheries in 2017. While stocks remain generally healthy, there is evidence of aging bream and bream hybrid populations in several lakes, where juvenile recruitment appears to be limited.

Resolving the dietary preference of pike is central to the management of pike and trout populations in Irish waters. To address this issue, IFI initiated a new project during 2016: *Pike in Ireland: Developing Knowledge and Tools to Support Policy and Management*. The diet of pike was examined between August 2016 and July 2017 in two lakes where both trout and roach are present: (a) managed lake with active pike removal (Lough Conn (Co. Mayo)) and (b) unmanaged lake with no pike removal (Lough Derravaragh). Monthly field sampling was conducted using IFIs electrofishing boom boats. The stomach contents of the live pike are retrieved using a process known as gastric lavage (or stomach pumping) which involves flushing the contents of the fish's stomach with a small amount of water. Pike of all age classes were included in the study. In excess of 1,400 pike stomachs have been examined from both lakes. Morphometric measurements (measurements of differing attributes of fish anatomy) of captured pike have also been recorded. Results obtained will be integrated into mathematical models examining the interactions between pike and trout. The collection of this information, complemented by assessment of the diet of pike captured in other lakes surveyed, will also aid the management of pike in the future. The results gathered from this project will be reported in June 2018.

Owenriff Catchment

Surveys of 17 river sites (5 main channels and 12 tributary) and two lakes (Loughs Bofin and Agraffard) on the Owenriff Catchment (Co. Galway) were undertaken in 2017. Pike, first recorded in 2009, were found to be present throughout the catchment. There is also evidence to suggest that salmon and brown trout numbers in river sub-catchments across the Owenriff catchment have declined since the previous survey in 1997. Additionally, abundance and biomass of trout captured in both lakes was lower than expected based upon results obtained from other lakes in the Owenriff and neighbouring catchment. A survey report and a fish population rehabilitation plan have been compiled and are available here; www.fisheriesireland.ie/Press-releases/owenriff-fish-stock-survey-and-rehabilitation-plan-published-by-inland-fisheries-ireland.html

Climate change

Preliminary findings of the projected impacts of climate change to some freshwater fish species in Ireland were presented at a European Inland Fisheries and Aquaculture Advisory Commission (EIFAAC) symposium in September 2017 and at the Institute of Fisheries Management's annual conference in October 2017. Arctic char is one of the rarest fish species in Ireland today. They are a cold water fish species that live in deep lakes mainly in the north-west, west and south-west of Ireland. Research conducted by IFI to date has concluded that Arctic char are at risk in lakes where mixed fish communities of salmonid and non-salmonids (e.g. perch, roach, etc.) coexist or lakes where non-salmonid fish species have been recently introduced. Some populations are also at risk from dispersal of non-salmonid species due to increases in rainfall and flooding associated with climate change. Other research has shown that natural river habitat and tree cover can have a buffering effect on stream water temperature in summer, thereby maintaining the cooler conditions that brown trout prefer.

Habitats, species and Directives:

Studies supporting Habitats Directive (fish species) and Water Framework Directive (Hydromorphology)

The Habitat Directive and Red Data Book Fish Programme

The Habitat Directive (HD) & Red Data Book (RDB) fish programme is directed to support Ireland's obligations in regard to Article 17 reporting for the HD and the National Biodiversity Plan. The Minister with responsibility for fish is identified in law (SI 477 of 2011) as having responsibility for undertaking the national monitoring under HD and IFI undertakes this task for the Minister. Article 17 has a six-year reporting cycle and this IFI programme operates to a six-year schedule. This programme also covers two RBD fish species – Arctic char and smelt.

During 2017, the team undertook a survey programme in relation to adult and larval lamprey, anadromous shads, pollan, Arctic char and smelt. A presentation on our IFI assessment methods was given at an Institute of Fisheries Management (IFM) conference on Renewable Energy in Wales in April 2017.

The overall six-year programme plans to re-survey all of the catchments designated as Special Areas of Conservation (SACs) for lamprey, first surveyed in the 2003-06 period. The work in 2017 was done as Year 5 of this project, with catchment-wide surveys of larval lamprey in the River Barrow (Co. Carlow) (122 sites) and River Mulkear (Co. Limerick) (30 sites). In order to examine 'trends' in population, as required by the EU Habitats Directive for Article 17 reporting, the project team has also established a network of Index Channels that are visited annually or biennially. Sampling is conducted in 4-6 sites on each Index Channel. However, sampling was significantly adversely impacted by heavy rainfall events in the autumn of 2017. Float-over surveys to examine the locations and extent of sea lamprey spawning were undertaken in the Rivers Suir (Co. Tipperary) and Nore (Co. Kilkenny) as part of a long-term study. This strategy is highly successful in identifying areas of successful spawning as well as identifying the areas potentially available for sea lamprey spawning.

IFI supported a two-year post-doctoral study (2016-18), as part of an Irish Research Council Enterprise Partnership Scheme, by a former staff member, Dr Fiona Bracken, at University College Dublin (UCD). Her study examined two strategies for knowledge development in regard to conservation fish – the use of environmental DNA (eDNA) and the use of Citizen Science strategies. The eDNA study focussed on tracking the migration and spawning of adult sea lamprey in the Mulkear (Co. Limerick) and Munster Blackwater (Co.s Waterford /Cork) Rivers through taking of water samples and testing these for genetic evidence showing presence/absence of the target species. The results are very positive and will be published in a peer review journal. One of the tools used in the Citizen Science was that of structured interviews with people familiar with the key topic – rare fish and sea lamprey in particular.

Pollan is present in the Republic in Loughs Allen, Ree and Derg on the River Shannon. In conjunction with IFI's Lakes Survey team the status of pollan is being investigated during the current 6-year reporting cycle. The survey is conducted seasonally (summer, autumn and winter) using pelagic nets. Outcomes have been very positive in terms of status of the pollan populations and also in regard to knowledge gained. Lough Ree (Co.s Longford / Roscommon /Westmeath) was completed in spring 2017 and the three sampling events on Lough Derg

went ahead as scheduled with completion due in spring 2018. The on-going Arctic char survey programme continued during 2017 with sampling undertaken in two Kerry lakes, Annascaul and Coomasaharn.

Hydromorphology – linking habitats and species

The WFD has identified 'Connectivity' as important in regard to the natural functioning of rivers. Connectivity is one component of river hydromorphology, a composite topic that deals with the physical habitat factors that underpin ecology – the quantity of water, the condition of the instream and riparian habitat and the connectivity of the channels both laterally and longitudinally. The themes in hydromorphology are consistent with IFI's overall aims of the conservation of species and their habitats, as well as the aims of the Habitats Directive in regard to the various life stages of migratory fish, species travelling between the sea and fresh water, listed in Annex II of the Directive.

Three significant hydromorphology projects, all with shared strands, were continued or commenced during 2017 – the Environmental Riverine Enhancement Programme (EREP) study, the Adaptive Management of Barriers in European Rivers (AMBER) project and the new National Barriers Programme.

The EREP study is a long-term multi-faceted project with the OPW Drainage Division. It applies the Water Framework Directive 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 physical habitat in drained channels. During 2017, the project examined the fish community, physical habitat and barrier issues in the lower part of the Inny catchment. The EREP also allows IFI to re-visit channels where studies were undertaken previously and to build up a long-term database on fish and habitat over periods in excess of 20 years. Repeat surveys were conducted on the Clodiagh (Brosna) (Co. Offaly) and Dungolman (Inny) (Co. Westmeath /Longford /Cavan) Rivers in 2017.

The AMBER Project

The AMBER project is an EU Horizon 2020 project – Adaptive Management of Barriers in European Rivers – and IFI is one of 20 partners. IFI is contributing to Work Packages developing a European Barriers Atlas, with a detailed survey of the Barrow catchment completed in 2017. A comparative study of two barrier pass-ability protocols was completed on over 50 large structures in Irish rivers; the Scotland and Northern Ireland Forum for Environmental Research (SNIFFER) (U.K.) protocol and the Informations sur la Continuité Écologique (ICE) protocol (developed by the French National Agency for Water and Aquatic Environments). In addition, IFI is contributing to a Work Package looking at locations where barrier removal or mitigation is planned. To date a detailed fish community survey has been completed in addition to a detailed population study on eel in an impounded section of river. The team has also recently completed a telemetry-based study, examining dace and trout interactions in the same impounded channel reach. AMBER allows IFI to interact scientifically with fellow partners and the University of Southampton has partnered with the organisation to look at the Barrow barrier data in more detail with a view to generating ICE scores (French method) from the IFI field data. IFI staff presented papers at the Fish Passage 2017 conference and at a Dam Removal conference arising from IFI's involvement in AMBER.

During 2017 the Department of Housing, Planning and Local Government allocated funding to IFI and tasked the organisation with developing a Geographical Information System (GIS) -based national layer of barriers in rivers. The programme will build on already-generated data available from the RBDs around the country, from AMBER and from the EREP.

The series of projects and activities listed above have strong cross-connections. Finding and mitigating barriers in OPW catchments addresses two concerns at once – those of contributing to the National Barriers database and those of mitigating for adverse impacts of barriers. Scotland and Northern Ireland Forum for Environmental Research (SNIFFER) surveys of barriers in SAC rivers are relevant for Habitats Directive Conservation Objectives. In some cases the SACs are also OPW arterial drainage schemes e.g. the Rivers Boyne (Co. Kildare /Meath /Louth), Moy (Co. Mayo), Corrib (Co. Galway), and thus the barrier studies are also relevant to OPW and to potential barrier mitigation measures.

The National Eel Monitoring Programme has completed the third year of this reporting cycle (2015 - 2017). The overall aim of the programme is to fulfil Ireland's obligations under the monitoring objectives set out in the Eel Management Plan.

The aim of the Elver Monitoring Programme is to monitor the level of recruitment arriving in Ireland and create a long-term time series to track changes in recruitment levels through time. Elver monitoring was undertaken at 6 sites nationally. The distribution of recruitment was spatially uneven in 2017 with some sites recording good to moderate recruitment in the Rivers Ballysadare (Co. Sligo), Inagh (Co. Clare), Corrib (Co. Galway) and Feale (Co.s Cork /Kerry)) and poor recruitment in the River Maigue (Co. Cork /Limerick). New elver traps were installed at all locations in 2017. The latest International Council for the Exploration of the Sea (ICES) advice reports recruitment at 8.7% for 'elsewhere in Europe' series and 1.6% for the 'North Sea' series. This is a decrease from 10.6% in the 'elsewhere in Europe' series reported in 2016.

The eel monitoring programme assisted the scientific eel fishery yellow eel programme in 2017. A second year of the mark recapture study was undertaken in 3 locations; Waterford Harbour, Munster Blackwater Estuary and Lough Muckno (Co. Monaghan). The study in Waterford Harbour and Munster Blackwater was designed to identify movement of eels within an estuarine environment. In Waterford Harbour, 15 nights of fishing within designated zones resulted in a catch of 6,756 eels, 1,620 of which were tagged. There were 106 eels recaptured within the year and 122 eels recaptures from 2016. The study highlighted the movement of eels between the different zones and site fidelity with eels returning back to zone of capture. In the Munster Blackwater 540 eels were caught over 16 nights with 8 eels recaptured (7 from 2016 and 1 from 2017). An acoustic telemetry study was undertaken in the Munster Blackwater estuary to track the movement of eels along the estuary. Thirty eels were tagged with Vemco tags (transmitters) and monitored with receivers located along the estuary from Youghal Bridge up to Capoquin (Co. Cork). To date the data collected shows the eels moving between different zones within the estuary covering distances of 8-12kms and returning back to a burrow. In Lough Muckno a mark recapture study was carried out within a small bay of the lake to determine population estimates and a rate of silvering for yellow eels. A catch of 709 eels were caught over 5 nights, 38 eels were recaptured from previous years and 8 were recaptured within the year. The tagged yellow eels in Lough Muckno, will be caught in the silver eel fishery on the outflow of the lake over the coming years and rates of silvering will be determined.

Yellow Eel on the Munster Blackwater

The Eel Monitoring Programme continues to assess the impact of the swim bladder parasite *Anguillicola crassus* in the eel population in Ireland. A detailed study of the effect of the parasite on the swimbladder of eels was undertaken in Lough Ramor (Co. Cavan) and Lough Muckno (Co. Monaghan) in 2017. Samples were taken monthly from May to September to investigate the difference in parasite prevalence and swimbladder damage at different times and temperature. This study will be repeated in 2018 with samples taken in April during colder conditions.

The programme continued to investigate the distribution of eels in the Barrow catchment, in the River Tully (Co. Kildare), a sub-catchment of the River Barrow; no eels were recorded in 14 sites. Eels were present in two small sub-catchments of the River Barrow at the high water mark near St Mullins (the Pollmounty and the Aughnavaud Rivers (Co. Kilkenny)). In summary, an electrofishing survey of two sub-catchments of the River Barrow (Rivers Tully and Greese (Co. Kildare)) with good habitat indicated a complete absence of eels. A fyke net survey of the River Barrow main channel will be undertaken in 2018 to investigate whether the majority of the eel population now inhabits the main channel of the River Barrow.

The silver eel season for 2017 was very unusual with the majority of the catch caught in September outside the new moon phase. In the Fane catchment (Co.s Monaghan /Louth), 770kgs of eels were caught; however 40% of the catch was over two nights in September. The River Barrow silver eel site fished 24 nights with a total catch of 273kgs, 57% of the catch was caught over 2 nights in September.

Full information on the eel monitoring programme and the EU report are available on the IFI website at http://www.fisheriesireland.ie/Fisheries-Management/eel-management-plan.html

Scientific Eel Fishery

The scientific eel fishery programme was set up in April 2016 upon request by the DCCAE. These scientific fisheries cover the different life stages (glass eel, elver, yellow and silver eel) and are distributed in key catchments around Ireland. The purpose of the research fisheries is to increase knowledge of eels in Ireland ahead of the next EU review and to inform the management of eel populations which are currently in decline.

A pilot glass eel survey was undertaken from January to May 2017 to investigate the timing of glass eel arrival. In total, 350 glass eels were captured and the pigment stage determined. The majority of the glass eels were caught in March and April. The progression of pigmentation was recorded in the catch with early stage glass eels caught in January/February and late stage glass eels dominant in March and April.

Glass eel

Five lakes (Upper and Lower Lough Corrib (Co. Galway), Lough Conn (Co. Mayo), Lough Ramor (Co. Cavan and Lough Muckno (Co. Monaghan) and two transitional waters (Waterford Harbour and Munster Blackwater Estuary) were surveyed for yellow eels, in 2017. Of the lakes sampled in 2017, Upper Lough Corrib had the highest Catch per Unit of Effort (CPUE) reported of 5.59 (2,159 eels captured; see table below)). The majority of the eels (1,659) were caught in one bay with 500 eels caught in the remaining locations in the lake. The largest number of eels in the bay was present during the July survey (1,582 eels) and fewer were present in the August and September sample (511 and 66 respectively). The greatest yellow eel catches overall during the summer of 2017 were recorded at Waterford Estuary where 6,663 eels were caught.

Location	Nights Fished	No. of Eels	Catch per unit of effort
Upper Lough Corrib	9	2,159	5.59
Lower Lough Corrib	8	508	2.59
Lough Conn	8	866	1.35
Lough Ramor	5	940	4.7
Lough Muckno	5	703	3.52
Waterford Harbour baited pot	9	6,285	34.92
Waterford Harbour fyke net	5	378	5.04
Munster Blackwater pots	14	343	0.99
Munster Blackwater fyke nets	14	197	3.46

Breakdown of catch per location for yellow eel surveys

The silver eel fishery on the outflow of Lough Ramor was monitored during the autumn/winter of 2017. However, the catch was very low despite good numbers of yellow eels present in the lake.

This broad programme embraces monitoring and research of salmon and sea trout stocks to assess stock status in order to provide scientific advice for management, and to improve understanding of their freshwater ecology, and also their nearshore marine ecology.

National Salmon Management Advice/Conservation Limit attainment

The annual scientific advice on the status of salmon stocks and associated documentation was produced by the Independent Scientific Committee on Salmon. To support the provision of scientific advice for the 2017 salmon season, Catchment Wide Electro-Fishing (CWEF) was completed in 32 catchments to assess abundance and distribution of salmon fry. This index acts as a proxy for adult salmon presence in rivers and in many systems these results provide the only data on salmon spawning in these catchments. A total of 854 sites were visited in 2017. In the first ten years of this programme (2007-2017) a total of 404 catchment surveys in 146 catchments or sub-catchments were conducted comprising 9,473 individual site surveys. In relation to scientific advice for 2017, based on these CWEF data, fifteen rivers predicted to be under their Conservation Limit (CL), but with a high average catchment-wide salmon fry index, were recommended for opening on a catch & release angling basis. A comprehensive series of reports on the IFI salmon management programme is available here; www.fisheriesireland.ie/Fisheries-management/salmon-management.html

Based on the scientific advice provided by the Standing Scientific Committee on Salmon (SSCS), IFI management determined that during 2017, of the 143 grilse rivers nationally, 44 rivers would be open for a harvest fishery, 27 rivers would open for catch and release angling and 72 rivers would be closed. Of the 16 spring salmon rivers, 12 were open, and 3 were open for catch and release and one river was closed in 2017.

The National Salmonid Index Catchment – the River Erriff Catchment

The Erriff Fishery (Co. Mayo) is the national salmonid index catchment (NSIC) for salmon and sea trout populations in Ireland. The topography of the Erriff catchment, which combines a riverine and a lake fed tributary sub catchment, is representative of typical migratory salmonid habitat in Ireland.

A long-term sea trout monitoring programme has been operating on the Tawnyard Lake sub-catchment of the NSIC since 1985. From March through to June 2017, a total of 1,380 sea trout smolts (juveniles) and 175 sea trout kelts (spawned adults) were recorded in the downstream trap situated near the lake outflow; monitoring of returning adult salmon and sea trout was carried out and a total of 3,082 salmon and 577 sea trout ascended through the trap/fish counter located beside Aasleagh Falls during 2017.

The NSIC is critically important in monitoring the Erriff Fishery sea trout population and will allow assessment of the impact of environmental factors, including sea lice levels, on the sea trout stock. In 2014, investment was made to enhance its research and monitoring capacities. As part of this investment, an array of hydro acoustic receivers was installed in Killary Harbour to monitor sea trout and salmon movement and residency in the marine environment. This array is central to a 5-year programme to investigate the marine phase of salmonids and is reported in the Salmonid West Project below.

A new sea lice monitoring programme for sea trout began in May 2015 in Killary Harbour and continued in 2017, with the deployment of a Norwegian bag net. Sea trout are captured alive in the bag net, monitored for sea lice infestation, tagged and returned. Sea trout were recorded with a very high mean abundance of lice (average 47.3 per fish) in May 2015 but very low lice abundance (average 2.3 per fish) in spring 2016. The mean lice abundance in 2017 was 17.6 lice per fish. The bag net will be used to investigate lice infestation levels in spring and the possible influence of lice from local salmon farms on wild salmon and sea trout stocks in Killary Harbour.

A new project using Passive Integrated Transponder (PIT) tag technology began in spring 2016 to determine sea trout and salmon smolt to adult (return to freshwater) mortality. In 2016, a total of 1,020 salmon smolts and 667 sea trout smolts were PIT tagged during the spring smolt migration. Sea trout returning to the Erriff Fishery as finnock (i.e. in the same year as they migrated as smolts) averaged 22% in 2016, which is similar to historic return rates. The marine survival of salmon to return a one sea winter (grilse) was low in 2017 at 3.5%. Detailed studies of the spatial distribution, habitat and life history of juvenile sea trout progressed significantly in 2017. Electrofishing and PIT tagging of juvenile trout, measurement of habitat variables and monitoring of tagged migrant trout has been undertaken and the data are being analysed to develop sea trout production models for the Erriff fishery, which will have applications for management of the fishery and other sea trout fisheries.

LiceTrack Project

A new project entitled; '*Sea lice Model for the Sustainable Development of Atlantic Salmon Fisheries and Aquaculture*', began in Killary Harbour (Co. Galway /Mayo) in 2017. The project is funded by the EU through the North Atlantic Salmon Conservation Organisation (NASCO). Project partners are: IFI, National University of Ireland Galway (NUIG), Norwegian Institute for Nature Research, Marine Scotland Science, and the Institute of Marine Research, Norway. This project proposes to develop a sea lice integrative model developing and refining hydrodynamic modelling, incorporating environmental variables, sea lice production on salmon farms and other data requirements to support the sustainable development of aquaculture and conservation of wild salmon stocks. Existing modelling tools have been developed in Norway and Scotland. These models simulate dispersal of larval sea lice based on farm production, hydrodynamics, water temperature and salinity, and have been used to identify the role of specific salmon farming sites as recipients or sources of sea lice. In order to make directly comparable estimations of lice dispersal, and hence larval concentrations and

infection pressure, the models need to be standardised. A network has been formed within the project that will meet with the objective of developing a standard model that can be plugged into any hydrodynamic model of local currents to generate sea lice dispersal patterns. This project will contribute to developing best management practice for sea lice control and define a range of production strategies aimed at reducing the presence of sea lice and their negative impacts, both on farmed and wild Atlantic salmon.

During 2017, six sentinel cages were deployed at various locations in Killary Harbour and stocked with hatchery salmon smolts to monitor sea lice infestation pressure. Data was recorded on salinity, temperature and water velocity at sites throughout Killary Harbour as parameters in the development of the hydrodynamic and particle tracking model. Sea trout were monitored in the Aasleagh upstream trap between May and October 2017. Bathymetric data for the Killary Harbour model was collated and a digital terrain model of Killary Harbour was developed. A preliminary hydrodynamic model of Killary Harbour has also been developed in 2017. The parameters required for a sea lice integrative model developing and refining hydrodynamic modelling, environmental variables, sea lice production on salmon farms and other data requirements are being developed with the objective of developing a standard sea lice model.

Salmonid West Project

The Salmonid West Project aims to investigate migration, distribution, habitat usage and survival of sea trout and salmon smolts in the marine environment at sites on the west coast of Ireland using acoustic telemetry, and to contribute to the determination of the impacts of sea lice on these species. Outputs from this project will improve the understanding of salmonid ecology at sea and allow assessment of the impacts of development (e.g. wind farms, harbour development, finfish aquaculture etc.) on wild salmonids to enable robust environmental impact assessment and spatial planning. The project initially (2014) focused on the River Erriff (The National Salmonid Index Catchment (NSIC)), Killary Harbour and the surrounding coastal waters. In 2016, the project expanded into Galway Bay as a shortfall in information about marine habitat usage by sea trout within the bay was identified.

River Erriff (NSIC)

It is year four of this programme (2017); 45 sea trout smolts, 10 sea trout kelts (overwintered finnock) and 40 wild salmon smolts were acoustically tagged & released in the Erriff River in spring 2017. Sea trout smolts displayed differential movement patterns: some migrated fully out of Killary Harbour while others resided fully within the fjord. Untypically, the majority of sea trout kelts returned to freshwater periodically during their marine feeding migration. 40% of tagged kelts and no tagged sea trout smolts returned to freshwater. Salmon smolts suffered high losses during their freshwater migration, which may have been partly attributable to low water levels and high water temperatures in the latter part of the smolt run window. No losses occurred during their marine migration through and out of Killary Harbour. The salmon smolt tagging programme in 2017 was

undertaken as part of the EU funded SMOLTRACK project. Similar tagging programmes were carried out by project partners in Northern Ireland (NI), United Kingdom (UK), Spain and Denmark in this NASCO-led project.

Galway Bay

In 2017, monitoring of salmonids in their inshore marine phase continued in Galway Bay. The focus was on sea trout movement and residency in inner Galway Bay. This study is also part funded through SmartBay's National Infrastructure Access Programme (NIAP II) fund. For technical reasons the planned deployment of an array of hydro acoustic receivers extending from Furbo to Blackhead could not be undertaken in 2017.

In the Dunkellin catchment and adjacent inshore waters in Galway Bay, 10 sea trout smolts and 10 larger sea trout were tagged with standard acoustic tags (location) and released. Sea trout (smolts and larger fish) displayed several differential movement patterns which are being analysed. Some fish resided in the upper Dunkellin Estuary while other made movements into the lower estuary and some made extended marine migrations. In addition, several larger sea trout were dual tagged with low-resolution acoustic accelerometer tags and high-resolution external data loggers. Data analyses will be directed toward improving understanding of wild trout swimming behaviour, and these outputs will also facilitate assessment of whether transience or residence in partial locations is a passive or active process thus contributing to understanding of marine habitat usage.

Change and Human Activity on Sea Trout (CHASES Project)

IFI is collaborating with researchers from the Norwegian University of Science and Technology (and other international partners) as part of the externally funded CHASES Project. The overall aim of the project is to examine the consequences of land-use change and human activity on sea trout because of the large declines in populations in recent decades. The work package will compare the growth and marine residency period of sea trout in areas with finfish aquaculture and control areas in selected bays in Ireland and Norway based on detection of subtle changes in the elemental composition of scales. IFI is completing a joint analysis of historical and current sea trout scale samples from systems in both countries, combined with an investigation of the potential of laser ablation inductively coupled plasma mass spectrometry (LA-ICPMS) to analyse the elemental chemistry of their scales. Complex life histories (due to natural population variation, environmental or anthropogenic effects) are a feature of many sea trout populations making scales difficult to interpret. The LA-ICPMS based scale analysis is designed to discriminate the freshwater and marine phases of individual fish to support life history interpretation and, potentially, a quantitative assessment of marine growth. In 2017 scale samples from several sea trout systems in Norway and Ireland were analysed and models, using different chemical elements, are being developed and tested for robustness

IFI is the statutory body responsible for advising the Minister on policy and national strategies relating to sea angling in Ireland. The Marine Sportfish (MSF) Programme embraces studies on species including bass, elasmobranchs, and mullet in addition to carrying out annual assessments of fish species status in transitional waters. Some elements of the programme are augmented considerably by anglers contributing as citizen scientists to localised sampling efforts.

National Bass Programme

Monitoring and assessment studies on various bass life stages undertaken in 2017 included:

- Annual juvenile bass (young of the year) monitoring was undertaken in ten estuaries including three new sites. Densities were highest in the Slaney Estuary (Co. Wexford). Four estuaries on the south coast have been identified as established juvenile bass nurseries based on a consistent presence of juvenile bass for a minimum of two consecutive survey periods.

- Trawling of sites in the Munster Blackwater and River Barrow transitional waters encountered bass aged 1 year and older, which was consistent with previous years. For the first time trawling was carried out in the lower reaches of the River Slaney. Over 96% of bass from all sites combined were 1 year old fish.

- Angler-led bass scale sampling continues to prove a valuable asset for adult bass population structure assessment; almost 2000 sets of adult bass scales, spanning 2013-2016 period, have been aged. Over 500 sets of scales were provided by anglers in 2017 and age/growth details have been reported back to contributors. The 2007 year class continues to dominate rod catches.

- The bass floy tagging programme continues to operate at various venues around the coast. 1137 were tagged from 2013-2016; 352 were tagged in 2017. Three tagged bass were recaptured in 2017. Recapture data has generally shown that bass are recorded within 20km of their original tagging location.

- Identification of key juvenile bass nursery estuaries – current monitoring data suggests that few estuaries in Ireland support juvenile bass (O-group) populations. An initial IFI study using Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICPMS) (Ryan *et al*. 2016) found that otolith elemental profiles from juveniles were estuary-specific. The national baseline is being expanded to include samples from additional estuaries where bass have been recorded for the first time. In the medium term, these studies will form that basis for investigation of the potential for otolith microchemistry to assign adult bass to estuary of origin.

Estuarine Fish Sampling

Estuaries are highly productive habitats which provide shelter and food for marine species and are especially important nursery habitat for juvenile fish until they are available to recruit to adult stocks. Surveying and monitoring the distribution and abundance of marine fish species in estuaries is within IFI's sea angling brief and also addresses a requirement for sampling and reporting fish status in listed transitional waters for the WFD. The broadly based sampling programme designed to determine fish species presence and distribution in Irish estuaries on a rolling programme basis, is summarised as follows:

- Five transitional waterbodies were surveyed in autumn 2017. A total of 48 different species were identified across all sites.

- The extensive Shannon transitional waterbody (which includes 3 large individual water bodies) improved its ecological status from moderate to good since it was previously surveyed in 2014. An improved distribution of species throughout this waterbody was the main factor for this improvement.

- The ecological status of the River Maigue improved from moderate to good status since it was last surveyed in 2014. A total of 18 different species were identified during the survey.

- A total of 24 different species were identified in the Argideen Estuary (Co. Cork). This was a substantial increase on the 15 species recorded since the previous survey in 2009. The increase in species richness was the major driver in improved status from moderate to good.

Shannon Estuary Beach Seining (method of fishing employing a seine or dragnet)

Marine Sportsfish (Elasmobranchs) Tagging Programme

The long-running IFI Marine Sportsfish Tagging Programme was established to study the movements of elasmobranch fish species (e.g. sharks, rays and skates) occurring in Irish waters and to provide scientific advice for species conservation, and ultimately for management of the sports fisheries. Many are important and valuable recreational angling species and several have a high conservation value. Under the programme over 40,000 sharks, skates and rays have been tagged since 1970, mainly by trained angling charter skippers. The co-operative nature of the programme, which relies on catch and release and good handling, is a major contribution to its value and success. Over the years, the programme has contributed, in particular, to understanding the distribution and migration patterns of Blue shark in the North East Atlantic.

Considerable tagging and recapture data validation has been carried out in recent years which has facilitated basic mapping of species distribution. An extensive validation process and in-depth analysis of blue shark tagging data is ongoing. IFI tagging data for other vulnerable elasmobranch species including

Porbeagle Shark (*Lamna nasus*), Angel Shark (*Squatina squatina*) and the Common skate complex (*Dipturus batis* complex) are being analysed for publication. These data provide valuable information on species hot spots and will contribute to informing species and habitat conservation management.

Mullet Conservation Study

A small-scale study designed to capture baseline data on the distribution, ecology and movement of mullet species in Irish waters was initiated in 2016. Three species occur in Irish waters and each supports popular niche angling fisheries in estuarine waters. This programme is being undertaken with considerable assistance from anglers who are collecting scale samples. Related IFI sampling programmes in transitional waters will contribute distribution data and scale samples also. Mullet distribution data are being mapped and scale samples are being analysed to provide an understanding of mullet population structure in Irish waters. Acoustic tagging commenced in Waterford Harbour in summer 2017 – initial results show variable individual movement patterns by mullet within this extensive estuary.

The Research Division has delivered an extensive number of peer reviewed publications, 23 in all, across various projects during 2017. In supporting the dissemination of IFI research activities to a wider audience, a quarterly layman's newsletter has been developed and released; these newsletters provide updates on research activities available for both IFI staff and stakeholders alike.

Developments in Inland Fisheries Ireland Research

Issue 3, Spring 2017 IFI/2017/1-4379

Iascach Intíre Éireann
Inland Fisheries Ireland

Welcome to the Newsletter

Spring 2017 brings news of a major change for the Research and Development (R&D) Division: our move to new research laboratories in Citywest Business Campus. Our stories on glass eels and ICP-MS show how some R&D programmes are using these new facilities.

This issue also highlights the importance of collaborative research for IFI, from participating in international projects

As always, we thank all IFI staff who contribute to our research programmes and to this newsletter.

Slán,

Dr. Cathal Gallagher, Head of Research & Development

In this issue

Logistics & Research Centre
Glass eels
Celtic Sea Trout & COMPASS
Lamprey spawning

IFI Fish Farm Activities

The IFI brown trout and rainbow trout fresh water aquaculture facilities at Roscrea and Mullingar continued to produce good quality fish to meet all the requirements of the recreational angling sector. There was continued focus on ensuring that IFI's aquaculture facilities operate to the highest environmental and health and safety standards; to support this expert resources have been contracted to develop and implement improvement programmes in these areas across the farms.

In 2017, the Board of IFI appointed a Board sub-committee, which includes representatives from the trout angling representative bodies (the National Anglers Representative Association (NARA) & Trout Angling Federation of Ireland (TAFI), to support IFI in ensuring the future availability of sustainable freshwater aquaculture facilities to support stocked fisheries. As part of this initiative, IFI has tendered for the development of a new brown and rainbow trout freshwater aquaculture facility, it is expected that these tenders will be evaluated early in 2018.

Information & Communications Technology

Significant Information and Communications Technology (ICT) infrastructural upgrades were successfully completed during 2017, with the addition of a new Storage Area Network and clustering services. There were also many application upgrades supported including email, chat services, spam filtering, services, SharePoint sites and services and components of GIS application.

Having identified potential risks to ICT services and data, an ICT disaster recovery project was completed in 2017 in order to mitigate significant data loss while also providing a level of high availability for essential ICT services and applications. The National Disaster recovery solution encompasses all IFI's District offices with full replication of key system and associated data to its Disaster Recovery site located at Citywest Dublin.

With IFI placing additional emphasis in 2017 on remote working and the ability to access internal and hybrid cloud applications a set of requirements was identified to provide a secure access method to corporate resources (e.g. SharePoint/Time Management Software (TMS) while maintaining a single user name and password combination. IFI has implemented a Single Sign On (SSO) and Active Directory Federated Service (ADFS) mechanism in order to manage common credential access to a number of key software solutions.

As smartphones and tablet devices become more frequently utilised for day to day business communications, a system to manage and secure these devices was introduced to protect both the asset investment and any potentially sensitive data residing on such devices. A Mobile Device Management (MDM) solution was implemented so that all mobile devices are centrally managed for security and application deployment.

BUSINESS DEVELOPMENT

The National Strategy for Angling Development

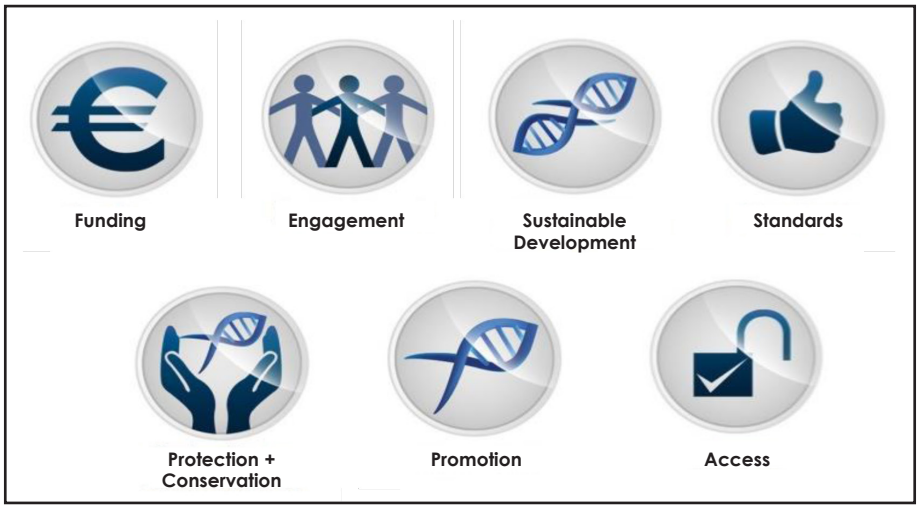
Significant progress has been made throughout 2017 on the implementation of the National Strategy for Angling Development (NSAD) which was launched in February 2016 by IFI following extensive research and a public consultation process. It is the first comprehensive national framework for the development of our angling resource. Subject to resource availability, the strategy will deliver a wide-ranging set of investments, innovations and promotions. This will lead to the protection and enhancement of fish stocks and angling infrastructure for both their economic value and their recreational benefit to the communities and visitors they serve across Ireland.

Successful implementation of the NSAD will lead to significant opportunities for new enterprise and employment, particularly for rural communities. Should future overseas anglers figures reach the historical figures estimated for the year 1999, the increase in associated economic contribution would approach €53m annually and support an extra 1,400 jobs.

In addition, an increase in domestic angler participation of 0.5% would increase economic contribution by approximately €43m annually and support an additional 420 jobs.

The aim of the strategy aligns with the IFI vision to provide an accessible and sustainable, world class, inland fisheries and sea angling resource for all. It has three objectives:

- Making angling accessible and attractive through information, infrastructure and support.
- Tourism development through promotion of our angling resource.
- Recognition of angling as a key leisure and recreation pursuit.



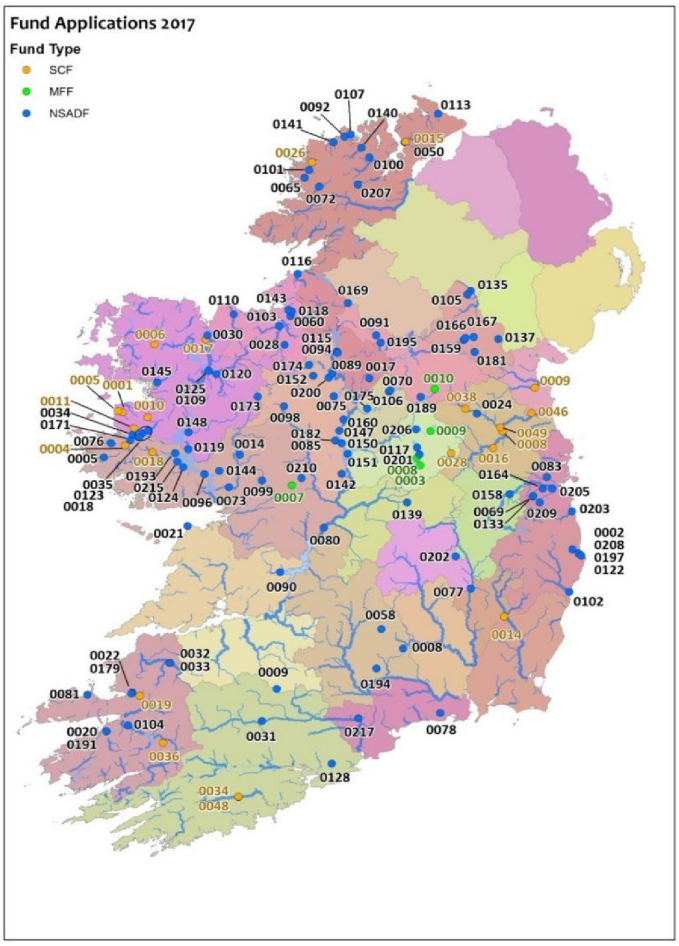
Seven action measures were identified to deliver on these objectives. These measures act as a framework for delivery of the Strategy, the broad nature of which ensures that the full benefits of angling can be realised. Progress made throughout 2017 on each of these action measures is outlined below.

1. Identify and access funding for the NSAD and future fisheries development and management

It is estimated that the NSAD will require approximately €25million in funding over five years to implement in full. A mix of baseline funding, IFI funding schemes and wider government investment in outdoor recreation and rural development is required.

Funding Process and systems

In 2017, IFI delivered significant improvements to the processes and systems used in managing funding schemes to ensure that public funds are managed in line with governance requirements. To this end a new online grants application portal was developed to store all information associated with each application and manage the workflow from application to evaluation, delivery and payment. These improvements were informed by the 2016 public consultation exercise along with management recommendations. This portal, which provides extensive guidance material for prospective applicants, can be found on the IFI website www.fisheriesireland.ie/ funding.



During the period, IFI assisted clubs in delivering projects funded under the Capital Grants Scheme 2016 and ran four additional funding schemes, the sponsorship scheme along with a joint call for projects worth €2.2m under the Midland Fisheries Fund (MFF), Salmon Conservation Fund (SCF) and NSAD Fund 2017. This joint Funding Call was open from 9th August to 13th October 2017.

To complement traditional information avenues 8 roadshows were held across the country over three weeks from 29th August to 14th September 2017 to support the rollout of the 2017 Funding Call. These events provided information on the funds available and application requirements while also providing opportunity for stakeholders to discuss their project ideas with local staff. Meetings were advertised on both national and local media as well as through social media, in addition staff engaged with their local contact points to inform them of events. Approximately 250 people and over 50 staff attended over the 8 evenings of the roadshows.

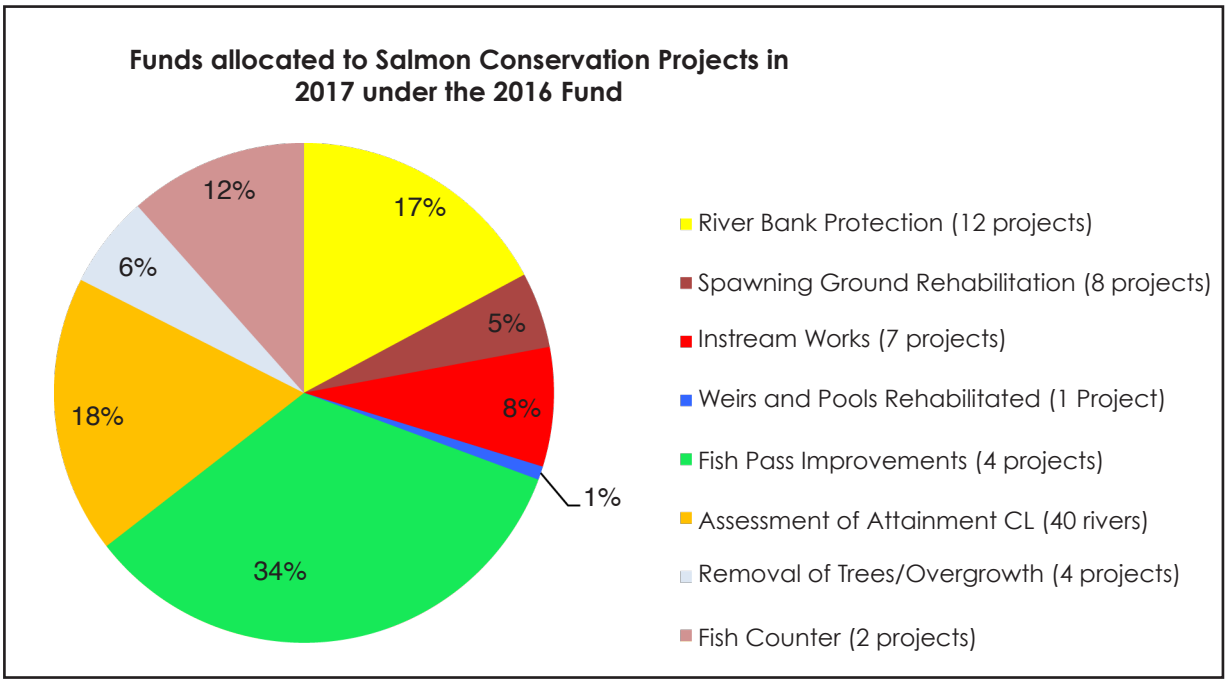
In total, 142 successful applications were accepted across the three funds. Each application was submitted using the new Online Grant Application Portal, ensuring all information associated with each application, its evaluation and delivery is stored in one place.

Although applications to the three calls, the MFF, the SCF and the NSAD, were received from 24 of the 26 counties, as can be seen from the map above, the highest number of project applications came from across the midlands and west of the country. This was also reflected in the project awards.

Salmon Conservation Fund

During 2017, funds of €544,195 were allocated to 24 projects. These awards were from Salmon Conservation Funds collected in 2016 and funds carried forward from previous years. Those who have purchased a salmon rod or commercial fishing licence in the relevant year can apply for funding and these may include angling clubs, commercial fishermen, fishery owners, riparian owners and landowners with an interest in a salmon fishery. Of the 24 projects, 10 of these were led by contributors and 14 by IFI.

Funds were used for river rehabilitation works to assist and facilitate the improvement of our wild salmon and sea trout stocks. The types of projects awarded funds are illustrated below. Full details of the salmon conservation fund can be accessed on the Inland Fisheries Ireland's website at the following link; http://www.fisheriesireland.ie/Salmon-Management/salmon-conservation-fund.html



Midland Fisheries Fund

The MSF is a sustainable funding mechanism through which angling clubs and organisations can access funding to undertake sustainable development works in the Midland Fisheries Group permit area. The fund has been created through angler contributions set-a-side from the permit income received by IFI in the Midlands Fisheries Group permit area.

Applicants must have paid a Midland Fisheries Group permit to be eligible for this fund. Implementation of MFF projects continued throughout the year while an additional three projects were awarded funding under this scheme in 2017.

National Strategy for Angling Development Fund

The NSAD Fund 2017 was aimed specifically at projects that aim to contribute to the objectives of the NSAD, which are to increase tourism from angling, promote angling as a key leisure and recreation pursuit and increase access to angling. All development is underpinned by the conservation and protection ethos and legislative role of IFI. Grants were available to all groups and individuals including local development associations, tidy towns, angling clubs and others looking to improve Ireland's angling resource.

The total available fund was €1.5m, with funding awarded to 85 stakeholder led projects.

December: Minister of State Sean Kyne TD, on the banks of the Grange River with local landowner, Pat Ward, welcomed the award of funding, to the value of €2.2m, by IFI to angling development and conservation initiatives nationwide

Sponsorship Scheme

IFI awarded €30,000 to angling clubs, angling federations, community groups and tourism service providers to support angling, angling competitions, novice angler initiatives and national angling teams through the IFI 2017 Sponsorship Scheme. Further support was awarded in the form of staff support, biosecurity assistance, the provision of equipment and the preparation of venues at a cost of approximately €100,000 to the organisation.

Newport Sea Angling Club applied successfully for sponsorship of their 51st Newport Sea Angling Club Annual Festival and their Daniel Peacock Memorial Competition for junior anglers

2. Encourage stakeholder engagement and involvement in fisheries development & management

Delivery of sustainable development projects

The NSAD aims to maximise the use of volunteerism where it is of benefit to angling development. This approach comes to the fore in the ideation and delivery of sustainable development projects, further illustrated as part of Measure 3 below.

Funding Roadshow in Donegal 12th September 2017

Throughout the year, many ambitious projects were proposed which would contribute to the objectives of the funding calls. Feedback from both applicants and our staff collected during the application and evaluation process was extensive and this will be incorporated in the delivery of these projects.

To ensure that capability is built across the sector Minister of State Kyne awarded additional funding to recruit 'Project Officers' to assist community organisations around Ireland with realising ambitious angling projects and conservation initiatives for 2018 and build capability across the sector. These roles were advertised through www.publicjobs.ie and the IFI website in December 2017. It is anticipated that successful candidates will take up their roles in Quarter 1 2018.

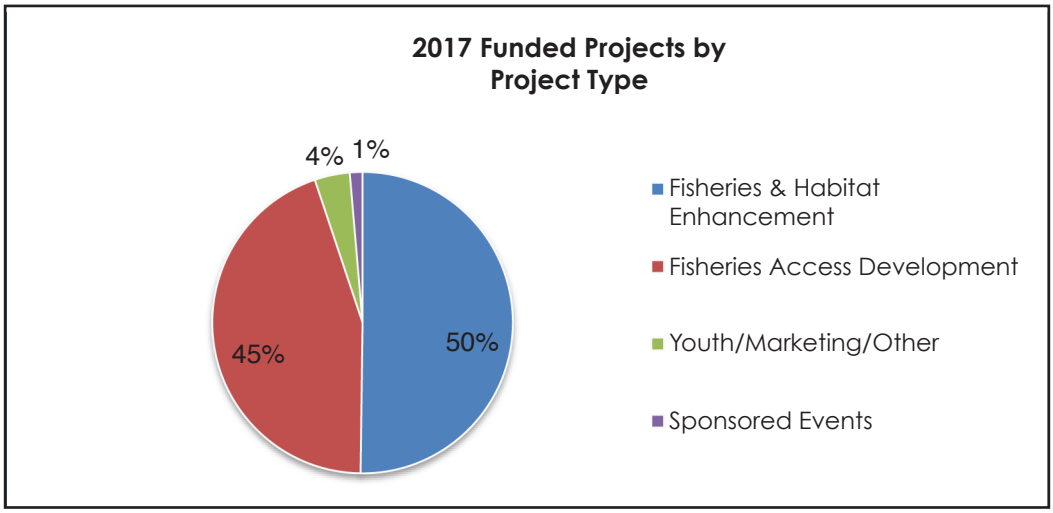
Surveys

The Economic & Social Research Institute (ESRI) has been actively recruiting anglers who are willing to volunteer for participation in angling related surveys. By the end of 2017, approximately 1,000 Irish anglers had joined the panel. From September 2017 these anglers are being asked to complete a monthly survey to capture, with improved accuracy, data relating to their angling activities and expenditures over the course of one year.

Two surveys of overseas anglers from the Dutch and UK markets were also conducted in 2017. The focus of the UK survey was to assess UK anglers' perceptions of how Brexit and travel restrictions might impact on their angling holidays, with specific reference to Ireland if those anglers were regular visitors. The data collected showed that the UK angler sample did not believe that Brexit would affect their angling holiday preferences.

3. Ensure sustainable development of the natural angling resource through the design, development and delivery of development projects

Funding schemes delivered in 2017 are outlined above, 24 projects were funded under the SCF, 3 under the MFF as well as 79 angling initiatives under the sponsorship scheme and 85 stakeholder led projects under the NSAD. The projects sit across fisheries and habitat enhancement; fisheries access development, youth, marketing and sponsored events as outlined below. This graph Illustrates the percentage of funding awards by project type across SCF, MFF, Sponsorship and NSAD Funds 2017 (total funding €2.2m).



4. Ensure protection and conservation of the fisheries resource

Detailed information on protection and conservation successes for 2017 is outlined in the Operations Section. To ensure that conservation and protection remain fundamental to the NSAD, IFI has developed an Environmental Charter and Environmental Assessment Process, which will be applied to development projects.

All instream and dry works projects applied for under the 2017 funding schemes were independently assessed by an environmental expert to ensure that applications met required environmental standards.

#CPRsavesfish

#CPRsavesfish was a new campaign launched in 2017 designed to highlight angling and the importance of conservation. 'CPR' stands for 'Catch, Photo, Release' and refers to a method of angling where a fish is

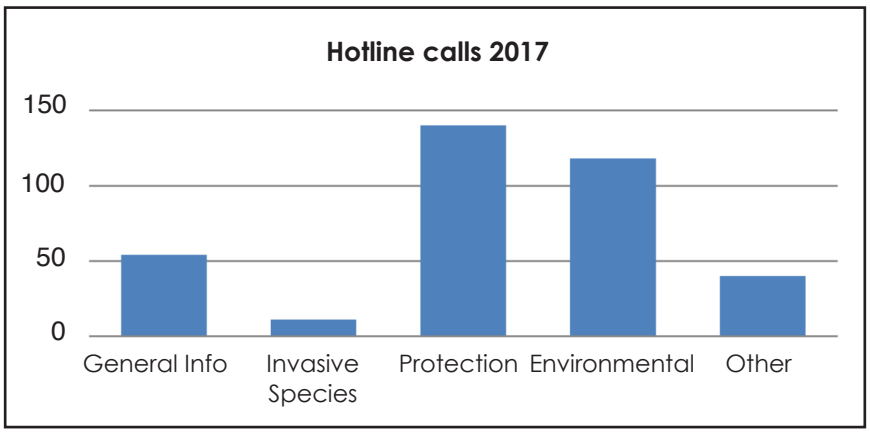
caught and subsequently returned unharmed back into the water. IFI supports and promotes catch and release across all types of angling including pike, coarse, salmon and trout fishing as well as sea angling.

The hashtag #CPRsavesfish was placed across a number of bridges and high footfall locations across the country to engage the public around the pursuit of conservation focused angling. Locations included Dublin, Cork, Galway, Limerick, Letterkenny and Kilkenny. The hashtag stencils, power washed with water onto pavements, are completely environmentally friendly and are expected to fade naturally over time.

The #CPRsavesfish stencil impression on St Patrick's Bridge, Cork city

Inland Fisheries Ireland Telephone Hotline 1890 34 74 24

IFI operates a 24 Hour Hotline on 1890 34 74 24 through which concerned individuals can report incidents of pollution, poaching and the presences of invasive species or other threats to the fisheries environment. In 2017, there were 363 calls to the Hotline, down 8% on 2016. The majority of the calls were in respect of illegal fishing and pollution complaints. In 2017 reports of invasive species rose significantly.



Overview of hotline call 2017 by subject matter

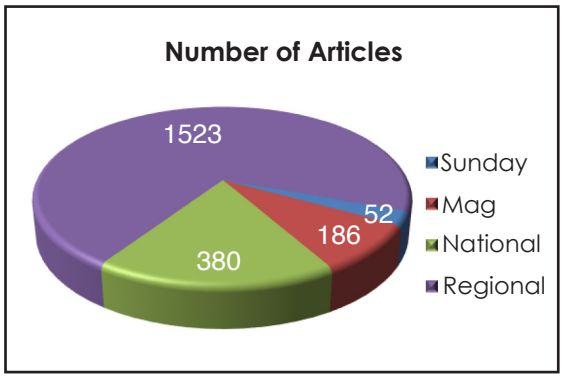
5. Set standards for fisheries and related services, including through the development, application and review of *Angling Product Evaluation Criteria*

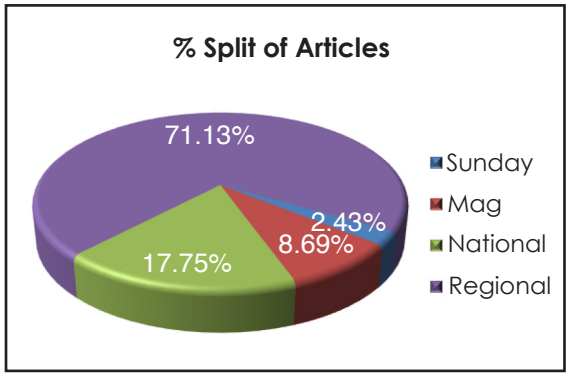
A better understanding of the state of our fishing product will enable informed marketing, promotion and development.

Angling Product Evaluation Criteria were developed and fisheries classified against these standards. This enables IFI to identify gaps and necessary developments that will provide the fishery with greater potential to attract anglers and economic benefits. These criteria were used as part of the evaluation of the 2017 funding applications.

6. Market and promote angling domestically and abroad through the development and implementation of a marketing strategy, including developing MOUs and partnerships and online licence and permit sales

Marketing and promotion activity will ensure that Ireland's angling product is developed to address customer requirements and thereby deliver on the strategic objectives. IFI has, with its partners, consistently marketed the angling product with a focus on the greatest potential to grow tourist numbers and economic return.





To build awareness of inland fisheries and angling, ongoing Public Relations (PR) and Digital Communications activity were implemented throughout the year across a number of communications channels. In total, 57 press releases were issued by the organisation and shared across print, broadcast and online media resulting in 2,141 press articles, 403 radio items, and 1,381 web stories.

IFI's online channels were active with 127 new webpages created on www.fisheriesireland.ie and 1,253 blog posts generated on www.fishinginireland.info. There were 4,168,000 page views by 598,346 stakeholders at IFI's various websites in 2017.

The organisation's social media channels grew in followers with IFI's Facebook Page receiving an increase to 12,960, up 23% from 10,521. The total weekly reach of the Facebook page exceeded 187,163 people during peak periods, a huge 253% increase over peak activity in 2016. Twitter followers increased to over 2,800 and monthly Tweet impressions were as high as 83,800, up 30% over last year.

A growing mailing list of engaged angling enthusiasts also received 39 issues of the popular ezine, the Irish Angling Update. The Irish Angling Update had an average open rate of 35% (twice the industry average). In the last quarter of 2017, the mailing platform was utilised to engage with stakeholders on diverse issues from surveys to funding calls and achieved open rates of up to 48.5%.

Promotional Material

In 2017, IFI completed two new brochures to assist with the promotion of angling tourism in Ireland. The first brochure depicts the range of angling opportunities to be found along the Wild Atlantic Way, one of Ireland's foremost tourism attractions. The second brochure provides a map and angling advice for fishing Lough Sheelin (Co.s Cavan /Westmeath /Meath), one of Ireland's most productive trout angling loughs. (See front covers of both publications below).

In addition to this, IFI partnered with our equivalent agency in Northern Ireland (Department of Agriculture, Environment and Rural Affairs) and north/south body The Loughs Agency to begin production of a suite of brochures to promote angling on the island of Ireland. Five brochures were written in 2017 and are scheduled for production in Quarter 1 of 2018. Angling publications can be found on the IFI website as follows: www.fisheriesireland.ie/Angling/angling-publications.html

Journalist Visits

IFI staff facilitated 13 foreign journalist trips in Ireland during 2017. Journalists came from a variety of markets, including the UK, France, Netherlands, Germany, Scandinavia, Italy and USA. 21 articles (132 pages) were published during 2017. Many of these articles relate to trips from 2016 as magazines often publish several months behind, which means many articles from the 2017 trips will be published in 2018.

The articles published equate to an estimated advertising spend of approximately €290,000, however editorial content has a higher value than paid advertising and the value of the coverage received would be much higher. Total IFI spend on journalist trips was approximately €15,000. Most of these trips were also supported by Fáilte Ireland (FI) with funding for travel, accommodation and car hire.

Example of magazine article on angling published in 2017

In addition, a number of blog articles were published by journalists, and one German magazine created a free DVD on fishing the Wild Atlantic Way for its subscribers.

PLAN B: THE CONG

Andrew Flitcroft is blown off Lough Corrib, but finds a local day-ticket river with prolific runs of grilse

PHOTOGRAPHY: PETER GATHERCOLE

'IT'S OFF,' SAID Larry. "Heavy rain and gales are forecast tomorrow."

Not what you want to hear when a July day hunting big trout on Corrib was on the cards.

"How about Ashford? It's full of fish."

This was not the first time Larry had made this suggestion. He's been banging on about fishing the Cong River at Ashford Castle for years.

"Honestly, it's crawling with them... I swear to God."

If you hadn't gathered by now, when it comes to fishing Corrib, everything else takes second place, but with little else to do except sit in a pub all day, we agreed to give it a crack.

The next morning Larry, Richard and I set off early from Corrib View Lodge. The village of Cong is just 15 minutes away and the imposing 13th Century Ashford Castle sits in manicured parkland less than a mile further downstream on the shores of Lough Corrib. It's a five-star hotel, one of the finest in Ireland and according to the web, a "basic" room for the night in October will set you back more than £500. If you're feeling flush, you can opt for the presidential suite for £4,000. Last April squillionaire golfer Rory McIlroy took over the entire castle for his wedding.

We met fishery manager William Cullinan at the on-site tea room while outside wealthy, well-dressed American couples walked off lavish breakfasts under umbrellas. We'd skipped our full Irish in the hope of an early fish and had to beg and borrow double-handers, reels and lines. It was a lousy morning, classically Irish and with no hope of respite we'd dressed in our finest - if incongruous - wet-weather gear. We had salmon flies, which we'd used a few days before on drifts with single-handers way out west, but we'd been advised the previous night by another of Larry's friends, regular Ashford rod Simon Cassidy, to fish "fine and small".

Simon has caught more than ten fish in a day at Ashford, fishing with micro flies (size 18s) on very long leaders. Delicate presentation and non-splashy casts are his recipe for success.

When you see the river, you'll understand why. The Cong is like a chalkstream. Its water flows underground through limestone from Lough Mask and while its levels can fluctuate, it always remains clear. It emerges in Cong village and empties into Lough Corrib roughly a mile downstream. Although very short, it is significant for two reasons. Firstly, radio-tagging carried out in 2005 by Paddy Gargan of Inland Fisheries Ireland (IFI) on Corrib's famous ferox trout revealed that 99 per cent of them spawn in the Cong river. To protect the huge ferox, which start running the river in August, the Cong is closed for fishing from September onwards.

More significantly for the salmon angler, there is a salmon hatchery at Cong, which is run by IFI for scientific purposes. Hatchery fish are raised to the smolt stage and every spring around 50,000 of them are released into the Cong, the Galway Fishery and the Erriff. The smolts are fin-clipped and micro-tagged. Half of them are treated with the chemical Slice to see what effect salmon farming (sea-lice) has on their chance of survival.

Many fish in the Corrib system run through the lough and head for the Cong hatchery, which is why there can be much local angling effort on the river - at the top and where it meets the lough. Don't be

Richard Baker fishes one of the hotspots on Ashford Castle's beat on the Cong River, County Mayo.

"Well-dressed American couples walked off lavish breakfasts under umbrellas"

RIGHT (FROM TOP TO BOTTOM) Andrew prepares to tail a 7lb grilse from the flats where fish use the cover of weed in the chalkstream-clear Cong.

The view upstream to wooded banks and the eel weir in the distance.

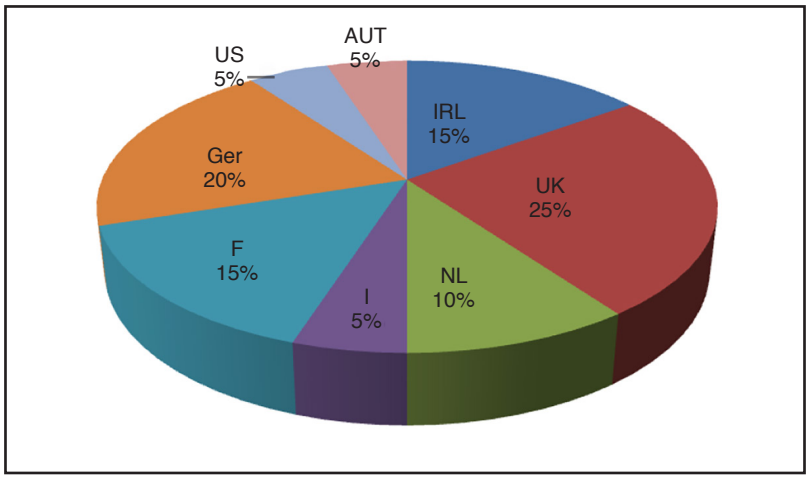
Ashford Castle's fishery manager William Cullinan ties stunning flies. He prefers a size 12 or 10 in good fly water.

The 7lb cock took a small plastic hitch, fished as a conventional tube-fly.

Trout and Salmon Magazine December 2017

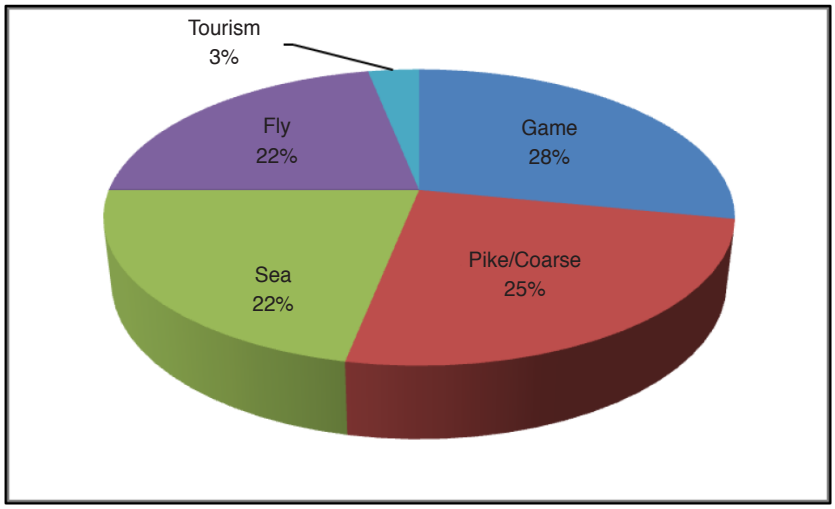
Angling Promotion – Trade Shows

During the year, IFI presented at 20 trade shows across Ireland, the US, France (F), Germany (Ger), The Netherlands (NL), Austria (AUT), Italy (I) and the UK. Sixteen shows were selected for their proven track record in providing effective access to both customers and media. In addition, IFI also attended four new trade fairs at venues in France, England, Austria and the US.



Angling Show Attendance by Country

Each trade show provided a slightly different mix in terms of angling disciplines and target markets. IFI staff bring relevant expertise and local language skills relevant with the needs of each show. In some cases, trade partners were invited onto the IFI stand to provide better and more effective marketing opportunities. IFI supported 19 members of the Irish angling industry at venues in France, Germany and the Netherlands. Feedback from staff and members of the trade attending these shows was extremely positive and the shows were deemed most successful with trade reporting a number of bookings.



Angling Show Attendance by Discipline

In addition, IFI deliver presentations during these shows attracting a wide audience of over 550 individuals with angling interests. A significant number of leads were generated and media visits planned.

A busy 'Angling Ireland' stand at the Pescare Show held in Vicenza, Italy

All shows were attended under the '*Angling Ireland*' brand. Twelve shows were organised and attended in conjunction with our partners from the Department of Agriculture, Environment and Rural Affairs (DAERA) in Northern Ireland. The Loughs Agency (LA) participated at three joint trade fairs.

7. Achieve access to angling for all including physical access, addressing ownerships issues and bringing angling to the people.

Access issues can impinge on the potential of angling to maximise economic, tourism, health and recreational benefits. Access issues include physical access, ownership issues and barriers to starting angling, Inland Fisheries Ireland delivered multiple programmes throughout 2017 to engage the nation in fisheries habitats and angling.

Something Fishy

The 2017 'Something Fishy' programme saw 3,390 children from across the country taking part in 113 schools and nine education centres nationwide. Eight different lessons were studied in the classroom before the students were visited by IFI staff who introduced them to 'river life and its surrounds' backed by a full range of resources for teachers and children available on www.somethingfishy.ie. End of term projects were based on a key learning from the 'Something Fishy' experience. The students were invited to submit digital class projects with special reference to IFI's involvement. Gartan National School of Churchill, Letterkenny, County Donegal, was named the winner of 2017 national 'Something Fishy' competition.

Since the inception of 'Something Fishy' in 2005, approximately 50,000 children have participated in the initiative, which aims to promote interest and understanding in fish and their habitats.

Dublin Angling Initiative

The Dublin Angling Initiative (DAI), which aims to promote, develop and improve angling in the Dublin area, experienced significant demand for its services during 2017.

Over 420 children and young people from the Greater Dublin Area, (Tallaght, Whitechurch, Darndale, and Blanchardstown), and inner city youth projects, took part in this year's programme. Participants received fishing lessons, travelled on fishing trips, took part in competitions and enjoyed family fishing days at various community events.

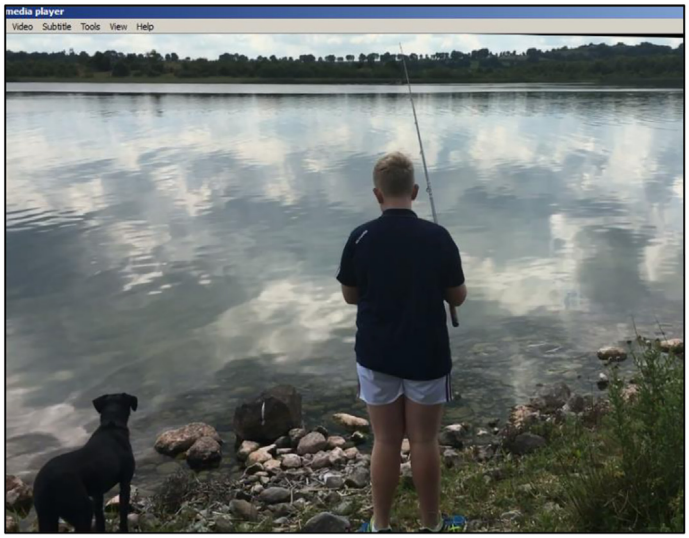
Thousands of young people have been involved in the DAI programme since its inception over 20 years ago.

Participants attending a Dublin Angling Initiative in Wicklow event

Fish & Film

In 2017, IFI launched a Fish & Film competition to encourage young people to spread the word about fishing. Junior fishing clubs, youth clubs, projects and centres were invited to apply to the competition, launched in June, by taking film footage of their fishing adventures and promoting it online.

The Fish & Film competition saw entrants film a fishing trip and include fun interviews on what angling means to them. The films were youth led in content and production with all junior anglers up to and including the age of 18 eligible to apply. All films submitted were uploaded onto the organisation's YouTube channel and the public's views on each film counted as votes. Four excellent entries were received, with the prize fund distributed equally between them, each awarded €500.



A clip from Whitelake Angling Club's winning 'Fish & Film' video entry

Ploughing Championships

In 2017, 291,000 attended the National Ploughing Championships, the highest number ever to attend the event.

The National Ploughing Championships 2017 attended by Sean Kyne TD, Minister of State at the Department of Rural and Community Development and the Department of Communications, Climate Action and Environment

IFI's public engagement stand was a resounding success, with the use of aquariums, video screens and microscopes all adding to opportunities for insight and learning by young and old alike. It was hugely encouraging that there was such an interest in recreational fishing and associated environmental matters.

National Heritage Week

Almost 300 children and adults took part in a public initiative by IFI at Glenveagh National Park, Donegal in August to mark National Heritage Week.

National Heritage Week is part of European Heritage Days and is a joint initiative of the Council of Europe and the European Commission and is the most widely celebrated participatory cultural events shared by the citizens of Europe. Over 70,000 events are organised every year in order to help raise awareness of Europe's common heritage and the continuous need for its protection.

IFI Staff at Glenveagh National Park during National Heritage Week

Given that the theme of this year's dedicated day was 'Water', IFI staff brought along an aquarium with brown trout and salmon of different year classes and in keeping with the overall focus of European Heritage Week this year - the unique link between people and nature - those in attendance heard talks on the life cycles of the various fish species present in Glenveagh National Park such as brown trout, salmon, Arctic char and sea trout.

State Fisheries

IFI has over 180 State owned fisheries under management. A standard and transparent process is in place for the tendering and licencing of these State fisheries. IFI has a policy of ensuring that all of its State assets are openly available to the public and therefore angling clubs who are awarded a State fishery licence must make the fishery available through day/weekly/season tickets to all visiting anglers. This ensures that all State fisheries can be enjoyed by local and tourist fishers alike. During the 2017 season, 87 fisheries were under licence to 47 clubs and organisations generating over €52,405 of income in licence fees.

Socioeconomics of Inland Fisheries Research Programme

In August of 2015, IFI embarked on a new genre of fisheries research; a programme of socio-economic research focussing on recreational fisheries in Ireland. The Economic and Social Research Institute (ESRI) and the Socio-Economic Marine Research Unit (SEMRU) of the National University of Ireland, Galway (NUIG) were engaged as key partners and a three year joint programme was drawn up. The aim of the research programme is to create, improve and enhance knowledge on social and economic issues pertaining to the inland fisheries resource and management thereof in order to provide evidence for policy in this area. Research outputs will support policy decisions regarding the management of the inland fisheries resource and angling within Ireland.

Some of the outputs from 2017 included the submission of a number of papers for publication in economic and fisheries journals; the sponsorship of three economics Master's students' fisheries related dissertations; the ongoing sponsorship of one PhD student; and the commencement of an angler panel of volunteers for participation in angling economic surveys.

Salmon Management - Salmon and Sea Trout Tagging Scheme, Bye-laws

In 2017, based on scientific advice, management recommended the opening or partial opening of 76 rivers (including catch and release options) and the closure or partial closure of salmon and sea trout (over 40cm) fishing in 72 rivers. A system of brown gill tags was in operation in selected rivers where it was considered necessary to ensure river based salmon angling quotas were not exceeded.

The principal aims of the Wild Salmon and Sea Trout Tagging Scheme are to provide a means of collecting accurate nominal catch statistics and estimates of salmon and sea trout stock exploitation, to develop best management strategies and to ensure these species are exploited in a sustainable manner on a national, river basin, fishery district and river basis.

Under the regulations all fishermen must affix a coded tag to each salmon (or sea trout over 40 cm) they catch and retain. A logbook entry must then be made giving details of each fish caught. All logbooks and unused tags must be returned to RBD offices as set out in the Wild Salmon and Sea Trout Tagging Scheme regulations.

This data is entered into a national database by IFI staff and following this, the validation, collation and analysis of the data is performed to produce the annual Wild Salmon and Sea Trout Statistics Report. These reports provide valuable information to fisheries managers, scientists, policy makers and legislators and assist in the design and implementation of policies and strategies for the conservation of salmon and sea trout stocks in Ireland. The most recent reports (2001 to 2017) can be downloaded from the IFI website at http://www.fisheriesireland.ie/Salmon-Management/wild-salmon-and-sea-trout-statistics.html

Bye-laws

The principal Bye-laws introduced for the 2017 season were for the Conservation of Salmon and Sea Trout stocks. Bye-laws were set in place at both national and local level to facilitate bag limits for salmon and sea trout angling (Bye-law No. 944 of 2016), the opening of fisheries on a catch and release basis (Bye-laws No. 945 and 948 of 2016), and the closure of certain fisheries where it was considered necessary to afford adequate protection to salmon and sea trout stocks (Bye-law No. 321 of 2016).

Further restrictions were set in place for all angling methods on certain closed and catch and release fisheries prohibiting the use of any fish hooks, other than single barbless hooks, and the use of worms as bait in angling where it was considered necessary to afford additional protection measures to salmon and sea trout stocks (Angling Bye-law No. 943, 2016).

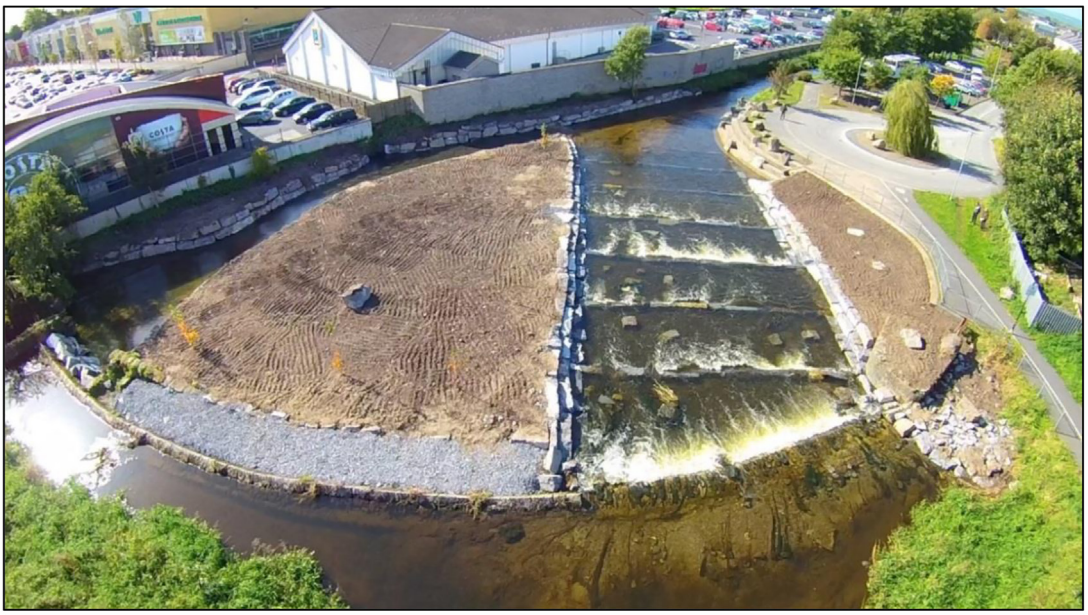
Commercial fishing for salmon and sea trout detailing the rivers where commercial fishing was permitted along with the opening and closing season was set out in the various Bye-laws (Bye-law No. 947 of 2017).

The above Bye-laws were proposed by IFI, based on best management and scientific advice and consultation with stakeholders, and then submitted to the Minister of State for Communications, Climate Action and Environment, Sean Kyne TD, for consideration. Following approval and signing by the Minister of State, these Bye-laws were enforced by Inland Fisheries Ireland field staff. A list of relevant Bye-laws enacted for 2017 are provided and can be found on the Inland Fisheries Ireland website: http://www.fisheriesireland.ie /publications/fisheries-legislation-and-regulations.html

Fish Pass Improvement Works

Hanover Weir - Works on the construction of a rock ramp fish pass at Hannover Weir on the River Burren in Carlow town was completed in September 2017. The project, which took almost five years to complete, replaced an existing fish pass on a 1.6m high weir. This new rock ramp structure has significantly improved fish pass facilities at this location.

Aerial shot of Hannover Weir, Carlow Town before construction work commenced



Hannover Weir, Carlow Town following construction work

Martry Weir - Planning permission was obtained in 2017 to carry out fish passage improvement works on Martry Weir on the River Blackwater (Co. Meath). The River Blackwater, which is a tributary of the River Boyne, is considered a key Atlantic salmon and river lamprey river (among other species) and is contained within an SAC (002299). Martry Weir has been identified by IFI as an obstacle to fish migration and free movement of all fish over all periods of the year thereby rendering it non-compliant both with Section 116 of the 1959 Fisheries (Consolidation) Act and the requirements of The European Habitats Directive.

An IFI 'Assessment of Fish Passability Report' found that the structure is a partial high impact barrier to adult salmon and trout and a complete barrier to cyprinids, adult lamprey and juvenile salmonids. A number of engineering solutions were considered with the preferred option for the weir being the provision of a full width rock ramp downstream of the existing weir. IFI were granted planning permission for the scheme which will allow the passage of endemic fish species upstream and downstream of the existing weir obstacle,

Bunowen Weir Removal - IFI research carried out a barrier assessment survey (SNIFFER) on the Bunowen Weir upstream of Ahascragh Village (Co. Galway). The weir significantly impacts the upward migration of salmonids, eel and lamprey, and plans are being progressed to change the flow process. Planning permission for the installation of rock ramp was granted at the end of 2017, the installation of which should open up 8km of habitat upstream for all fish species. Works are due to commence in summer 2018 subject to available funding.

Fisheries Habitat Development

Over 552 rivers sites were assessed for fisheries habitat development in 2017. During the year, 37,659 metres of lakeshore and bankside works were undertaken and 24,445 metres of instream works completed.

Following a major pollution incident at Clifferna Water Treatment Plant (WTP) in 2016, which resulted in a fish kill of over 3,000 trout along 5km of the Laragh River (Co. Cavan), substantial costs (in excess of €59,000) were awarded to IFI for the rehabilitation of the Laragh River.

Instream habitat enhancement works, which commenced in 2016 were completed in 2017. Works included raking of existing gravel beds, introduction of spawning gravel, placement of instream boulders and bank stabilisation. Some bankside works were also completed which comprised of fencing and selective bank clearance. Trout stocks have responded well to the habitat works as evidenced from recent assessments in the area.

Enhancement works were completed on a tributary of the Glore River (Moy catchment, Co. Mayo) by the OPW in conjunction with IFI personnel. The plan was based on a walkover survey carried out in April 2017 and designed on the basis of a template used by IFI.

Four fisheries enhancement projects were completed in the Corrib catchment (Co. Galway) in conjunction with The Corrib Federation, Clydagh Foundation, Local angling clubs, the OPW, National Parks and Wildlife Service (NPWS), landowners and contractors. Amongst these was the Cahermorris Stream where work focused on both instream and riparian zone works, which were aimed at improving habitat for juvenile salmonid populations.

The 'Curly Hole' section of the River Boyne at Oldbridge (Co. Meath) is a renowned area for salmon and sea trout fishing. Over the past two decades, the flow pattern of the River Boyne at the Curly Hole has undergone substantial forced changes due to bankside vegetation impinging into the river upstream of the Curly Hole. Salmon and sea trout have become more vulnerable as the slow flow regime makes the pool more accessible for poaching. IFI have submitted a full planning application to Meath and Louth County Councils for a scheme to restore the original flow regime. The proposed restoration works are directly connected with and necessary for the management of the River Boyne and River Blackwater SAC (No. 002299) and the River Boyne and River Blackwater Special Protection Area (SPA) (No. 004232). Once planning permission is granted IFI intend to apply for SCF to allow progression of the project to construction stage in 2018.

Under the Shannon Fishery Partnership programme of works (which includes the Electricity Supply Board (ESB), IFI and Ormond Anglers) angler access works were completed downstream of Ballynaclogh Bridge on the Nenagh River (Co. Tipperary). The plans were drawn up by IFI and carried out by ESB and it is envisaged that a further section will be completed in 2018.

Instream enhanced works were carried out under the Shannon Fishery Partnership in July 2017 on the Duniry River, which is an important spawning tributary of the Cappagh River (Co. Galway).

Managing Lakes and Rivers

Angling Infrastructure Development

An extensive programme of installation, renovation and removal of derelict angling structures was undertaken across the country in 2017.

Under the NSAD over €300,000 of prefabricated stiles, plastic wood and timber was purchased towards ongoing renovation, replacement and repair of angling access infrastructure throughout the country. While the vast majority of structures were fabricated from recycled plastic wood and galvanised steel a small number were constructed from traditional tanalised (pressure treated) wood.

2,760 structures were tagged with Quick Response Code (QR Code) on anodised aluminium asset tags. This system provides a mobile asset management tool which can be utilised by field staff for audit and follow up repairs and/or repeat inspection over time. Data is geo-referenced thereby allowing comprehensive spatial analysis as the programme progresses.

Angling Development Works	ERBD	SERBD	SWRBD	Shannon	WRBD	NWRBD	Total
No of Angling Structures Removed	3	0	23	106	85	405	**622**
No of Angling Structures Replaced	14	0	8	16	54	141	**233**
No of Angling Structures Repaired	14	1	20	45	64	232	**376**
No of New Angling Structures Created	30	0	3	15	20	13	**81**

Significant structural works completed include:

- The extension of existing angling stands on the Town Lake, Bailieborough, Co. Cavan.
- A raised walkway installed on Breaky Lake, Kingscourt, Co. Cavan.
- New raised walkway and other structures on the River Boyne at Oldbridge, Co. Meath.
- The removal of old angling structures from the Easky River. Co. Sligo.
- Prefabricated and painted stiles installed at the Erriff River beats, Co. Galway.
- A derelict structure removed from Corrigeencor Lake, Co. Leitrim and replaced with a new long life low maintenance structure.
- A new bridge and a new bridge and stile combination installed on the River Moy, Co. Mayo.
- Footbridge and prefabricated stile erected on the Robe River, Co. Mayo.
- Maintenance of structures at Clare Lake and the removal of a derelict structure at Mayfield Lake in Claremorris, Co. Mayo.
- Construction of a new angling stand at Dromore Lake, Cootehill, Co. Cavan.
- The construction of a new angling stand at Church Shore, Garadice Lake, Co. Leitrim.
- Erection of aluminium stiles on the Owenea Fishery.

- Two wheelchair accessible stands constructed at Kiltybarden Lake, Co. Leitrim under the Rural Economic Development Zone (REDZ) programme.
- New accessible angling development on the Gweebarra Fishery which was funded under Rural Recreation Programme.
- The completion of 14 fishing stands at Rogers Island downstream of Portumna Bridge on the River Shannon (Co.s Galway /Tipperary). This was the final phase of a two year program involving IFI and project partners Portumna Coarse Anglers and Galway County Council, which resulted in the upgrade of Rogers Island area to a world class angling events area.
- The Mota Quay angling project was completed in 2017 along with a biosecurity station. The capital cost of the project was €45,585 with €43,250 (95%) funded by Fáilte Ireland and the remaining €2,335 (5%) by IFI. All project supervision (planning, design, site surveying, screening AA) and travel costs were covered by Inland Fisheries Ireland. The provision of this structure created 6 new universal angling spaces (catering for wheelchair access) on Lough Derg for coarse fishing.

Department of Rural and Community Development

In September 2016, IFI received funding of €536,886 to develop key angling projects in rural areas. The funding was awarded by the Department of Rural and Community Development as part of the Government's programme to support rural development.

Project Ref.	Project Name	Amount	RBD
EOI15027	Slí Na Finne, Gweebarra	€31,450	NWRBD
EOI15028	Bothar na Naomh Heritage & Nature Trail, Cloone, Co. Leitrim	€113,660	ShRBD
EOI15029	Maintenance of Angling Facilities - The Meadows Athlone	€73,000	ShRBD
EOI15030	Wheelchair Accessible Angling - Suck Valley Way, Co. Roscommon	€89,230	ShRBD
EOI15031	Development at Lough Nanannagh Claremorris, Co. Mayo	€85,347	WRBD
EOI15082	Curry Grange Lake, Co. Longford	€29,100	ShRBD
EOI15088	Mudflats Carrick On Shannon, Co. Leitrim	€103,100	ShRBD
EOI15089	River Suir River Bank Restoration, Co. Tipperary	€12,000	SERBD

* Monetary amounts are rounded to the nearest whole number

All projects for the ShRBD were completed in 2017. Four of the project sites had floating or fixed galvanised structures associated with them.

Works on the Curry Grange project progressed during May 2017 with the creation of a secondary embankment. Further works will involve a new slipway, a fixed fishing platform, fencing and entrance gate.

Staff installed the floating angling structures at 'The Golden Mile', Meadows, Athlone during 2017 which involved the insertion of three floating angling stands on the main River Shannon.

Official Opening of New Angling Developments

On 13th November, Minister for Communications, Climate Action and Environment, Denis Naughton TD officially launched the new angling developments at 'The Golden Mile', Athlone, Co. Westmeath and at Lough Acalla, Kilconnell, Co. Galway.

IFI worked with anglers, local angling clubs, landowners, and the relevant statutory agencies and contractors in the design and construction of these new floating platforms, which include wheelchair accessibility at both locations.

In Leitrim, another significant development project was completed with an investment of €103,000. The project resulted in the creation of new roadways, car parks, upgraded toilet facilities, upgraded slipway and a floating angling stand at 'The Mudflats' on the main River Shannon at Carrick-On-Shannon, Co. Leitrim. This is another important match angling venue, used widely for international match angling events such as the World Pairs and the Carrick Angling Festival.

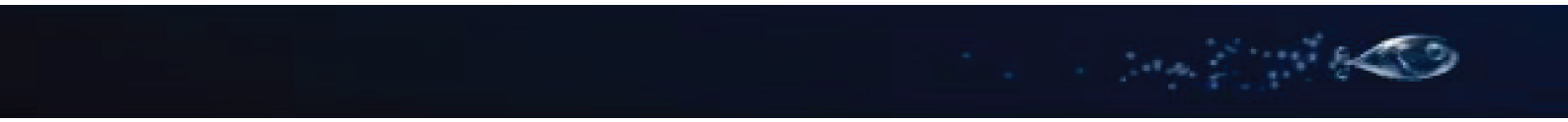
Stock Management

Stock management operations were carried out on six designated wild brown trout lakes in the WRBD. The stock management plan involved netting operations largely restricted to March. Some very limited electro fishing operations were also carried out in the early part of the year.

The ShRBD stock management programme was conducted on Lough Sheelin (Co.s Cavan /Westmeath / Meath) between March 13th and April 3rd. Nets were lifted to facilitate two competitions; the Kilroy Cup (March 19th) and GoAndCatch (March 26th).

Fish Stocking

Fish were stocked free of charge during the period in the following;



Waters	Number of Rainbow Trout	Number of Brown Trout
Pallas lake	1,500	0
Lough Gornaid – West Clare	600	0
Lough Garvillaun – West Clare	600	0
Clonmacken lake – West Clare	0	450
Lough Namina – West Clare	600	0
Knockerra lake – West Clare	0	450
Mount Dalton - Westmeath	0	500
Lough Owel - Westmeath	0	9,000
Lough Acalla – East Galway	2,000	0
Lough O Flynn - Roscommon	0	2,000
Loch an Dochais (through sponsorship) - Offaly	50	150
Meelagh Lake, East Clare	200	0
Total	**5,550**	**12,550**

Invasive Species Management

The National Parks and Wildlife Service (NPWS) is responsible for the protection and conservation of Ireland's natural heritage and biodiversity at national government level. IFI has provided support in implementing temporary measures to reduce the impact of outbreaks/encroachments of invasive aquatic species (both fauna and flora) which occurred during the year.

Pink Salmon (non-native) landings

The appearance of over 30 non-native pink 'humpback' salmon in a number of Irish fisheries during 2017 was a very worrying development. Pink salmon were recorded from several fisheries along the northwest and west coast including the Rivers Drowes, Lackagh Crana, Delphi and Erriff. Pink salmon are native to the Northern Pacific Ocean and adjacent areas such as the Bering Sea and the Arctic Ocean. They represent a serious potential threat to Irish native salmon and other fisheries in terms of genetic introgression*, and transfer of disease or parasites. As there is no licenced aquaculture facility for farming pink salmon in Ireland their appearance in Irish waters was unexpected. IFI issued

a number of public notices to encourage any anglers who captured a suspected pink salmon to contact IFI, to record a number of key details such as date, location and fish weight and submit suspect fish for scientific analysis.

* *Introgression is the transfer of genetic information from one species to another as a result of hybridisation between them and repeated backcrossing.*

Asian clam

In order to track the continuing spread of the invasive species Asian clam in the Upper Erne following its recent introduction to the catchment, IFI conducted an Ekman grab survey of the River Erne downstream of Belturbet.

Crayfish Plague

An outbreak of the crayfish plague occurred on the River Suir, Co. Tipperary, in June 2017. A number of inter-agency meetings were held to coordinate a joint response. Agencies involved included representatives from the NPWS, Local Authority Waters & Communities Office (LAWCO), the OPW, and related Local Authorities. Recommendations from the group included the erection of signage, notification of relevant stakeholders and postponement of planned canoe /kayak events.

Curly Leaved Water Weed (*Lagarosiphon major*)

Weed management operations continued throughout 2017 on upper Lough Corrib, Co. Galway, where the curly leaved waterweed, *Lagarosiphon major* continues to be maintained at manageable levels. The project received support from the OPW and Galway County Council. IFI bore the majority of the costs associated with this work. The OPW also provided logistical support in relation to the maintenance of the weed harvesting boats.

In the earlier part of 2017, sites listed for eradication were initially mechanically controlled (weed cutting and harvesting) and at the beginning of the growing season were treated by covering with light blocking jute sheets. These sites can be considered free from the weed, until such time as the *L. major* fragments wash into those areas again.

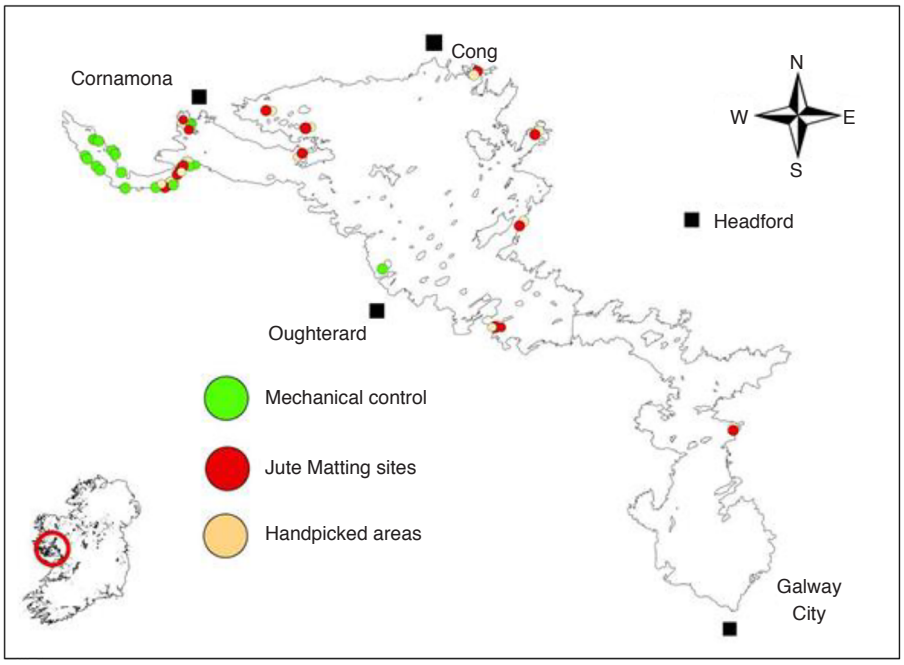
Sites were also prioritised for treatment based on the size of the infestation and the dates of any prior treatment. Weather and ability to work within sheltered sites was also considered. Some sites were chosen based on their exposure, the time of year and on the ability for the control team to relocate to a nearby sheltered location on days when wind conditions were problematic. The total area of lake treated by the three methods over 2017 amounted to 13.6ha (136,020m^2). The area of lake treated with each method is detailed in the table below:

Method	Area treated (m^2)
Mechanical control	91,480
Jute matting	42,500
Hand picking	2,040
Total	**136,020m^2**

Mechanical cutting was carried out at 15 locations around the lake and each of these locations included sites that had previously been the subject of weed control operations. Some sites were mechanically cut so that jute matting treatment could be applied later in the year increasing the potential for successful eradication. The total area of lake where weed was mechanically cut amounted to 9.1ha (91,480m^2).

Jute matting control began in May and continued into November. The mild conditions enabled the team to begin dive operations early in the season. Light excluding and biodegradable jute matting was laid at 14 locations around the lake and the total area of lake bed covered was 4.2ha (42,500m^2).

Hand picking was used to treat sparsely spread singular strands and is vital to the success of the jute matting operations. Divers carefully examined the peripheral areas of treated zones to locate any outlying singular strands or sites that were too small to require sheets of jute matting. This method is difficult, but will enhance the success of eradication within areas treated with jute. A total lake area of 0.2ha (2,040m2) was handpicked during 2017.



Locations in Lough Corrib treated in 2017 and treatment type

HUMAN RESOURCES

HR Operations

The 2017 Business Plan was launched at a staff briefing day early in the year. The event also showcased activities and achievements during the previous year for all staff nationwide.

The IFI Staff Scheme is provided for under Section 33 of the Inland Fisheries Act 2010 and a revised Scheme was finalised by IFI in conjunction with DCCAE towards the end of 2017. This scheme sets out the remuneration, tenure of office, qualifications for appointment and conditions of service for staff. Thirty eight associated policies and procedures were encompassed in the final scheme. Under the 2010 Act, the Staff Scheme is required to be approved by Minister of State Kyne with the concurrence of the Minister for Public Expenditure and Reform and it will be submitted for approval early in 2018.

IFI commenced the implementation of several significant projects, which included preparation for the implementation of a digital fleet management information system and an upgrade of the HR Information system incorporating a time and attendance system. Consultation at national level began in Quarter 3 of 2017 working towards implementation deadlines in early 2018.

Following the outcome of a staff survey IFI formed a working group from a cross section of staff, to address the key findings.

Training & Development

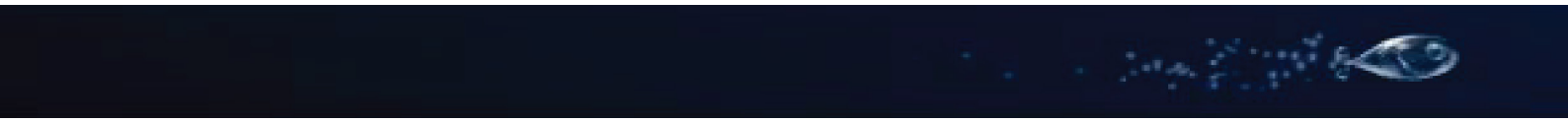
IFI's vision is to provide a 'world class Inland Fisheries Resource for all' and the importance of training cannot be emphasised enough. IFI recognises the importance of empowering staff, by giving them the opportunity to update their skills and knowledge so they can continue to provide the highest standards to our stakeholders.

The primary focus for staff training this year was on ensuring that staff have the necessary skills to deal with the challenges encountered on a daily basis and make it home safely at the end of the day was a key priority for 2017.

Training Completed in 2017

In 2017, IFI ran 16 programmes of training completed by staff (773 days). The majority were Health and Safety focused, with particular reference to Driver Handbook Training.

However, in other areas of the organisation statistical training was rolled out for research staff (20 staff completed a 4 day training course in Quarter 4 (Q4)). Freedom of Information (FOI) – Decision Maker training was delivered; which involved detailed guidance on managing and responding to FOI requests. In preparation for the General Data Protection Regulations (GDPR), which will come into effect on the 25th May 2018, Data Protection and Privacy Impact Assessment training completed. *Appendix IV shows a breakdown of numbers for each training course in 2017*. A number of staff also received funding for Further Education programmes.



Health & Safety

IFI continues to improve its systems to ensure the safety, health and welfare of employees, customers and those affected by our activities. Following the insight acquired through the Nordic Safety Climate Questionnaire (NOSACQ-50) perception survey conducted during the period, a number of measures have been implemented to enhance safety culture. Perhaps the most significant of these has been the introduction of the IOSH Managing Safely training course for line managers. The course has been instrumental in conveying the responsibility for health and safety at all levels of the organisation while empowering managers to assess risk and implement control measures locally. The immediate impact of the training has been a notable increase in engagement between the Health and Safety Executive and line managers to address safety issues. The course will continue to be rolled out during 2018.

The IFI Safety Statement was reviewed and updated in 2017. The new document has been issued to staff following collaboration between the Health and Safety Executive, the National Safety Committee and Management; it captures new work practices, practices which have changed in line with technical progress and legislative updates. Along with issuing a CD copy to all staff the document is readily accessible in each IFI base and via the IFI Intranet site.

A driver handbook was developed following detailed consultation with internal stakeholders and staff representative groups. Training was then rolled out to all staff, which included practical demonstrations of the vehicle and trailer daily checks. The programme helps to ensure IFI conforms with the joint Road Safety Authority (RSA) and Health and Safety Authority (HSA) driving for work guidance document and also legislative compliance.

Other examples of risk management activities included (i) staff workshops on risk assessing protection patrols; (ii) tendering for fire alarm and emergency lighting maintenance services, (iii) management of national property security maintenance and monitoring services (iv) the IFI workplace biannual risk assessments; (v) on-going accident investigation and claims management.

Incident Reporting 2017

23 incidents resulting in injury were reported to the Health and Safety Executive in 2017. Of these, nine were reported to the Health and Safety Authority (HSA).

Regulatory Compliance

Freedom of Information (FOI)

As a public body, IFI falls under the Freedom of Information Act 2014. This Act provides that every person has the following legal rights:

- the right to access official records held by Government Departments and all public bodies that conform to the provisions of Section 6 of the Act;
- the right to have personal information corrected or updated where such information is incomplete, incorrect or misleading; and
- the right to be given reasons for decisions taken by public bodies.

IFI received 34 FOI requests for the 12 month period ending on December 31st. Of these requests; 9 were granted in full, 10 were part-granted, one was withdrawn and one handled outside the FOI process. Eight FOI requests were refused where records did not exist or where it was deemed that release was not in the public interest. This arises for example where raw data had not yet been verified; where the record contains commercially sensitive information or the personal information of 3rd parties; records were also refused where matters continue to be deliberated upon.

At the end of the year, five requests remained open to be responded to early in 2018.

Access to Information on the Environment

The European Communities (Access to Information on the Environment) (AIE) Regulations 2007 (S.I. 133 of 2007), gives legal rights to those seeking access to information on the environment from public authorities. These rights were amended by the European Communities (Access to Information on the Environment) Regulations 2011 (S.I. 662 of 2011) and further amended by the European Communities (Access to Information on the Environment) Regulations 2014 (S.I 615 of 2014). Subject to certain specific exceptions, information relating to the environment held by, or for, a public authority must be made available on request to any person. IFI responded to two AIE requests during the year.

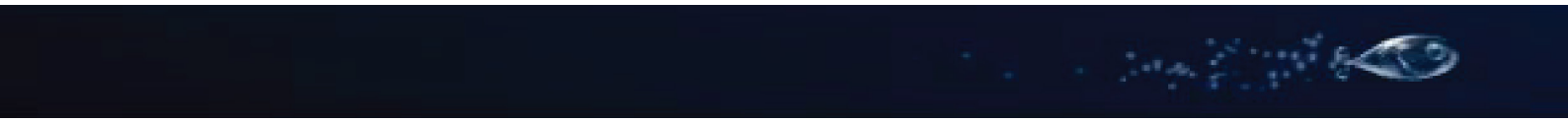
Data Protection

Following an independent external assessment of IFI's systems and policies in relation to data protection in late 2016, IFI set about addressing data protection issues raised under the current legislation (Data Protection Acts 1988 and 2003) and implementing measures to ensure its readiness for the impending GDPR. A Data Protection Advisory Committee was set up to draft/review data protection related policies and procedures and review data protection risks. This work will continue into 2018 in order to meet GDPR requirements.

Customer Service

Customer Charter and Customer Action Plan 2015-2017

IFI's Customer Charter which incorporates the 12 Principles of Quality Customer Service was initially developed and launched in January 2015. The Customer Charter is a comprehensive document, which sets out IFI's



commitment to our stakeholders, a code of conduct for our staff and an action plan for translating these principles in to every day actions throughout the organisation.

The charter and action plan will be reviewed in early 2018 and launched for a further 24 months with an expiry date of December 2019.

FINANCE & LOGISTICS

The role of the Finance Division of Inland Fisheries Ireland (IFI) is to deliver an effective financial management service to IFI through the provision of a comprehensive set of Financial and Governance systems which are adaptive and flexible enough to meet the evolving demands of IFI and robust enough to meet the highest standards of corporate governance.

IFI delivered on all its finance goals set out in the 2017 Business Plan. The Finance function provided necessary financial management, co-ordination, and specialist support services to all Divisions and maintained proper financial records for the agency during 2017. The Division complied with statutory and corporate governance reporting deadlines for both the Financial Statements and the Annual Report.

The Division also provided financial advice for strategic decision making to the management and Board of IFI, including Board financial accounts and analysis.

The Logistics Division provides and assists in the procurement and disposal of assets including properties and fleet, maintenance of these assets, provision of workwear and allocation of assets including fleet.

Financial Management

Budgets and Management accounts

During 2017, detailed Divisional budgets were prepared and consolidated into a final IFI budget that was agreed by the Board and the Senior Management Team (SMT). Management accounts were presented to the Board and SMT on a monthly basis with a commentary on performance against budget.

Draft unaudited Financial Statements

IFI's Financial Accounts in respect of 2016 were submitted to the Minister for Communications, Climate Action and Environment (DCCAE) for the 28th of February 2017 deadline and to the Minister and the Comptroller and Auditor General (C&AG) by the 31st of March 2017 in full compliance with statutory obligations.

See Appendix VI for a copy of IFIs draft Financial Statements 2017

Procurement

Management continue to nurture the strong value for money culture inherent throughout the organisation. The Logistics division gave assistance in the preparation of the larger tenders.

Financial and Treasury Management

The Finance Division, in conjunction with our parent Department, Department of Communications, Climate Action and Environment (DCCAE), successfully met both strategic and operational funding requirements during 2017.

Funding for 2017

In 2017, IFI received an initial exchequer grant of €26.528 million with additional funding of €463k received late in the year bringing the total to €26.991 million. In an attempt to bridge the difference between pay costs and exchequer funding an additional €570k pay grant was received in 2017. The total cost of pay in 2017 was €19.197 million compared to the exchequer pay grant of €16.232 million leaving a pay gap of €2.965 million. IFI also generated €3 million in 2017 from other income sources compared to €2.6 million in 2016; the major contributing factor was the loss (€0.5 million) on the disposal of fixed assets in 2016 arising from the exiting of the Swords Laboratory lease compared to a profit (€0.25 million) on disposal of assets in 2017 assisted by the disposal of the two large patrol vessels. The Salmon Conservation Funds claimed by IFI in 2017 were down from €436k in 2016 to €187k in 2017.

The 2017 capital grant provided €1.5 million for the NSAD and €0.3 million for angling structures. The NSAD funds have been deferred to 2018 to allow for the full corporate governance structures to be put in place. Interested parties responded to the funding call in late 2017 and the full €1.5 million was allocated in 2017.

An additional €0.5 million was generated from the Salmon Conservation Fund during 2017. This fund is due to be disbursed in 2018 for reinvestment in the conservation and rehabilitation of salmon and sea trout fisheries/habitats. Part of these funds will be made available to angling clubs, federations and similar organisations.

Corporate Governance

In 2017, there was continued development of policies and procedures to enhance good corporate governance and to reflect best practice. Coordinated responses were delivered on 92 Parliamentary Questions (PQs).

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. IFI received no protected disclosures in the period.

Internal Audit

RSM McClure Watters confirmed in the Statement of Internal Financial Control for 2017 that systems are in place to provide substantial assurance that objectives relating to key financial systems can be achieved.

Board Effectiveness Review

As recommended in the Code of Practice for the Governance of State Bodies 2016, the Board of IFI completed an external expert review of its effectiveness performance in 2017. Results and recommendations of the review were reported and adopted by the Board.

Audit & Risk Committee

The IFI Audit & Risk Committee met on four occasions in 2017. The responsibilities of the Audit & Risk Committee are: to review the annual Financial Statements, to discuss the nature and scope of the audit with the external auditors and review matters arising from audits; to review the Board's statement on internal control systems; to review the internal audit programme and internal audit resourcing; and to consider other topics, as defined by the Board. The Audit & Risk Committee, on behalf of the Board, is responsible for reviewing the effectiveness of the risk management process.

The Annual Report of the Audit and Risk Committee for 2017 is contained in Appendix V.

Appendices

Appendix I: Fishing Licences and RBD Managed Fisheries 2017

Salmon/ Sea Trout Angling Licences	ERBD	SERBD	SWRBD	SHRBD	WRBD	NWRBD	Total
Sold through Distributors & Online	1,060	953	4,534	649	7,843	3,173	**18,212**

Commercial Salmon Licences Issued	ERBD	SERBD	SWRBD	SHRBD	WRBD	NWRBD	Total
Private Draft Net	0	0	10	2	1	0	**13**
Public Draft Net under Control of Fishing for Salmon Order (CFSO)	0	0	30	26	15	2	**73**
Special Local Draft Net	0	0	0	0	13	8	**21**
Snap Net	0	0	5	0	0	0	**5**
Other	0	0	1	12	0	0	**13**
Totals	**0**	**0**	**46**	**40**	**29**	**10**	**125**

Dealer Licences Issued	ERBD	SERBD	SWRBD	SHRBD	WRBD	NWRBD	Total
Salmon/ Sea Trout Dealers	30	18	33	10	35	10	**136**
Molluscan Dealers	57	20	27	24	24	6	**158**
Oyster Dredge Licences	0	0	79	0	107	24	**210**

IFI Managed Fisheries	ERBD	SERBD	SWRBD	SHRBD	WRBD	NWRBD	Total
Number of Fisheries Managed	1	0	5	17	11	8	**42**
Derived Revenue (€)	**€628**	**0**	**€47,488**	**€132,217**	**€368,540**	**€45,961**	**€594,834**

Appendix II: Fish Kills Reported by Location 2017

RBD	Location of Fish Kill (Please provide name of river/stream/lake and county) 2017	Est No. of Casualties	Length of River Affected (M)
ERBD	River Vartry at Roundwood Water Treatment Plant, Co. Wicklow	108	400
ERBD	River Tolka at Mulhuddart, Co. Dublin	600	3,000
ERBD	Lough Ramor, Boat Pond, Virginia, Co. Cavan	100	Lake – N/A
SERBD	Pond on Douglas River at Highpool Lower, Kiltegan, Co. Wicklow	100	60
SERBD	Cushaling River at Cushaling, Co. Offaly	500	1,500
SERBD	Tributary Aherlow River at Rossadrehid, Bansha, Co. Tipperary	60	850
SWRBD	River Flesk, tributary of River Bride, 3.5km north of Watergrasshill, Co. Cork	50	700
SWRBD	Bandon River, Bandon, Co. Cork	200	150
SWRBD	Inniscarra Reservoir, Co. Cork	300*	Lake – N/A
SWRBD	The Lough, Cork City, Co. Cork	15	Lake – N/A
ShRBD	Youghal River, Portroe, Co. Tipperary	12	5
WRBD	Athenry, Eiscir River (Clarinbridge River), Co. Galway	30	750
NWRBD	River Eske, Donegal town, Co. Donegal	10	35
NWRBD	River Erne, Burdautien townland, Co. Monaghan	38	350
	TOTAL	2,123	7,800

*Estimated for Inniscarra Reservoir Fish Kill as several hundreds dead fish were recorded

Appendix III: Fish Kills Reported Origin by District 2017

Fish Kills	ERBD	SERBD	SWRBD	SHRBD	WRBD	NWRBD	Total
Reported Fish Kills	3	3	4	1	1	2	14
Fish Kills caused by Agricultural Practice	0	0	0	0	0	0	0
Fish Kills caused by Industrial Operations	0	0	0	0	0	0	0
Fish Kills caused by Municipal Works	2	0	1	1	0	0	4
Other (Disease, Natural Causes)	1	0	1	0	0	1	3
Cause unconfirmed	0	3	2	0	1	1	7
Number of Water Samples Collected	16	53	0	21	0	6	96

Appendix IV: Training Courses completed by IFI staff during 2017

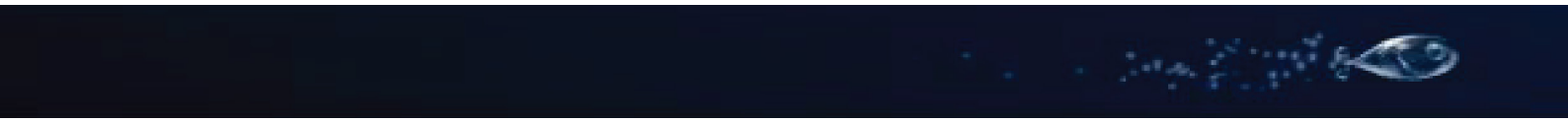
Course Name	No of Participants	Training (Days)	Total Staff Training (Days)
Advanced FOI Decision Maker Training	36	1	36
Data Protection/Privacy Impact Assessment	17	1	17
Driver Handbook Training	360	0.5	180
Electrofishing	1	1	1
IFI- National Admin & Support Day	32	1	32
Induction (HR)/ Health & Safety	29	0.5	14.5
IOSH - Managing Safely	34	4	136
Managing Aggressive Behaviour	28	1	28
Manual Handling	38	0.5	19
Night Vision Training	7	1	7
Occupational First Aid - FETAC Level 5	51	1.5/2	73.5
Occupational First Aid instructor	1	1	1
Pesticide Application	2	1	2
Powered Pole Pruner (QCF) - Pole Saw	1	1	1
Statistics - Computerised (4 Day Course)	20	4	80
Swiftwater & Flood First Responder/ Water and Flood Awareness - Full/Fresher	130	1/2	145
Totals	**787**		**773**

Appendix V: Annual Report of the Audit and Risk Committee of Inland Fisheries Ireland – Year Ended 31st December 2017

Audit & Risk Committee

Annual Report

For year ended 31st December 2017

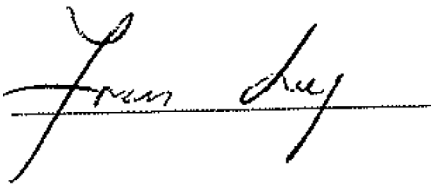


Contents

1.1 Foreword

This annual report for the Audit and Risk Committee (ARC) of Inland Fisheries Ireland (IFI) is a synopsis of its key functions and outputs for 2017. This includes an initial outline of committee members with the number and dates of committee meetings held during the year. The roles and responsibilities of the audit and risk committee are clearly laid out in detail. The work of the committee during 2017 focused on compliance and value for money audits and risk management.

I confirm that IFI has adopted the Code of Practice for the Governance of State Bodies 2016 and has taken initial steps to ensure its compliance during the reporting period.



Professor Frances Lucy

Chair of the Audit & Risk Committee

1.2 Membership of the Audit & Risk Committee

1.2.1 Members of the Committee during 2017

Prof Frances Lucy (Chair)	Appointed: 01/06/2015
Mr Peter John Nally	Appointed: 31/10/2014
Mr Patrick Gibbons	Appointed: 30/06/2016
Ms Bernadette Orbinski-Burke	Appointed: 29/09/2016

All members of the Audit and Risk Committee (ARC) of IFI are non-executive members. Each member serves for a period of three years on the Committee; this may be renewed for a further three years.

Following an illness, respected and valued Committee member, Peter John (PJ) Nally passed away in August of 2017. I wish to acknowledge his passionate contribution to IFI and to fisheries interests in general throughout his lifetime.

At the end of the reporting period, there is a vacancy on the Audit & Risk Committee (ARC).

1.2.2 Committee Meetings

IFI's Audit & Risk Committee met four times in 2017; March 13th, May 10th, September 27th, and November 15th.

The Chief Executive Officer of IFI Dr Ciaran Byrne, the Head of Finance and Logistics, Pat Doherty and members of the River Basin District Management Team were invited to attend each meeting. Other officers of the organisation were invited to meet and report to the Committee on specific matters.

IFI's appointed Internal Auditor, RSM Northern Ireland attended two meetings of the Committee; May 10th and November 15th.

1.3 Roles and Responsibilities of the Audit & Risk Committee[1]

The roles and responsibilities of the Committee are:

1. To review the Annual Financial Statements before submission to the Board, focusing particularly on: -
   - Any changes in accounting policies and practices;
   - Major judgmental areas;
   - Significant adjustments resulting from the audit;
   - Compliance with accounting standards.

2. To discuss with the external auditor, before the audit commences, the nature and scope of the audit;

3. To discuss problems and reservations arising from the interim and final audits and any matters the auditor may wish to discuss (in the absence of management where necessary);

4. To review the Board's statement on internal control systems with particular reference to E.U. funds;

5. To review the internal audit programme; ensure co-ordination between the internal and external auditors; ensure issues raised by the external auditor have been comprehensively and appropriately dealt with; and ensure that the internal audit function is adequately resourced and has appropriate standing within the Board;

6. To commission internal investigations; consider the major findings of internal investigations and management's response;

[1]From IFI's 'Audit & Risk Committee's Terms of Reference

7. To consider other topics, as defined by the Board including but not limited to: -
   - Internal control procedures and documentation
   - External Audit
   - Review budgeting control
   - Code of practice and ethics
   - Cost saving initiatives
   - Value for money
   - Performance management/reporting
   - Reviewing its own effectiveness (at least every three years)
   - Management of Risk

8. Any internal audit/audit items that relate to the Board's areas of responsibilities should be communicated to the Board as soon as they are identified.

9. The Committee may consider the following:
   - the effectiveness and adequacy of the body's anti-fraud, anti-corruption and protected disclosure policies and staff awareness of them;
   - whether financial control, including delegation structure, enables the organisation to achieve its objectives on a value for money basis and;
   - whether the procedures for investment appraisal are fit for purpose and comply with best practice including the principles and relevant requirements of the Public Spending Code.

1.4 The work of the Audit & Risk Committee during 2017 focused on:

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

Internal Audit Function Programme of Work

In monitoring and reviewing the effectiveness of IFI's internal audit activities, the ARC met with its outsourced internal audit function twice during the year. In the final quarter of the year, IFI engaged in a tender process for Internal Audit services to replace RSM Northern Ireland, which was approaching the end of its three year contract for service [ending in January 2018]. Following a review of the tendering practices' independence, expertise, experience and adherence to professional standards, a contract of service was awarded to ASM Charted Accountants in December 2017, to commence in February 2018.

Internal Audit Plan 2017

The ARC approved the scope and terms of reference of the Internal Audit Plan for 2017. The following audit reports/reviews of operational areas within IFI were delivered;

- Review of ICT Strategy
- Review of Human Resources encompassing the following areas;
  - Compliance and Legislation;
  - Staff Conduct & Discipline
  - Employee Relations
- Review of Health & Safety on the adequacy and effectiveness of management control over a set number of areas (corporate wide and specific to two randomly selected RBDs).
- Review of Internal Financial Control
  - Annual Budgeting Process;
  - Focussed Payroll Test;
  - Bank Reconciliations;
  - Follow-up on Previously Accepted Recommendations
- High level Budget Review to 2017-2019

Cooperation between External Auditor and Internal Audit Unit

Upon the request of the ARC, the internal auditor, RSM Northern Ireland engaged in communication with the external auditor (the Comptroller and Auditor General (C&AG)),

The ARC reviewed the content of the Management Letter from the C&AG regarding matters relating to its audit and considered the responses of the Executive in relation to same.

Draft Financial Statements

The ARC reviewed the draft Financial Statements for 2016 in advance of being recommended to the Board for adoption. In this review 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 IFI
- the comprehensiveness and meaningfulness of the IFI's Statement on Internal Control and review of the Letter of Representation before issue

Draft Business Plan and Budgets for 2017

Review of Draft Business Plan and Budgets for 2017 prior to approval by the Board of IFI

Risk Management

The ARC individually invited senior managers (River Basin District Directors) of the Operations Division to each of its meetings during the period to discuss risk management in their areas of the organisation and to provide recommendations in relation to the risk framework. Key aspects of the risk framework were considered during the course of Committee meetings;

- Review of the IFI Risk Appetite Statement
- Review of the IFI Corporate Risk Register, Field Risk Register and other organisational Risk Registers.

Review of Effectiveness of the IFI Audit & Risk Committee

In quarter 4 of 2016, the ARC completed a combined assessment of its effectiveness. All four members completed a self-assessment questionnaire. Independent feedback was sought from the separate business unit of RSM Northern Ireland as part of a high level, external assessment. This feedback was combined and reported to the Committee who undertook to address and implement recommendations throughout the year.

Other Areas of consideration

- The ARC reviewed and revised the Committee's Terms of Reference (Charter) in quarter one of 2017
- The ARC reviewed IFI's Anti-fraud policy and Protected Disclosures Policy & Procedure during the period
- The Committee closely monitored the implementation of the Fleet Management Plan 2017 incorporating digitalisation of manual processes improving management information and decision making
- The Committee monitored progress on IFI's Property Rationalisation Plan
- The Committee reviewed Management Accounts throughout the year
- Adoption of the Criteria for Selection of the ARC Chair, and
- Adoption of the New Member Induction Process.

1.5 Comptroller & Auditor General

The Audit & Risk Committee have 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.

1.6 Priorities for 2018

- Review the Statement of Internal Control (SIC) and the Annual Financial Statements for 2017
- Approve a risk based Internal Audit Plan for IFI (2018-2019)
- Comprehensive Review of the IFI Risk Framework and Risk Management Policy
- Ongoing monitoring and review of cost saving, accountability and compliance measures
- Ongoing oversight of compliance with the Code of Practice for the Governance of State Bodies
- Seek assurances from senior management staff at ARC meetings
- Review IFI's Codes of Business Conduct, and
- Conduct a review of effectiveness of the Audit & Risk Committee.

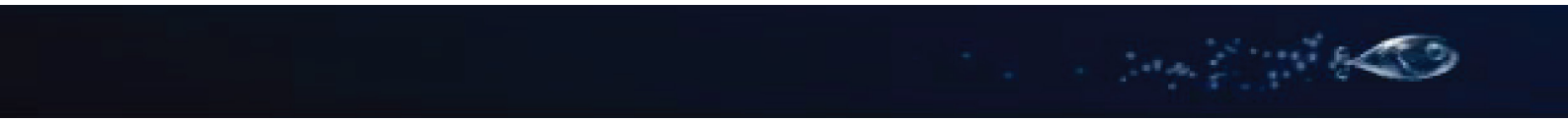
1.7 Conclusion

The members of the Committee would like to acknowledge the co-operation and assistance during the year of the staff of IFI. Progress can be reported in relation to value for money initiatives, cost saving measures and accountability for taxpayers money. The Audit & Risk Committee is satisfied that, in general, there are adequate systems of control across the organisation.

Appendix VI:
Audited Financial Statements of IFI – Year Ended 31st December 2017

Inland Fisheries Ireland
Financial Statements

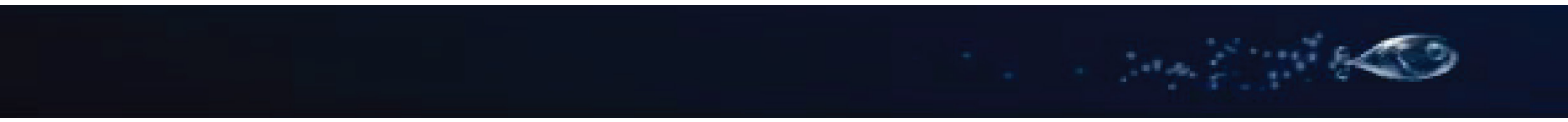
Year end to 31st December 2017



Inland Fisheries Ireland
Financial Statements - Contents

Inland Fisheries Ireland General Information

Address	3044 Lake Drive, Citywest Business Campus, Dublin 24, D24 Y265
Bank	Bank of Ireland, College Green, Dublin 2, D02 VR66
Auditor	The Comptroller and Auditor General, 3A Mayor Street Upper Spencer Dock Dublin 1 D01 PF72
Solicitors	George Maloney & Co, Solicitors, 6 Farnham Street, Cavan, Co. Cavan, HI2 V658. Arthur Cox. Earlsfort Terrace, Dublin 2, D02 T380. Finian Brannigan & Co, 16, Fair Street, Drogheda, Co. Louth, A92 DK25. Liam Keane & Partners, Solicitors, The Old Toll House, Dunshaughlin, Co. Meath, A85 DR68. Ensor O'Connor Solicitors, 4 Court Street, Enniscorthy, Co Wexford, Y2I K2AO



Inland Fisheries Ireland
General Information Cont.

Solicitors continued.

Kelly & Ryan Solicitors,
Teeling Street,
Sligo, F9I YH66.

MacHale Solicitors,
Pearse Street,
Ballina,
Co Mayo, F26 K7C7.

D.G. O'Donovan & Co,
5th Floor, Riverpoint
Lower Mallow Street,
Limerick, V94WC6A.

Boland & Quirke,
72, South Mall,
Cork, TI2 VX9A

John M Forde & Son,
2, Montpellier Terrace,
Sea Road,
Galway, H91 A6P3

Patrick J Durcan & Co,
Solicitors,
James Street,
Westport,
Co. Mayo, F28 KC52

Tracey Solicitors,
34 Westmoreland Street,
Dublin 2, D02 YW59

VP McMullin & Son Solicitors,
Donegal Street,
Ballybofey,
Co. Donegal, F93 DE63

Mason Hayes & Curran,
South Bank House,
Barrow Street,
Dublin 4, D04 TR29

James Reilly & Sons,
4, Brighton Place,
Clonmel,
Co Tipperary, E91 X9V2

Coakley Moriarty,
Solicitors,
New Road,
Kenmare,
Co Kerry, V93 N880.

Governance Statement and Board Members' Report - 2017

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 principle functions of the agency are 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 Chief Executive Officer (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.

Governance

The work and responsibilities of the Board are set out in IFI's *Governance Policy 07 – 'Statement of Board Responsibilities'*. Matters specifically reserved for Board decision are outlined in IFI's *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, and
- Reserved matters

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 of Communications, Climate Action and Environment with consent of the Minister of 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, which was done at the January 2017 Board meeting. An evaluation of the performance of Inland Fisheries Ireland by reference to the annual business plan and budget was carried out at each meeting of the Board during 2017.

The Board is also responsible for safeguarding its assets and for taking reasonable steps for the prevention and detection of fraud and other irregularities.

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 2017.

Board Structure

The Board consists of a Chairperson and nine ordinary members, seven of which are non-executive members, a staff representative and the CEO of Inland Fisheries Ireland. The Chairman, non-executive members of the Board and the staff representative are appointed for a period of five years. The Board meets no less than eight times a year. The table below outlines the appointment details for members during 2017.

Position	Name	Date of Appointment	Nomination	
Chairman	Fintan Gorman	10/09/2013	Ministerial	Department of Taoiseach
Ordinary Member	Peter John Nally	10/09/2013	Ministerial	Department of Environment Community & Local Government Deceased - August 11th, 2017
Ordinary Member	Martin McEnroe	26/02/2014	Joint Oireachtas	Joint Oireachtas Committee on Transport and Communications under section 12(1) (b) of the Inland Fisheries Ireland Act 2010
Executive	Niall Greene	01/07/2014	Ministerial	Department of Communications, Climate Action and Environment
Ordinary Member	Frances Lucy	24/03/2015	Ministerial	Joint Oireachtas Committee on Transport and Communications under section 12(1) (b) of the Inland Fisheries Ireland Act 2010
Ordinary Member	Sean Coady	17/11/2015	Staff	Under Sec 13 of the Inland Fisheries Act 2010
Ordinary Member	Patrick Gibbons	13/01/2016	Joint Oireachtas	Minister appoints upon the recommendation
Ordinary Member	Bernadette Orbinski Burke	01/07/2016	Ministerial	Department of Communications, Climate Action and Environment (DCCAE)
Ordinary Member	Fidelma McGuirk	04/10/2016	Ministerial	Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs
Executive	Ciaran Byrne	01/01/2010	CEO	

The Board completed an external Board Effectiveness and Evaluation Review in June 2017.

The Board has established four committees, as follows;

1. **Audit and Risk Committee:** comprises four Board members. The role of the Audit and 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.

   The members of the Audit and Risk Committee are; Professor Frances Lucy (Chairperson), Patrick Gibbons and Bernadette Orbinski Burke. The fourth member of this committee passed away in August of 2017. There were four meetings of the ARC in 2017, the CEO and Head of Finance were invited to each of these meetings.

2. **Protection Committee:** comprises three Board members. The members of this committee are; Sean Coady (Chairperson), Martin McEnroe and Patrick Gibbons. There were four meetings in 2017.

3. **Salmon Committee:** comprises four Board members. The members of this committee are; Niall Greene (Chairperson), Sean Coady, Martin McEnroe and Fidelma McGuirk. There were eight meetings in 2017.

4. **Fish Farm Working Group:** comprises two Board members, four angling stakeholder representatives and two members of the IFI senior management team. The Board members on this committee are; Fintan Gorman (Chairman) and Professor Frances Lucy. There were two meetings in 2017.

Schedule of Attendance, Fees and Expenses

A schedule of attendance at the Board and Committee meetings for 2017 is set out below including the fees and expenses received by each member:

	Board	ARC	Protection	Salmon	Fish Farm	Fees 2017 €	Expenses 2017 €
Number of Meetings	**14**	**4**	**4**	**8**	**2**		
Fintan Gorman	14				2	11,970	8,947
Peter John Nally*	2	0				4,732	478
Martin McEnroe	14		4	8		7,695	6,870
Frances Lucy	14	4			1	-	4,051
Sean Coady	13		4	8		8,158	5,323
Niall Greene	12			8		7,695	710
Bernadette Orbinski-Burke	12	4				7,695	1,322
Fidelma McGuirk	13			6		7,695	_
Patrick Gibbons	14	4	3			7,695	843
Total						**63,335**	**28,544**

*Peter John Nally was ill during the year and sadly passed away in August, 2017.

See **Note 7** of the Financial Statements 2017 for further details.

One Board member, Professor Frances Lucy, did not receive a Board fee under the One Person One Salary (OPOS) principle.

Key Personnel Changes in 2017

One member of the Board passed away during the year. This position was vacant at 31 December 2017.

The Head of Human Resources, Mr Kieran Murphy retired from his position with effect from 4 August 2017. Ms Roisin Bradley was appointed as Head of Human Resources with effect from 3 December 2017.

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 no employee short-term benefits in excess of €60,000.

Range of total Employee Benefits		No. of Employees	
From	To	2017	2016
€ 60,000	€ 69,999	26	20
€ 70,000	€ 79,999	5	7
€ 80,000	€ 89,999	6	2
€ 90,000	€ 99,999	4	5
€ 100,000	€ 109,999	0	0
€ 110,000	€ 119,999	0	0
€ 120,000	€ 129,999	0	0
€ 130,000	€ 139,999	1	1

Note 6 of the Financial Statements 2017 outlines the range of total employee benefits.

Consultancy Costs

Consultancy costs include the cost of external advice to management and exclude outsourced 'business-as-usual' functions.

	2017	2016
Consultancy Costs	**€**	**€**
Legal	254,565	197,980
Financial	18,914	28,273
PR / Marketing	109,851	139,517
HR and Pensions	7,795	8,871
Business Improvement	81,636	8,261
Other - Current Expenditure	382,695	423,516
Other - Capital Expenditure	60,335	103,605
	915,791	**910,023**

Consultancy Costs are outlined in **Note 5a** of the Financial Statements 2017.

Legal Costs and Settlements

Legal Fees are for prosecution cases under fisheries legislation and corporate legal advice. € 283 was paid for counterparty legal costs. Total legal costs in 2017 for prosecution cases were €167,139. In addition € 52,500 was accrued for potential counterparty legal costs as a result of an omission in the Fisheries Act 2010.

Travel and Subsistence Expenditure

Travel and subsistence expenditure is categorised as follows:

Remuneration and Other Pay Costs	2017	2016
	€	€
Travel & subsistence - National *	956,843	907,645
Travel & subsistence - International	66,964	38,697
	1,023,806	946,342

*includes travel and subsistence of € 28,545 paid directly to Board members in 2017 (2016: €30,091)

No international travel and subsistence payments were made for travel under taken by Board members.

Hospitality Expenditure

Hospitality Expenditure	2017	2016
	€	€
Staff hospitality	3,274	1,352
Client hospitality	-	-
	3,274	**1,352**

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 2017.

On Behalf of the Board of IFI

Mr. Fintan Gorman - Chairperson — 13th December 2018

Dr. Frances Lucy Board Member — 13th December 2018

Ard Reachtaire Cuntas agus Ciste
Comptroller and Auditor General

Report for presentation to the Houses of the Oireachtas

Inland Fisheries Ireland

Opinion on financial statements

I have audited the financial statements of Inland Fisheries Ireland for the year ending 31 December 2017 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 2017 and of its income and expenditure for 2017 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.

Patricia Sheehan

Patricia Sheehan
For and on behalf of the Comptroller and Auditor General
18 December 2018

Appendix to the report

Responsibilities of Board members

The governance statement and Board members' report sets out the Board members' responsibilities. 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 there are 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 there is 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 - 2017

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).

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 has been in place in Inland Fisheries Ireland for the year ended 31 December 2017 and up to the date of approval of the financial statements.

Capacity to Handle Risk

Inland Fisheries Ireland has an Audit & Risk Committee (ARC) comprising of four Board members [one vacancy at the time or reporting], with financial and audit expertise, one of whom is the Chair. The ARC met 4 times in 2017.

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

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 also has 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.

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 and updated 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 the assets, and
- Control procedures over grant funding to applicants which ensures adequate approval of grants and monitoring and review of grantees to ensure grant funding has been applied for the purpose intended.

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.

Procurement

I confirm that inland Fisheries Ireland has procedures in place to ensure compliance with current procurement rules and guidelines and that during 2017 Inland Fisheries Ireland complied with those procedures.

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 Audit and Risk Committee which oversees their work, and the senior management within IFI 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 2017.

Internal Control Issues

No weaknesses in internal control were identified in relation to 2017 that require disclosure in the financial statements.

On Behalf of the Board of IFI

Mr. Fintan Gorman, Chairperson

13th December 2018

INLAND FISHERIES IRELAND

STATEMENT OF INCOME AND EXPENDITURE AND RETAINED REVENUE RESERVES FOR THE 12 MONTHS TO 31 DECEMBER 2017

	Notes	2017		2016	
		€	€	€	€
Income					
State and EU Funding					
Oireachtas Grants	2	25,491,135		26.303,338	
Net deferred funding for pensions	14c	3,217,624	28,708,759	3.514,212	29.817.550
Other income	3		3,090,962		2.660.665
Total Income			31,799,721		32,478,215
Expenditure					
Administration	4		5,322,496		4,848,625
Operations	5		26,476,929		25,609,887
			31,799,425		30,458,512
Surplus / (Deficit) for the Year before Appropriations			296		2,019,703
Transfer from / (to) Capital Account	12		(7,466)		1,442,381
Surplus / (Deficit) for the Year after Appropriations			(7,170)		3,462,084
Balance Brought Forward at 01 January			6,882,904		3,420,820
Balance Carried Forward at 31 December			6,875,734		6,882,904

The Statement of Cash Flows and notes 1 to 17 form part of these financial statements.

On Behalf of Board of Inland Fisheries Ireland

Mr. Fintan Gorman - Chairperson — 13th December 2018

Dr. Frances Lucy - Board Member — 13th December 2018

INLAND FISHERIES IRELAND

STATEMENT OF COMPREHENSIVE INCOME FOR THE 12 MONTHS TO 31 DECEMBER 2017

		2017 €	2016 €
Surplus / (Deficit) for the Year before Appropriations		**296**	**2,019,703**
Experience gains on retirement benefit obligations		**(917,000)**	**1,114,000**
Change in assumptions underlying the present value of retirement benefit obligations		**(2,088,000)**	**(11,068,000)**
Total actuarial gain/(loss) in the year	**14b**	**(3,005,000)**	**(9,954,000)**
Adjustment to deferred retirement benefits funding		**3,005,000**	**9,954,000**
Other Comprehensive Income for the year		**296**	**2,019,703**

The Statement of Cash Flows and notes 1 to 17 form part of these financial statements.

On Behalf of the Board of Inland Fisheries Ireland

Mr. Fintan Gorman - Chairperson — 13th December 2018

Dr. Frances Lucy - Board Member — 13th December 2018

INLAND FISHERIES IRELAND

STATEMENT OF FINANCIAL POSITION AS AT 31 DECEMBER 2017

	Notes	2017 €	2016 €
Fixed Assets			
Property, plant and equipment	9	18,523,086	18,515,620
Current Assets			
Inventory		339,943	239,758
Cash and cash equivalents	16	13,026,739	12,240,138
Receivables	10	1,332,516	731,123
		14,699,198	13,211,019
Current liabilities (amounts falling due within one year)			
Payables	11	7,823,464	6,328,115
		7,823,464	6,328,115
NET CURRENT ASSETS/(LIABILITIES)		6,875,734	6,882,904
TOTAL ASSETS LESS CURRENT LIABILITIES BEFORE PENSIONS		25,398,820	25,398,524
Deferred retirement benefit funding asset	14c	119,614,303	113,391,679
Retirement benefit obligations	14b	(119,614,303)	(113,391,679)
		-	-
TOTAL ASSETS LESS CURRENT LIABILITIES		25,398,820	25,398,524
NET ASSETS/(LIABILITIES)		25,398,820	25,398,524
Reserves - representing Net Assets Transferred to Inland Fisheries Ireland			
Capital account	12	18,523,086	18,515,620
Surplus on Income and Expenditure and retained Revenue Reserves		6,875,734	6,882,904
		25,398,820	25,398,524

The Statement of Cash Flows and notes 1 to 17 form part of these financial statements.

On Behalf of the Board of Inland Fisheries Ireland

Mr. Fintan Gorman - Chairperson — 13th December 2018

Dr. Frances Lucy - Board Member — 13th December 2018

INLAND FISHERIES IRELAND

STATEMENT OF CASHFLOWS FOR THE 12 MONTHS TO 31 DECEMBER 2017

Net Cash Flows from Operating Activities

	2017 €	2016 €
Excess Income over Expenditure	296	2,019,703
Depreciation and Impairment of Fixed Assets	1,477,395	1,435,368
(Increase)/Decrease in Receivables	(601,394)	444,389
Increase/(Decrease) in Payables	1,495,349	751,457
(Profit) / Loss on sale of fixed assets	(234,069)	531,750
Net interest	14,894	9,058
(Increase)/Decrease in Inventory	(100,185)	(54,488)
Net Cash Inflow/(Outflow) from Operating Activities	2,052,286	5,137,237
Cash Flows from Investing Activities		
Payments to acquire Property, Plant & Equipment	(1,496,297)	(1,475,659)
Proceeds from the disposals of Property Plant & Equipment	245,506	950,936
Net Cash Inflow/(Outflow) from Investing Activities	(1,250,791)	(524,723)
Cash Flows from Financing Activities		
Net interest	(14,894)	(9,058)
Net Cash Inflow/(Outflow) from Financing Activities	(14,894)	(9,058)
Net Increase / (Decrease) in cash and cash equivalents	786,601	4,603,456

INLAND FISHERIES IRELAND

STATEMENT OF CASHFLOWS FOR THE 12 MONTHS TO 31 DECEMBER 2017 (contd)

Reconciliation of net Cash Inflow/(Outflow) to movement in net funds

	2017	2016
	€	€
Increase / (Decrease) in cash	**786,601**	**4,603,456**
Cash and cash equivalents at the beginning of the year	**12,240,138**	**7,636,682**
Cash and cash equivalents at the end of the year	**13,026,739**	**12,240,138**

The Statement of Cash Flows and notes 1 to 17 form part of these financial statements.

On Behalf of the Board of Inland Fisheries Ireland

Mr. Fintan Gorman - Chairperson — 13th December 2018

Dr. Frances Lucy - Board Member — 13th December 2018

Notes to the Financial Statements
For the year ended 31 December 2017

I. 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 2017 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 Tourism Recreational Angling Measure and the National Strategy for Angling development are accounted for on an accruals basis.

Notes to the Financial Statements
For the year ended 31 December 2017

I. Accounting Policies continued

d) Revenue continued

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.

f) 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%

Notes to the Financial Statements
For the year ended 31 December 2017

I. Accounting Policies continued

f) Property, Plant and Equipment continued

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.

g) 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%

h) 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.

i) 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.

j) 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.

Notes to the Financial Statements
For the year ended 31 December 2017

I. Accounting Policies continued

j) Employee Benefits continued

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 and members' salaries. 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.

k) 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.

Notes to the Financial Statements
For the year ended 31 December 2017

I. Accounting Policies continued

k) Critical Accounting Judgements and Estimates continued

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

INLAND FISHERIES IRELAND

NOTES TO THE FINANCIAL STATEMENTS FOR THE 12 MONTHS TO 31 DECEMBER 2017

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:

Inland Fisheries Ireland	2017 €	2016 €
Current Expenditure Grant	24,121,029	23,472,530
Capital Expenditure Grant	1,370,106	2,830,808
	25,491,135	**26,303,338**

3 Other Income

		2017 €	2016 €
Contract work		552,020	510,793
Fish Farm income		300,055	294,513
Permit Income		546,768	503,179
Licence Income		**2017 €**	**2016 €**
Rod	475,167		
Commercial Fishing	41,211		
Part X Dealers	37,039		
State Fisheries	72,348	625,765	637,874
Salmon Conservation Funding		187,550	436,451
Fines & Forfeitures (a)		67,336	195,281
Fishery Rates		235,186	240,122
Department of Social Protection - Community Employment		203,305	233,633
Profit (Loss) on Sale of Fixed Assets		234,069	(531,750)
Rural Recreation Fund		98,450	45,440
Miscellaneous		40,458	95,129
		3,090,962	**2,660,665**

(a) During 2017 amounts, totalling € 10,335 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 (2016: € 17,475).

INLAND FISHERIES IRELAND

NOTES TO THE FINANCIAL STATEMENTS FOR THE 12 MONTHS TO 31 DECEMBER 2017

4 Administration	Notes	2017 €	2016 €
Staff costs and Board Members' fees	6	3,507,738	3,190,948
Office expenses	8e	417,282	394,126
Bank interest		15,373	12.932
Advertising & public information		29,704	28,154
Publicity & promotion		151,276	139,738
Professional fees		108.267	88,833
Audit fee		26,000	23,000
Board expenses		29,413	30,302
Legal Fees		5,369	34,319
Insurance		29,145	20,853
Depreciation	9	579,828	665,820
Computer Expenditure	8d	261,659	93,674
Miscellaneous	8b	138,274	119,507
Bad debt provision	8b	23,168	6.419
		5,322,496	**4,848,625**

5 Operations		2017 €	2016 €
Staff costs	6	20,528,511	19,905,938
Office expenses	8e	650,774	660,736
Lease costs		204	133
Safety		171,169	317,531
Training		134,050	208,116
Legal Fees		249,195	163,661
Professional fees		521,765	534,951
Repairs & maintenance	8e	36,198	76,293

INLAND FISHERIES IRELAND

NOTES TO THE FINANCIAL STATEMENTS FOR THE 12 MONTHS TO 31 DECEMBER 2017

5 Operations (continued)		2017 €	2016 €
Field supplies		260,981	234,106
Development Works	8c	352,531	496,240
Development Supplies	8c	689,005	113,470
Running & upkeep of vehicles & boats	8a	1,189,530	1,307,652
Laboratory expenses		51,843	33,641
Purchase of fish & fish food		200,945	159,212
Insurance		186,471	139,870
Depreciation	9	897,567	769,548
Dilapidations	8b	-	138,345
Miscellaneous	8b	203.713	203,607
Computer Expenditure	8d	97,327	90,597
Licence and permit commission		55,150	56,240
		26,476,929	**25,609,887**
Total expenditure		**31,799,425**	**30,458,512**

- Following a legal case which challenged IFI's legal powers to take fisheries prosecution. The Board reviewed its legal powers, as a result the Inland Fisheries (Amendment) Act 2017 was enacted which clarified IFI's powers to take Fisheries prosecutions. Separately the Board received legal advice that this matter will have no implication on persons already convicted who have not challenged their convictions. The Board has made a provision of €52,500 for potential counter costs arising from appeals already taken.
- Included in legal costs is €22K arising from a settlement in a copyright dispute. The settlement was paid out in early 2018.

INLAND FISHERIES IRELAND

NOTES TO THE FINANCIAL STATEMENTS FOR THE 12 MONTHS TO 31 DECEMBER 2017

5a	Consultancy Costs - Detail	2017 €	2016 €
	Business Improvement		
	Accounting Software Consultant	559	1,168
	Corporate Governance	7,650	-
	Data Protection Consultant	6,135	7,093
	Fleet Services	11,414	-
	Internal Auditors	5,390	-
	Organisational Review Consultant	50,400	-
	Website / Promotional / Software	3,285	-
		84,833	**8,261**
	Financial		
	Actuarial Services	4,613	4,613
	Internal Auditors	11,105	23,660
		15,718	**28,273**
	HR/Pension		
	Pension Advisor	2,721	2,721
	Recruitment Consultant	5,074	6,150
		7,795	**8,871**
	Legal		
	Legal Fees	254,565	197,980
		254,565	**197,980**
	Other		
	App Development	1,476	2,952
	Archaeology	-	11,316
	Architect	18,450	3,444
	Audio Visual	1,840	-
	Cong Visitor Study	-	13,530
	Consultant Engineer	55,589	72,387
	Corporate Gifts	2,310	-
	Creeslough Fisheries Consultant	4,424	-
	Eel Survey	92,800	52,400

INLAND FISHERIES IRELAND

NOTES TO THE FINANCIAL STATEMENTS FOR THE 12 MONTHS TO 31 DECEMBER 2017

5a	Consultancy Costs - Detail (continued)	2017 €	2016 €
	Other (continued)		
	Energy Consultants	4,299	4,100
	Environmental Consultant	11,221	10,332
	Fish Farm Study	-	8,183
	Freshwater Salmonid Consultant	65,000	62,500
	IT Consultants	-	5,544
	Legal Fees	1,845	177
	Medical Services	23,427	24,868
	National Outdoor Recreational Plan	2,800	-
	Natural Impact Statement	6,212	11,921
	Research Funding	15,467	82,359
	Scale Sampling	9,840	-
	Scuba Diving Services	14,034	3,167
	Veterinary Services	16,076	13,453
	Capital	2,550	-
	Property/Planning	1,817	24,971
	Website / Promotional / Public Admin	1,819	-
	Riverine Consultants	29,401	9,061
	SharePoint Consultant		4,151
	Shark Study		2,700
		382,697	**423,516**
	Other Capital		
	RIB Inspection	31,376	-
	Architect	28,958	103,605
		60,334	**103,605**

INLAND FISHERIES IRELAND

NOTES TO THE FINANCIAL STATEMENTS FOR THE 12 MONTHS TO 31 DECEMBER 2017

5a	Consultancy Costs - Detail (continued)	2017 €	2016 €
	PR / Marketing		
	Call Answering	5,904	5,116
	Media	3,242	3,339
	News Monitoring	7,769	7,003
	PR Consultancy	13,760	17,776
	Sea Lice Consultant	1,661	-
	Socio-Economic Survey	70,000	100,000
	Translation Service	6,211	4,783
	Website / Promotional	1,304	1,499
		109,851	**139,516**
	Total	**915,793**	**910,022**

6	Remuneration and Other Pay Costs		2017 €	2016 €
a	Salaries & wages		17,487,542	16,515,419
	Board Members fees	7	63,335	56,770
	Travel & subsistence - National		928,298	877,555
	Travel & subsistence - International		66,964	38,697
	Pension costs	14a	5,490,110	5,608,445
			24,036,249	**23,096,886**

Included in salaries and wages are:

- amounts totalling € 1.273m paid to 252 staff (2016: € l.2m paid to 247 staff) in relation to unsocial hours payments
- Total added years for pension purposes or early retirement without normal actuarial reductions paid: € 21.328 in 2016
- No termination benefits were paid in 2017.

NOTES TO THE FINANCIAL STATEMENTS FOR THE 12 MONTHS TO 31 DECEMBER 2017

6 Remuneration and Other Pay Costs (continued)

Number of employees	2017 Number	2016 Number
Managerial & clerical	60	59
Research / technical	249	251
Other	1	1
Total Staff	**310**	**311**

6b Range of short term employee benefits

From		TO	Number of Employees 2017	2016
€ 60,000	-	€ 69.999	26	20
€ 70,000	-	€ 79,999	5	7
€ 80,000	-	€ 89,999	6	2
€ 90,000	-	€ 99,999	4	5
€ 100,000	-	€ 109,999	-	-
€110,000	-	€ 1 19,999	-	-
€120,000	-	€ 129,999	-	
€ 130,000	-	€ 139,999	1	1

6c Aggregate Employee Benefits

	2017 €	2016 €
Staff short-term benefits Permanent Staff	14,709,798	14,541,465
Staff short-term benefits Contract Staff	625,770	614,212
Termination benefits	-	-
Retirement benefit costs	5,490,110	5,608,445
Employer contribution to social welfare	1,565,658	1,480,622
	22,391,336	**22,244,744**

INLAND FISHERIES IRELAND

NOTES TO THE FINANCIAL STATEMENTS FOR THE 12 MONTHS TO 31 DECEMBER 2017

6d Staff Short-Term Benefits

	2017	2016
	€	€
Basic Pay	14,012,372	13,292,729
Overtime	16,708	8,218
Allowances	1,306,488	1,240,518
	15,335,568	**14,541,465**

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:

	2017	2016
	€	€
Salary	681,341	666,164
Allowances	-	-
Termination Benefits	-	-
Health Insurance	-	-
	681,341	**666,164**

The Head of Human Resources Kieran Murphy retired on 4th August 2017. Roisin Bradley was appointed Head of Human Resources on 6th December 2017.

This does not include the value of retirement benefits earned in the period. The key management personnel with the exception of the Board Members and the outgoing Head of Human Resources Kieran Murphy 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:

	2017	2016
	€	€
Basic Annual Salary	138,155	135,806
Employer PRSI	13,634	13,329
Total	**151,789**	**149,135**

The CEO's 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 €11,196 in 2017 (2016: €9,730).

There were no payments made to Dr. Ciaran Byrne, Chief Executive Officer, under performance related pay schemes in the period.

INLAND FISHERIES IRELAND

NOTES TO THE FINANCIAL STATEMENTS FOR THE 12 MONTHS TO 31 DECEMBER 2017

7 The following amounts were paid to Board members for the 12 months ended 31 December 2017

Board	Board	Audit & Risk Committee	Protection Committee	Salmon Committee	Fish Farm Committee	Mileage & Subsistence	Fees & Remuneration
	2017	2017	2017	2017	2017	2017	2017
Number of Meetings	14	4	4	8	2		
Fintan Gorman (Chairperson)[E]	14				2	8,947	11,970
Dr Frances Lucy[A,E]	14	4			1	4,051	-
Peter John Nally[A]	2					478	4,732
Martin McEnroe[C,D]	14		4	8		6,870	7,695
Niall Greene[D]	12			8		710	7,695
Sean Coady[C,D]	13		4	8		5,323	8,158
Patrick Gibbons[A,I,C]	14	4	3			843	7,695
Bernadette Orbinski Burke[A,J]	12	4				1,322	7,695
Fidelma McGuirk[D,K]	13			6		-	7,695
						28,544	**63,335**

INLAND FISHERIES IRELAND

NOTES TO THE FINANCIAL STATEMENTS FOR THE 12 MONTHS TO 31 DECEMBER 2017

The following amounts were paid to Board members for the 12 months ended 31 December 2016

Board	Mileage & Subsistence	Fees & Remuneration	Meetings Attended
	2016	2016	2016
Fintan Gorman (Chairperson)[A,E]	11,005	11,970	16
Dr Frances Lucy[A,E]	3,087	-	14
Peter John Nally[A]	3,961	7,695	10
Martin McEnroe[C,D]	4,647	7,695	14
Niall Greene[D]	812	7,695	12
Sean Coady[C,D,F]	5,670	8,535	14
Patrick Gibbons[A,I,C]	430	7,457	16
Bernadette Orbinski Burke[A,J]	479	3,848	7
Fidelma McGuirk[D,K]	-	1,875	3
	30,091	**56,770**	

The total number of meetings held in 2017 was 32 (2016: 21 meetings)

Dr 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

[C] denotes Protection Sub Committee

[D] denotes Salmon Sub Committee

[E] denotes Fish Farm Sub Committee

[F] Sean Coady is the staff representative on the Board and his fee shown above includes Employer PRSI.

[I] appointed to the Board 13 January 2016 - 5 year term

[J] appointed to the Board 1 July 2016 - 5 year term

[K] appointed to the Board 4 October 2016

INLAND FISHERIES IRELAND

NOTES TO THE FINANCIAL STATEMENTS FOR THE 12 MONTHS TO 31 DECEMBER 2017

		Notes	2017	2016
8a	**Running & upkeep of vehicles & boats**		€	€
	Vehicle Insurance		109,214	86,384
	Vehicle repairs & maintenance		281,174	268,794
	Vehicle fuel		489,768	475,542
	Boat Insurance		39,635	38,436
	Boat repairs & maintenance		135,362	294,163
	Boat fuel		33,113	37,001
	Covert Car Hire		8,891	5,626
	Storage of Boats & Vehicles		6,841	10,843
	Other running costs		85,532	90,863
			1,189,530	**1,307,652**
8b	**Miscellaneous**			
	Magazines / periodicals		2,969	3,608
	Meeting Expenses		18,577	16,271
	Courier		4,244	6,392
	Facilities Expenditure		82,119	76,609
	Fish Vaccines		1,780	2,463
	Hatchery Costs		24,350	29,029
	Domestic supplies		19,771	19,642
	Cleaning		68,488	68,687
	Security		29,578	35,841
	Equipment repairs & maintenance		64,432	71,803
	Bad Debts Provision		23,168	6,419
	Bad Debts Write Off		-	-

NOTES TO THE FINANCIAL STATEMENTS FOR THE 12 MONTHS TO 31 DECEMBER 2017

		Notes	2017	2016
8b	**Miscellaneous (continued)**		€	€
	Equipment under €500		21,103	(8,430)
	Dilapidations		-	138,345
	Sundry		4,576	1,199
			365,155	**467,878**
8c	**Development Expenditure**			
	Sub-contract / plant hire		291,701	428,873
	Development supplies		689,006	113,470
	Rehabilitation Works		60,829	57,014
	Angling Works		-	10,353
			1,041,536	**609,710**
8d	**Computer Expenditure**			
	Computer consumables		19,375	(1,136)
	Computer software		127,477	6,764
	Computer Maintenance & Licencing		212,134	178,643
			358,986	**184,271**
8e	**Office expenses**			
	Printing & stationery		65,854	60,095
	Postage & telephone		101,718	109,083
	Mobile phones & Broadband & Antennae Masts & Off-Site Communication		210,647	217,161
	Rent & rates		272,721	264,577
	Heat & light		283,310	290,088
	Repairs & maintenance		170,004	190,151
			1,104,254	**1,131,155**

INLAND FISHERIES IRELAND

NOTES TO THE FINANCIAL STATEMENTS FOR THE 12 MONTHS TO 31 DECEMBER 2017

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 2017	20,158,507	6,025,561	4,727,883	5,208,632	2,758,879	38,879,462
Reclass 1 Jan 2017	-	-	2,050	142,543	(144,596)	(3)
Additions for year	729.633	-	135,584	466,716	164,364	1,496,297
Disposals for year	(523)	(218,017)	(1,685,414)	(296,057)	(80,538)	(2,280,549)
At 31 December 17	**20,887,617**	**5,807,544**	**3,180,103**	**5,521,834**	**2,698,109**	**38,095,207**
Depreciation						
At 1 Jan 2017	3,850,581	4,904,791	4,440,635	4,887,890	2,279,945	20,363,842
Reclass 1 Jan 2017	-	-	1,844	142,746	(144,593)	(3)
Charge for year	409,877	435,012	98,741	250,474	283,291	1,477,395
Disposals for year	(36)	(218,017)	(1,684,395)	(290,691)	(75,974)	(2,269,113)
At 31 December 17	**4,260,422**	**5,121,786**	**2,856,825**	**4,990,419**	**2,342,669**	**19,572,121**
Net Book Value						
At 1 January	16,307,926	1,120,770	287,248	320,742	478,934	18,515,620
Net Movement for the year	319,269	(435,012)	36,030	210,673	(123,494)	7,466
At 31 December	**16,627,195**	**685,758**	**323,278**	**531,415**	**355,440**	**18,523,086**

NOTES TO THE FINANCIAL STATEMENTS FOR THE 12 MONTHS TO 31 DECEMBER 2017

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 2016	21,329,513	6,471,130	5,161,948	4,720,909	2,702,565	40,386,065
Reclass 1 Jan 2016	5,277	11,426	(431,659)	426,972	(12,016)	0
Additions for year	859,603	136,357	23,975	185,148	270,576	1,475,659
Disposals for year	(2,035,886)	(593,352)	(26,381)	(124,397)	(202,246)	(2,982,262)
At 31 December 16	**20,158.507**	**6,025,561**	**4,727,883**	**5,208,632**	**2,758,879**	**38,879,462**
Depreciation						
At 1 Jan 2016	3,991,387	5,012,959	4,687,920	4,486,380	2,249,404	20,428,050
Reclass 1 Jan 2016	5,278	11,425	(334,565)	336,313	(18,451)	0
Charge for year	414,583	473,759	113,578	182,211	251,237	1,435,368
Disposals for year	(560,667)	(593.352)	(26,298)	(117,014)	(202,245)	(1,499,576)
At 31 December 16	**3,850,581**	**4,904,791**	**4,440,635**	**4,887,890**	**2,279,945**	**20,363,842**
Net Book Value						
31 December 2015	**17,338,126**	**1,458,171**	**474,028**	**234,529**	**453,161**	**19,958,015**
Net Book Value						
31 December 2016	**16,307,926**	**1,120,770**	**287,248**	**320,742**	**478,934**	**18,515,620**

- during 2016 IFI wrote off the residual value of leasehold improvements totalling €1.1 million following a decision to relocate premises

INLAND FISHERIES IRELAND

NOTES TO THE FINANCIAL STATEMENTS FOR THE 12 MONTHS TO 31 DECEMBER 2017

10 Analysis of receivables

	2017	2016
	€	€
Trade debtors etc.	561,188	502,574
Accrued Income	66,026	74,650
Bad debt provision	(352,197)	(341,790)
VAT on Long Term Lease prepayments	154,613	204,635
Other prepayments	902,886	291,054
	1,332,516	731,123

11 Analysis of payables

		2017	2016
		€	€
Deferred Income			
Deferred Contract income	119,911		159,545
Department Culture, Heritage and the Gaeltacht - Rural Recreation Fund	517,016		615,466
National Strategy for Angling Development	1,946,560		500,000
Total Deferred Income		2,583,487	1,275,011
Funds held in trust			
Salmon Conservation Fund		3,155,750	2,909,807
Trade creditors and accruals		2,084,227	2,143,297
		7,823,464	6,328,115

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.

NOTES TO THE FINANCIAL STATEMENTS FOR THE 12 MONTHS TO 31 DECEMBER 2017

11 Analysis of payables (continued)

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 2) 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.

Transactions in relation to the Salmon Conservation Fund in 2017 are disclosed below.

	2017	2016
	€	€
Opening Balance	2,909,807	3,014,740
Receipts	495,161	504,606
Interest earned	1,180	6,771
Expenditure		
Insurance SCF Employer and Public Liability	(14,176)	(12,965)
Room Hire	-	(338)
To third parties	(48,672)	(166,556)
To IFI*	(187,550)	(436,451)
Closing Balance	3,155,750	2,909,807

*Accounted for by IFI as Other Income.

	Deferred Contract Income	Rural Recreation Fund	NSAD	Total
	A	B	C	
Opening Balance	159,545	615,466	500,000	1,275,011
Receipts in year	89,984	-	1,500,000	1,589,984
Released to income and Expenditure	(129,618)	(98,450)	(53,440)	(281,508)
Closing Balance	119,911	517,016	1,946,560	2,583,487

INLAND FISHERIES IRELAND

NOTES TO THE FINANCIAL STATEMENTS FOR THE 12 MONTHS TO 31 DECEMBER 2017

A Licence Income, AMBER (EU Project) and DSP CE in the case of contract income.

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

C The Department of Communication, Climate Change 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).

12	Capital account	2017	2016
		€	€
	Balance at 1 Jan	18,515,620	19,958,001
	Transfer (to) / from Income and Expenditure and retained revenue reserves		
	To fund fixed asset purchases	1,496,297	1,475,659
	Amount Released on Disposal of Fixed Assets	(11,436)	(1,482,686)
	Adjustment for Opening IFI Balance 2010		14
	Amortisation in line with asset depreciation	(1,477,395)	(1,435,368)
		7,466	(1,442,381)
	Balance	18,523,086	18,515,620

13 Related Party Disclosures

Inland Fisheries Ireland adopts procedures in accordance with the guidelines issues 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 2017.

NOTES TO THE FINANCIAL STATEMENTS FOR THE 12 MONTHS TO 31 DECEMBER 2017

14 Retirement Benefit Costs

		2017	2016
	Analysis of total Retirement benefit costs charged to the Statement of Income and Expenditure and Retained		
a	Revenue Reserves	€	€
	Current service costs	3,863,000	3,369,000
	Interest on retirement benefit scheme liabilities	2,164,000	2,758,000
	Employee contributions	(536,890)	(518,555)
		5,490,110	5,608,445
b	Movement in Net retirement benefit obligations during the financial year		
	Net retirement benefit obligation at 1 January	(113,391,679)	(99,923,467)
	Current Service Cost	(3,863,000)	(3,369,000)
	Interest Costs	(2,164,000)	(2,758,000)
	Experience gains on retirement benefit obligations	(917,000)	1,114,000
	Change in assumptions underlying the present value of retirement benefit obligations	(2,088,000)	(11,068,000)
	Total actuarial gain/(loss) in the year	(3,005,000)	(9,954,000)
	Pensions paid in the period	2,809,376	2,612,788
	Net retirement benefit obligation at 31 December	(119,614,303)	(113,391,679)

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.

INLAND FISHERIES IRELAND

NOTES TO THE FINANCIAL STATEMENTS FOR THE 12 MONTHS TO 31 DECEMBER 2017

14 Retirement Benefit Costs (continued)

c Deferred Funding for Pensions (continued)

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

	2017	2016
	€	€
Funding Recoverable in respect of current year Retirement benefit costs	(6,027,000)	(6,127,000)
State Grant applied to pay retirement benefits	2,809,376	2.612,788
	(3,217,624)	**(3,514,212)**

The deferred funding asset for retirement benefits as at 31 December 2017 amounted to €119,614,303 (31 December 2016: €113,391,679)

		2017	2016	2015	2014	2013
d	History of defined benefit obligations	€	€	€	€	€
	Defined benefit obligations	(119,614,303)	(113,391,679)	(99,923,467)	(110,676,806)	(91,397,726)
	Experience gains / (losses) on defined benefit scheme liabilities	(917,000)	1,114,000	6,499,000	(828,000)	6,405,000
	Percentage of Scheme Liabilities	-1%	1%	6.5%	1%	7%

NOTES TO THE FINANCIAL STATEMENTS FOR THE 12 MONTHS TO 31 DECEMBER 2017

14 Retirement Benefit Costs (continued)

e 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 2017 by a qualified independent actuary taking account of the requirements of the FRS in order to assess the scheme liabilities at 31 December 2017 of IFI.

The principal actuarial assumptions were as follows:	**31.12.17**	**31.12.16**
Rate of increase in salaries (frozen until 2015 and 2.75% thereafter)	2.75%	2.75%
Rate of increase in pensions in payment	1.75%	1.75%
Discount Rate	1.80%	1.90%
Inflation Rate	1.75%	1.75%

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 2018, 2038.

Year of attaining age 65	**2018**	**2038**
Life expectancy - male	21.2	22.8
Life expectancy - female	23.8	25.2

INLAND FISHERIES IRELAND

NOTES TO THE FINANCIAL STATEMENTS FOR THE 12 MONTHS TO 31 DECEMBER 2017

15 Lease Commitments

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

At 31 December 2017 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	77
Payable within two and five years	86
Payable after five years	22
	185

Operating lease payments recognised as an expense were € 213,323 (2016: € 217,558)

16 Cash and cash equivalents

Included in IFI's year end bank balances of € 13.03 million are amounts of € 5.739 million being monies received but deferred at year end in respect of the Salmon Conservation Fund, the Rural Recreation Fund, TRAM and the National Strategy for Angling Development. These monies are restricted for use on these projects

Link Asset Services are holding € 482,000 in an escrow account in trust for Northern Marine Power Ltd who are contracted to build Rigid Inflatable Boats on behalf of IFI; The following funds are held by IFI and will be distributed when projects are complete - Salmon Conservation Fund €3.16M, National Strategy for Angling Development € 2M, Rural Recreation Fund € 517K

17 Approval of Financial Statements

The financial Statements were approved by the IFI Board on the 13th December 2018

Glossary

Acoustic Accelerometer tags – tags that can measure levels of fish activity via changes in acceleration. This data is then transmitted by sound-waves to listening stations that are within range

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

ADFS – an acronym for Active Directory Federated Service, which is a software component developed by Microsoft run on Windows Server operating systems to provide users with single sign-on access to systems and applications located across and within organisational boundaries

Baseline data – data which serves as a basis for comparison with the subsequently acquired data

Bathymetric – the measurement of depth of water

Boom boats – refers to high voltage electrofishing boats used to sample fish in large rivers and lakes

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

Clustering services – Microsoft Cluster Server (MSCS) is a computer program that allows server computers to work together as a computer cluster, to provide failover and increased availability of applications, or parallel calculating power in case of high-performance computing (HPC) clusters (as in supercomputing)

Digital terrain model – three dimensional representation of the earth's surface stored in digital format

Disaster Recovery – the use of alternative network circuits to re-establish communications channels in the event that the primary channels are disconnected or malfunctioning

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

Floy tagging – tagging fish with an external tag that has a unique coded printed on it

Freshwater aquaculture – fish farming in freshwater

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

External data loggers – (High resolution) miniaturised units designed to capture different movement types (e.g. fast/slow) – used to measure fish activity types.

Hydroacoustics – is 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

Hydrodynamics – the scientific study of fluids in motion

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 life the history of individual fish by analysing the elemental makeup of otoliths and scales

Method intercalibration – comparison study of two different sampling methods

NOSACQ-50 – Nordic Safety Climate Questionnaire - A tool for diagnosing occupational safety climate

Norwegian bag net – a surface trap net designed to catch live fish for scientific sampling

Otolith elemental profiles – a chemical chronology of the life history of a fish

Otolith microchemistry – the minor and trace elemental constituents of an otolith (ear-bone).

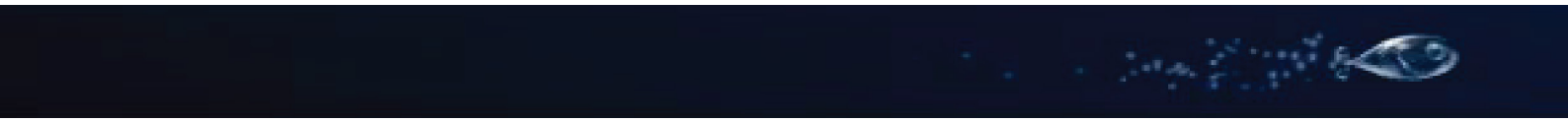
Pelagic zone – mid-water zone

Progression of pigmentation – fish can change their colouration during migration to better adapt to the local conditions, for example eel larvae are transparent while migrating to coastal waters but become pigmented when entering freshwater

QR code – a Quick Response Code is the trademark for a type of matrix barcode (or two-dimensional barcode) first designed in 1994 for the automotive industry. [A barcode is a machine-readable optical label containing information about the item to which it is attached].

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

Salinity – a measure of the level of salt in water



Sea lice integrative model – a statistical model that considers the effects of water movements, temperature, salinity and other environmental variables on sea lice distribution and sea lice prevalence on salmonids

Sentinel cage – experimental fish enclosures used to hold fish in open waterbodies

SharePoint – SharePoint is a web-based, collaborative platform that integrates with Microsoft Office software products, which is used to create intranets (internal websites) for team collaboration, blogs, wikis and company news

Silvering of eels – mature eels that are undergoing physical and physiological changes before migrating to the eel spawning grounds in the Sargasso Sea

Single Sign-On (SSO) – an authentication process which allows a user to access multiple applications with one set of login credentials, SSO is a common procedure in organisations where a member of IFI staff accesses multiple resources connected to a local area network (LAN)

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

Storage Area Network – (SAN) is a dedicated high-speed network or sub-network that interconnects and presents shared pools of storage devices to multiple servers

Temporal changes – changes which occur over time

Time management systems – often include a time clock or web-based application used to track an IFI 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

Inland Fisheries Ireland
3044 Lake Drive,
Citywest Business Campus,
Dublin 24,
Ireland.
D24 Y265

Tel: +353 1 8842 600

Web: www.fisheriesireland.ie
Email: info@fisheriesireland.ie