

# Inland Fisheries Ireland Annual Report 2016





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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 Statement**

I am pleased to present the Annual Report 2016 for Inland Fisheries Ireland (IFI). The principal functions of IFI are set out in **Section 7 of the Inland Fisheries Act 2010** and they are the conservation, protection, management, marketing, development and improvement of our inland fisheries and sea angling resources. This report provides high level detail of the work undertaken and the services provided by IFI during the period from January 1st to December 31st, 2016.

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As per section 2.16 and 2.17 of the Code of Practice for the Governance of State Bodies 2009 (the '2009 Code'), the roles of the Chairperson and CEO of IFI are separate and the Board of IFI regularly reviews its composition with a view to improving its effectiveness.

In accordance with section 13.1 of the 2009 Code;

- (i) In May of 2016, the Board of IFI approved the expenditure of €927,380, the cost of completing Phase
   2 and 3 of the Research & Logistics Centre at Citywest.
- (ii) The Board complied with all appropriate procedures for financial reporting, internal audit, procurement and disposal of assets;
- (iii) The Board has complied with its obligations under tax law;
- (iv) A statement on the Board's system of internal financial control is also available in this annual report;
- (v) The Codes of Business Conduct for Directors and for Employees have been put in place and adhered to. These Codes are available on the IFI website;
- (vi) The Board has complied with Government policy on the pay of the Chief Executive Officer and all employees;
- (vii) The Board was in compliance with Government guidelines on the payment of Director's fees.
- (viii) As of now, there have been no significant post balance sheet events;
- (ix) The Board has complied with the Guidelines for the Appraisal and Management of Capital Expenditure Proposals;
- (x) The Board has complied with all Government Travel Policy requirements;
- (xi) All Board members have made a Disclosure of Interests in accordance with the 2009 Code of Practice for the Governance of State Bodies.
- (xii) The 2009 Code of Practice for the Governance of State Bodies has been adopted by the Board and the Board is compliant with the provisions of the Code.

In accordance with Section 13.2 of the 2009 Code, I can confirm that no commercially sensitive developments took place in the preceding six months. As per Section 15 (subsections 1 – 7) of the 2009 Code the Board has complied with procurement procedures as set out in this section including compliance with the relevant tax clearance requirements as set out in Department of Finance Circulars 44/06 and 43/06. Also, as per Section 15.5 of the 2009 Code, I confirm that IFI has a Corporate Procurement Plan in place. As per Section 16.1 and 16.2 of the 2009 Code, I confirm that the *Guidelines for the Appraisal and Management of Capital Expenditure Proposals in the Public Sector* February 2005 are being adhered to and that the Department of Finance Value for Money Framework has been adhered to in all relevant cases. As per Section 17.2 of the 2009 Code, the Board has put appropriate procedures in place to monitor, report and enforce the relevant rules and requirements in relation to the foreign travel of staff members.

The Board of IFI acknowledges the launch of the Code of Practice for the Governance of State Bodies (August) 2016 and has informed the Department that it will be a 'late' adopter and has put in place an implementation plan to adopt this new code of governance in full and ensure organisational compliance.

Following its approval by the Minister for Communications, Climate Action and Environment, I was delighted to launch the IFI Corporate Plan 2016-2020. This plan sets out the priorities for the organisation over a five year period, takes into account a greatly increased focus on risk and risk management and moves towards a more open and transparent public service with a focus on performance and governance.

The launch of IFI's National Strategy for Angling Development (NSAD) in early 2016 is impacting positively in terms of fishery habitat and infrastructure and has the potential to significantly improve the angling product over its five year roll out term. The appointment of a Director with responsibility for the implementation of the strategy clearly illustrates the Board's commitment to this flagship project.

The operating environment has continued to prove challenging for IFI fishery officers. They continue to operate in an increasingly challenging environment and one particularly worrying incident involving staff being threatened with firearms illustrates the constant need to prioritize risk assessment, safety and supports.

Much of the development work in 2016 has concentrated on the replacement of angling structures (primarily stands and stiles) that were erected during the Tourism Angling Measure (TAM) Project in the late 1990's. Their replacement with a more durable and long lasting material will provide suitable amenities well into the future.

The funding of the organisation continues to be challenging. The fact that non-pay funds are being expended each year to meet the pay costs is becoming unsustainable in the short to medium term. Reductions in spending on such items as training were necessary to mitigate deficiencies in funding.

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The publication of "Review of IFI's Rainbow and Brown Trout Aquaculture Operations – Jan 2016 (Roscrea Co. Tipperary, Cullion Co. Westmeath, Lough Allua, Co. Cork and Cong Co. Mayo)", confirmed the considerable environmental and health & safety risks associated with this operation in outdated facilities. The report also starkly outlined the financial consequences for the organisation of producing fish at below cost or in many cases at "no cost". The recurring financial losses in this operation considerably reduce the funds available for other projects. IFI continues to work positively with the angling federation representatives in an effort to enable fish to be produced in a sustainable manner that will ensure the long-term viability of our fisheries.

The launch of IFI's inaugural Protection Plan is a further milestone in the evolution of a risk-based approach to protection with an increased emphasis on measurable outcomes. "Necessity is the mother of invention" and the reduced staffing available for protection duties necessitates prioritisation of resources with continuing emphasis on the primacy of staff safety. On a positive note the national roll out of the Tetra communication system coupled with the deployment of the most up to date equipment continues to aid safety and efficiency.

The national Trailer Maintenance Contract is expected to bring all trailers into compliance with the latest stringent Road Safety Authority requirements.

A Data Research Modeller was hired to collate the vast quantities of valuable data assembled by fisheries staff over many years. This data will hopefully prove invaluable in formulating effective species policies into the future.

The appointment of a Communication Officer is a direct response to a need identified in the recent staff survey and a recognised requirement to improve communication with stakeholders and interested parties.

I would like to warmly welcome three new members to the Board, Mr Patrick Gibbons, Ms Bernadette Orbinski-Burke and Ms Fidelma McGuirk. They bring a wealth of experience in the areas of finance, governance and strategic vision. I would also 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 continued courtesy to me and for their unstinting commitment and dedication to the mammoth task of conserving, protecting and developing our valuable fisheries resource.

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Fintan Gorman Chairman April 2017

# Chief Executive Officer's Introduction

I am pleased to introduce the 2016 annual report of the activities of IFI. This report sets out at a high level the main activities undertaken by IFI in 2016. Understandably it is not possible, nor desirable to quantify every single activity undertaken in one report. Thus an effort has been made to extract the most important information. Many of the reports contained herein are also supported by links to IFI's website where more comprehensive and detailed information is available.

I was delighted to welcome three new members to the Board and look forward to working with them throughout their term of office.

I would like to thank all of the Board of IFI for their unwavering support during 2016 and their focus on driving the organisation forward to ensure we are operating and delivering for the Irish taxpayer to the best of our abilities.

During 2016, IFI's new Corporate Plan 2016 – 2020 was launched. This 5 year plan and the National Strategy for Angling Development (NSAD) will drive the performance of the organisation over the coming years.

Ciara 3pos

Dr Ciaran Byrne CEO April 2017



Ireland's Inland Fisheries and Sea Angling Resource

#### **Management Team**

Dr Ciaran Byrne Mr Pat Doherty Mr Kieran Murphy Dr Greg Forde Dr Cathal Gallagher Ms Suzanne Campion Chief Executive Officer Head of Finance & ICT Head of Human Resources Head of Operations Head of Research & Development Head of Business Development

#### **River Basin District Directors**

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

Carl States

#### **Directors**

Mr Ian CarrollICT ManagerMs Shona RocheDirector of the National Strategy for Angling Development

# **Operations 2016**

IFI is responsible for ensuring 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 from baselines. The species protected comprise all freshwater fish species including migratory species such as salmon, sea trout, eel as well as lamprey and other important conservation species such as char and shad. IFI is also responsible for protecting certain molluscs including oysters and through a Memorandum of Understanding (MOU) with the Sea Fisheries Protection Association (SFPA) 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.

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 field staff during the summer of 2016. Having proved to be an effective communication system, the Tetra service was further distributed across the Operations Division. 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.

Substantial progress was also made in the delivery of an updated Rigid Inflatable Boats (RIBs) service. IFI worked closely with the Marine Survey Office (MSO) on the standards that will be required for a new 7.5 metre RIB. The new boats will be of very high specification and constructed to the standard stipulated by the Marine Surveyor's Office of the Department of Transport, Tourism and Sport in Ireland and will meet the legal requirements of the P5 Passenger Boat Licence specifications. The construction of the boats will require stage inspections 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. The tender for the provision of the new RIBs was initiated in November 2016 and the final decision determined in the first quarter of 2017.

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 237 staff.

In 2016, over 188,000 man hours were dedicated to safeguarding Ireland's fisheries resource in line with IFI's Fisheries Protection Programme and comprised of anti-poaching day patrols, covert night patrols and intelligence led surveillance operations.

IFI utilises a range of patrol methods in carrying out protection patrols on lakes, rivers, estuaries and at sea. The principal methods used for water based patrols are boats, kayaks and Personal Water Craft (PWC). Land based patrols are carried out using 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 scopes have proven instrumental in the apprehension of a number of illegal operators.

This protection programme targeted the species most at risk during specific seasons and included protection of salmon, trout, sea trout, conservation species, bass, coarse fish including pike, as well as oysters. Emphasis was placed on monitoring known poaching 'hotspots' with protection efforts enhanced at vulnerable times. During the year, 108,186 man hours were dedicated to patrolling rivers with protection activity peaking in Q3 when 34,372 man hours were utilised patrolling rivers nationwide. A total of 37,263 man hours were dedicated to patrolling lakes with the greatest activity taking place in Q2 with 12,245 man hours being recorded for this period. Man hours committed to patrolling coastal, estuary and sea areas totalled 42,956 for 2016.

Man-hours on Area Patrols	2016
Lake Patrols	37,263
<b>River Patrols</b>	108,186
Sea Patrols	6,197
Coastal/Estuary Patrols	36,759
Total	188,405

#### Patrol Man Hours - National Breakdown for 2016

Table 1: Time spent on Fisheries Patrols 2016

Patrol Methods	National Total 2016
Boat Patrols	1,151
<b>Bicycle Patrols</b>	363
Quad Patrols	84
Kayak Patrols	188
PWC Ski Patrols	37
Vehicle & Foot Patrols	29,357
Total	31,180

Table 2: Numbers of Patrols by method

During the year, 36,979 inspections of recreational anglers as well as licence holders were carried out nationwide. This represents an increase of 1,787 inspections on 2015 figures.

### **Items Seized**

An extensive range and number of illegal items were seized during 2016 ranging from fishing rods, dinghies, spears, hand lines and nets. 1,487 illegal fishing items were seized which included 301 nets measuring 14,782m and 818 illegally caught fish. The number of items seized in 2016 increased by 266 from items seized in 2015.

### Prosecutions

In 2016, 103 prosecution cases were initiated for breaches of fisheries and environmental legislation. Prosecution is regarded as one of the most important deterrents in terms of preventing illegal fishing activities in the long-term. As a result of the protection patrols and anglers inspections detailed above, a total of 82 prosecution cases were initiated in relation to **fisheries** offences and 54 convictions were recorded for **fisheries** offences (some of these convictions were cases initiated in previous years.

A total of 156 Fixed Charge Penalty Notices were issued for breaches of the Fisheries Acts, regulations or byelaws. Some 195 anglers received cautions from fisheries staff where very minor breaches were detected.

See Appendix 1 for prosecutions details by River Basin District (RBD)

### Water Quality/Pollution

In 2016, a wide range of environmental issues were addressed to assess their impact on water quality and fisheries habitats. Over 22,000 environmental inspections were carried out with the biggest increase recorded for inspections for pollution in habitats which rose from 11,626 in 2015 to 14,193 in 2016. There was also an increase in the number of inspections of civil engineering works/infrastructure with 2,651 inspections in 2016 in comparison to 2,020 inspections in 2015. During this period there were 21 prosecution cases initiated for **environmental** offences and by year end 15 convictions secured.

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2016 Environmental Inspections	National Total 2018
Farm Inspections	1,553
Industrial Premises	660
Wastewater & Water Treatment Plants	1,994
Civil Eng. Works/Infrastructure	2,651
Forestry Sites	810
Wind Farms Inspected	205
Industrial Miscellaneous sites	452
General Inspections for Pollution in Habitats	14,193
Total	22,518

Table 3: Method/Number of Environmental Inspections 2016

### **Fish Kills**

In 2016, there were 31 reported incidents of fish kills around the country, eight of which were caused by agricultural practice, two by municipal works and one by industrial works. In four instances the exact cause of the fish kill was difficult to ascertain while 16 incidents of fish kills were a result of disease and natural causes.

See Appendix II for details of reported fish kills by RBD

# Securing a Future for Fish

### Infrastructural Developments

Local Authorities and other agencies are obliged under legislation to notify and engage IFI on certain planning matters where an impact on the fisheries resource is possible. These agencies also require stakeholders (under their statutory powers) to consult with IFI, and subsequently submit proof of compliance with IFI's requirements as a component of the national formal planning system. Beyond local pre-planning and planning, a constant demand exists for input to Local Authority Development Plans, screening and scoping on Strategic Environmental Assessments (SEA) relating to major plans and national policies, Regional Planning Guidelines, Local Area Plans etc. Special Areas of Conservation (SAC), Special Protection Areas (SPA) and National Heritage Areas (NHA) catchment plans and projects are subject to Appropriate Assessment (AA) where IFI are also prescribed and notifiable.

Infrastructural elements impacting on surface waters (e.g. schemes such as wastewater/water treatment plants, water abstractions for potable supply, flood relief schemes, roads projects, housing, commercial waterside development) are evaluated and assessed from a fisheries legislative perspective. From design through to construction, IFI environmental staff are involved in close liaison with the relevant parties (often public agencies and bodies), their design teams and the various contractors 'on the ground' to ensure habitat protection, control of pollution and conservation of the fisheries resource to secure the future of fish populations.

A number of major infrastructural projects progressed during 2016, one of the most notable was the River Dargle Flood Alleviation Scheme. IFI personnel liaised with Wicklow County Council and their engineering representatives throughout the year to ensure the development works had minimal impact on fisheries habitats.

IFI also undertook collaboration on development works including consultation with the PM Group Environmental Consultants on the construction of the Dublin Waste to Energy Scheme proposed for Poolbeg, Dublin Port. This €500 million project is a Public Private Partnership (PPP) between Dublin City Council (acting on behalf of the four Dublin Local Authorities) and Covanta. The thermal plant will generate energy from up to 600,000 tons of waste annually.

IFI and Waterways Ireland have been engaged in a joint venture to design fish passes on six weirs on the River Barrow. These designs were completed in February 2016, and a planning application submitted to Carlow County Council for the repair and construction of a rock ramp fish pass at Tinnahinch Weir on the River Barrow, Co. Carlow. This weir has been identified as a priority as it is the furthest downstream and is also in urgent need of repair. It is intended that if this project is successful in planning and construction, and subject to future resources, a further five weirs will be developed in due course. In Cork, IFI has been in discussions with the Consulting Engineers on the Clonakilty Drainage Scheme. The proposed River Fealge (Clonakilty) Drainage Scheme comprises tidal defence walls and a river flood water storage area. The primary element of the drainage scheme is the provision of a storage reservoir that will hold the flood water and allow it to be released at rates that will not overtop the river banks in the town. The outflow of water from the storage reservoir will be controlled by a sluice. If constructed and operated as planned the impact on fisheries, post construction, should be minimal.

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Wexford County Council and their contracted consultants have been in discussions with IFI regarding a method statement to dredge and deepen the harbour at Courtown, Co. Wexford. This project will involve the alteration of two water courses which enter the harbour, the de-watering and lowering of the bed level within the harbour and the removal and translocation of all fish species within the affected area in advance of the works.

IFI also collaborated with the Consultant Engineers on the National Roads Authority (NRA) Bridge Rehabilitation Programme. The programme of works concerned numerous bridges nationally including 6 bridges in Co. Cavan in the Claddagh and Woodford River catchment. The works on these bridges include strengthening or replacement of the deck, masonry repairs, re-pointing, upgrading of parapets, scour repairs, installation of safety barriers and removal of vegetation.

### **Fisheries Habitat Development**

Over 370 river sites were assessed for fisheries development in 2016. During the year 51,500 metres of stream and lakeshore were maintained and 21,700 metres of stream/river banks rehabilitated nationwide.

In June 2016, the first phase of a significant habitat enhancement project on the Trimogue River at Kilkelly, Co. Mayo was completed. Plans were developed for this project in March by IFI personnel and the Office of Public Works (OPW) engineering staff. Both agencies have worked effectively together to bring this project to fruition. Much of the channel, in the vicinity of the village had been canalised between concrete walls and the habitat had become featureless, lacking in any heterogeneity. Fish friendly structures have now been introduced to address this and fish have already been observed using these new features. There were also significant beds of spawning gravel introduced at three locations and, it is hoped that these will attract spawning salmon over the coming months and years.

Further habitat development was carried out on Houndswood, Ballynalty, Ballycurran and Cornamona Rivers in Co. Galway as bank side pruning of excessive vegetation and removal of aquatic weed was undertaken. Pools were also created and repaired on several channels throughout the Corrib catchment to hold back water in drought affected streams to ensure that juvenile trout fry are protected. Tree pruning took place along the Cornamona River at Crimlin, Co. Cavan where excessive tunnelling was impacting light penetration into the channel. A similar operation was undertaken by the OPW at IFI's request on Annie's Stream in the Lough Carra catchment. Bank pruning and the removal of significant blockages was also undertaken on the Ballyfruit Stream near Headford, Co. Galway. Tree pruning is an essential aspect of habitat protection as it allows light penetrate to the river bed encouraging moss and other vegetation to thrive thereby increasing river biodiversity.

Two river enhancement and rehabilitation projects commenced at the end of August within the Lough Sheelin catchment as part of the Midland Fisheries Fund (MFF). Works were carried out on the upper stretches of the Mountnugent River which involved cutting and clearing the extensive vegetation and trees that was causing serious tunnelling of this watercourse and thereby a reduction in stream biodiversity.

### **Angling Infrastructure Development**

During 2016, a comprehensive inventory of angling structures was compiled nationwide. Data for over 4,900 angling structures was collated into an extensive database which noted the condition, location (including a photograph) and precise coordinates for each structure. The structures in need of repair, removal and replacement were noted and incorporated into a programme for development.

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Over €871,372 was invested in 47 angling facility enhancement projects which resulted in the replacement of 374 stiles, footbridges and platforms and the creation of 78 new fishing spaces. Work on the enhancement of angling access was carried out at a number of locations.

#### Refer to Appendix III for Angling Development Works

IFI staff worked with angling clubs and Community Employment Schemes (CES) to maintain and develop fisheries infrastructure nationwide. Examples of the significant works undertaken as identified by the survey include the Owenea River in Co. Donegal where stiles were repaired or replaced and 23 stiles completely removed. 49 metres of walkways were removed, 32 metres of walkway replaced and 25 meters repaired. 55 metres of anti-slip wire was also installed.

IFI staff erected two stiles on the River Boyne between Slane, Co. Meath and Drogheda, Co. Louth, and manufactured four stiles for the Slane and Rossan Anglers on the Oldbridge Fishery, Co. Meath. IFI staff manufactured two fishing stands for Rosehall Reservoir and were engaged in swim clearance on Dysart Lakes, Delvin/ Drumkeary and Bailieborough Lakes, Co. Cavan.

On the River Moy the last of the large angling structures planned for the section of the River Moy licenced to the East Mayo Anglers' Association was installed just downstream of Ballylahan Bridge at the confluence with the Clonlee River. This footbridge, which was prefabricated at the Lough Conn base, spanned a channel of over 7.6m (25 feet) and will facilitate easy angler access in a heavily fished part of the river.

Access work on the Lisanisk Lake, Carrickmacross, Co. Monaghan, was undertaken during July including swim clearance and development of walkways to and between existing stands to enable youth angling development summer schools. General repairs and upgrade of access roadway and car parking areas was carried out at Garadice Lough (Church and Haughton's Shore sections), Lough Gowna (Dernaferst North area), and car parking and access at Carrigallen Town Lake venue.

On the Eske Fishery, works included the removal of shrubbery and vegetation from around 14 structures and the repair of a handrail on one walkway above Donegal town. Works on the Eany Fishery included the replacement of two flood damaged walkways, placement of anti-slip mesh on 6 structures.

Repairs were carried out on the floating structure and catwalk at Lough Loung in Co. Roscommon, following damage from winter flooding.

The recent bridge installation at Derrycahill has now improved access to the River Suck downstream of Ballyforan. This is an important location for pike and coarse angling and had been cut off since the bridge was closed on safety concerns several years ago. IFI liaised with contractors and Roscommon County Council to improve boat launching locations, and the provision of two new metal angling access stiles either side of the bridge.

In February 2016, Minister of State for Tourism and Sport, Michael Ring TD., officially opened the recently completed development at Clare Lake, Co. Mayo, following an investment of €57k. IFI significantly upgraded the fishing facilities at the lake, with the installation of four new floating fishing stands, provision of wheelchair access, upgraded paths and signage, and the provision of disinfection facilities to clean fishing gear to prevent the spread of invasive species. Fencing was also erected to improve safety around the water and to encourage wild plants and trees to flourish around the lake margins. The work was completed in conjunction with the local Community Employment Scheme and was funded through the Department of the Environment Amenity Fund. The project was carried out in consultation with the Clare Lake / McMahon Park Development Committee, which represented the local community.

#### Control of Curly Leaved Weed (Lagarosiphon major) on Lough Corrib

The weed management team continued to control and manage infestations of the aquatic invasive weed *Lagarosiphon major (L. major)* on upper Lough Corrib throughout 2016. Control works were undertaken at 21 locations which are indicated on the map overleaf which also details the control methods utilised at these locations.

Three control methods were employed which included mechanical cutting, light exclusion using jute matting and handpicking in areas where singular strands surrounded the managed locations. In total 139,100m<sup>2</sup> (13.9ha) of lake area was treated.

Method	Area M <sup>2</sup>
Mechanical control	90,410
Jute matting	47,560
Hand picking	1,130
Total	139,100

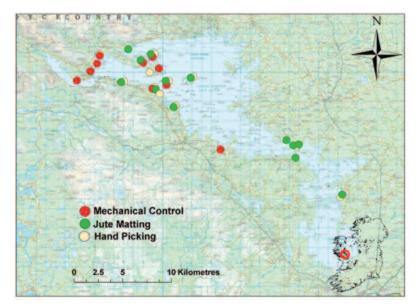
Table 4: Area of lake treated by method

Mechanical cutting was carried out at ten locations around the lake all of which had previously been treated. The ongoing need to revisit sites reflected the ease with which *L. major* can re-establish itself if not kept under control. Singular strands of the weed are capable of initiating a new infestation and wind aids their spread along with boat movements. Weed fragments that are inevitably left behind from the mechanical control process can also lead to re-infestation.

Jute matting control commenced in June and continued into November. Mild conditions enabled the team to dive for an extended period and 47,560m<sup>2</sup> (4.76ha) of jute matting was laid at thirteen sites during the summer and autumn of 2016. This was the largest amount of jute deployed in a season to date.

Handpicking was used to remove sparsely spread singular strands. This method is vital to the success of jute matting and involves divers swimming the outskirts of the treated zones to locate any outlying singular strand or sites that are too small to require sheets of jute matting. Weed strands were hand-picked at eight sites and a total area of 1,130m<sup>2</sup> (0.1ha) was treated.

In November a survey of potential vulnerable sites suitable for colonisation by the curly leaved waterweed in the lower basin was carried out. The team did not detect any evidence of *L. major* in the lower basin of Lough Corrib south of Annaghdown Bay.



Locations on Lough Corrib where weed management conducted

Due to the lack of statutory basis and specific budget allocation the sustainability of the weed management effort on Lough Corrib continues to be reviewed.

#### Asian Clam

The first record of Asian clam (*Corbicula spp.*) in the Erne system was recorded on 18th January, when 2 Asian Clams were discovered during Eckman grab surveys downstream of the Riversdale Marina on the River Erne below Belturbet. The area was being surveyed as part of an annual survey of the Shannon-Erne Waterway for invasive species. The National Parks and Wildlife Service (NPWS), National Biodiversity Data Centre, Cavan County Council, Department of Culture, Arts and Leisure (DCAL) Northern Ireland, ESB and Waterways Ireland were informed.

# **Facilities**

Following procurement late in 2015, an IFI field base fit-out at Unit F7, Network Enterprise Business Park, Kilcoole, Co. Wicklow was completed in 2016. The location was chosen on the basis of being suitably close to key Dublin rivers (Liffey, Dargle, Vartry and Avoca), the main roads network (M50 and associated major national roads network including the M11) and coastal boat launching facilities at Greystones, Co. Wicklow.

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# Research & Development 2016

# National Research Survey Programme (NRSP) - Lakes & Rivers (L&R) and National Coarse Fish and Pike Programme (NCFP)

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, and the Water Framework Directive (WFD) (including Arctic char). Method intercalibration and hydro-acoustic development also come under the jurisdiction of the team.

Currently there is considerable pressure on IFI's own resources to complete WFD fish monitoring. Significant overlap exists between WFD monitoring and other IFI research programmes; therefore fish sampling methods are being compared and refined and it is envisaged that from 2017, once standard methods are refined, one survey will be undertaken, where applicable, to assess fish stocks in designated waterbodies to cover more than one objective (unless species specific studies require alternate sampling approaches), e.g. (i) brown trout and WFD, (ii) coarse fish and brown trout and WFD, (iii) Arctic char and WFD, etc.

The NRSP team is also undertaking 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 (WFD) Fish Monitoring

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 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 (SEN standards). The comprehensive three-year rolling fish monitoring programme developed by IFI encompasses over 300 water bodies, (river, 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 low 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 survey programme. The WFD rivers monitoring programme is currently being reviewed by the Environmental Protection Agency (EPA) in conjunction with IFI and others and it is envisaged that it may change to an index catchment approach to assess long term responses to pressures from 2018.

17 lakes and 36 river sites from the WFD surveillance monitoring programme were surveyed during 2016 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 2016 are underway and will be published on the WFD fish website (www.wfdfish.ie) in due course.

### Rivers 2016

In addition to the WFD monitoring, 149 rivers sites were surveyed in 39 catchments during 2016, for various purposes, e.g. brown trout research, fish kill recovery assessment, method intercalibration, pressure assessment, etc.

Eighteen fish species including sea trout and one hybrid were recorded on 185 surveys (WFD and IFI research) in 2016. No fish were recorded at four sites. Brown trout was the most common species recorded at 72% of sites, followed by salmon (37%), stone loach (34%), minnow (30%), roach (29%), three-spined stickleback (22%), European eel (22%), perch (20%), pike (14%), lamprey (12%), gudgeon (11%), roach x bream hybrids (8%), bream and rudd (2%) and dace, flounder, rainbow trout and sea trout (1%).



Juvenile lamprey

#### Lakes 2016

Seven 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 two types of hybrid were recorded in all 24 lakes surveyed (WFD and IFI research) during 2016. Eel was the most common fish species recorded, occurring in 95.8% of the lakes surveyed. This was followed by perch, brown trout, pike, roach, roach x bream hybrids and bream which were present in 79.2%, 70.8%, 62.5%, 54.2%, 29.2% and 29.2% of lakes respectively. Where bream were recorded, roach, and their hybrid were also generally found. The exception was Belhavel Lough, where bream were the only cyprinid species recorded. In general, salmonids were the dominant species in lakes in the north, west and south-west of the country. Sea trout were captured in three lakes; Beltra Lough, Glen Lough and Kylemore Lough. Arctic char were recorded in three lakes; Lough Shindilla, Glen Lough and Kylemore Lough.

In addition to the standard fish stock surveys for the WFD, hydro-acoustic surveys were successfully completed in the pelagic zone of Loughs Derg and Parteen.

#### Method Intercalibration (lakes and rivers)

In 2016, three lakes were selected to compare the sampling methods used on the WFD and brown trout programmes (Lough Conn, Lough Derg and Inchiquin Lough) as part of a method intercalibration exercise.

Sites were also surveyed on two occasions in 2016 in selected River Suir sub-catchments as part of a study to examine the potential for a 10-minute boat fishing method.

#### Lakes

As part of IFI's National Brown Trout Lake Fisheries Programme two lakes were surveyed to assess the status of the brown trout stocks, Lough Conn and Inchiquin.

#### **Rivers**

Work on IFI's collaborative brown trout Micro-satellite DNA programme with Queens University, Belfast continued in 2016. The current programme includes the Dublin Rivers (Liffey, Dodder and Tolka), Moy Catchment and Mid Shannon System (from Carrick-on-Shannon south to and including the River Suck, Lough Ree and River Inny). These projects commenced in 2014 and are due to be completed in 2017. Laboratory and data analyses are well under way. Interim reports on the three current projects are available to view on the IFI website.

#### Stream Enhancement

IFI continued to support a number of stream development programmes for salmonids during 2016 by providing advice on suitable habitat enhancement works. All works carried out aimed to improve the spawning and nursery potential of these rivers and streams. Some of the rivers included under stream enhancement were; the Kells Blackwater River (Co. Meath), Kilmorgan River (Ballyoadare River tributary) (Co. Sligo), Upper Dargle River (Co. Dublin), Finniglas River (Waterville, Co. Cork) and Clodiagh River (Co. Westmeath).

### Coarse Fish & 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. In addition to those lakes mentioned above, four lakes were surveyed for the purposes of coarse fish research (Ballyquirke (Co. Westmeath), Belhavel (Co. Leitrim), Derryhick and Levally (Co. Mayo)).

Point Abundance Sample Electrofishing (PASE) which was piloted in 2015 was continued on Lough Muckno (Co. Monaghan) in 2016. In addition to providing an indication of spawning success of cyprinids, PASE targets fish fry and can enable the quantification of habitat variables on a small scale at a very large number of discrete sites. Results indicate a reduction in the numbers of cyprinid fry in 2016 compared to 2015. There was also a marked reduction in fry numbers between August and September 2016.

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 is being examined and compared over a twelve month period 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, Co. Westmeath). Monthly field sampling is 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 are included in the study. A combined total of 412 pike stomachs were examined from both lakes between August and December 2016. Morphometric measurements of captured pike have also been recorded. Sampling will continue in 2017, and the results obtained will be integrated into mathematical models examining the interactions between pike and trout. The collection of this vital fisheries information will also aid the management of pike as a species in its own right.

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. Diverse studies, funded both internally and externally, include:

## National Salmon Management Advice/Conservation Limit (CL) Attainment

The annual scientific advice on the status of salmon stocks and associated documentation was produced by the Independent Standing Scientific Committee on Salmon (SSCS) and is available for download on the IFI website at www.fisheriesireland.ie/fisheries-management-1/salmon/639-the-status-of-irish-salmon-stocks-in-2015-with-precautionary-catch-advice-for-2016. To support the provision of scientific advice by the SSCS for IFI managers for the 2017 salmon season, Catchment Wide Electro-Fishing (CWEF) was completed in 35 catchments in 2016 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 1,300 sites were visited in 2016. In the first nine years of this programme (2007-2016) a total of 376 catchment surveys in 136 catchments have been undertaken comprising 8,618 individual site surveys. In relation to scientific advice for 2016, based on these CWEF data, fifteen rivers predicted to be under their Conservation Limit, but with a high average catchment-wide salmon fry index (i.e.≥ 17 fish/5-min over the 2007-2016 period), were recommended for opening on a catch & release angling basis. A comprehensive series of reports on the IFI salmon management programme is available on the IFI website at www.fisheriesireland.ie/Fisheries-management/salmon-management.html

Based on the scientific advice provided by the SSCS, IFI management determined that during 2016, 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 4 were open for catch and release in 2016.

### The National Salmonid Index Catchment (NSIC) the River Erriff Catchment

The Erriff catchment, Co. Galway, is the national salmonid index catchment 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 2016, a total of 2,089 sea trout smolts (juveniles) and 61 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 479 salmon and 3,357 sea trout ascended through the trap/fish counter located beside Aasleagh falls during 2016.

The NSIC is critically important in monitoring the Erriff sea trout population currently and into the future 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 2016, 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 (av. 47.3) in May 2015 but very low lice abundance (av.2.3) in spring 2016. The bag net will be used to investigate lice infestation levels in spring and the possible influence of lice from the Killary salmon farm on wild salmon and sea trout stocks in Killary Harbour.

A new project using PIT tag (*Passive Integrated Transponder*) technology began in spring 2016 to determine sea trout and salmon smolt to adult (return to freshwater) mortality. 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 as finnock (i.e. in the same year as they migrated as smolts) averaged 25% in 2016 which is similar to historic return rates. Marine survival of sea trout will be assessed annually against sea lice infestation pressure in Killary Harbour. Salmon smolts tagged in spring 2016 will return to the Erriff in 2017, as one sea winter fish and a direct measure of marine survival will be determined.

Detailed studies of the spatial distribution, habitat and life history of juvenile sea trout progressed significantly in 2016. 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 which will have applications for management of the fishery and other sea trout fisheries.

# 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.

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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)

In year 3 of this programme (2016) 25 sea trout smolts and 1 kelt were acoustically tagged & released in the Erriff River in spring 2016. Kelt numbers were low due to poor marine survival in 2015. Only salmon smolts were present at the Killary commercial salmon farm in spring 2016 and low lice levels were recorded on these fish. Sea trout smolts displayed differential movement patterns: some migrated fully out of Killary Harbour and others resided fully within the fjord. In 2016, 12% of tagged smolts and no tagged kelts returned to freshwater.

## Galway Bay

In 2016, a major investment was made by IFI to enhance the research and monitoring capacities in the bay under the Salmonid West Programme. An array of hydro-acoustic receivers was installed from Spiddal to Blackhead to monitor sea trout and salmon movement in and out of the bay and a network of receivers in the inner bay monitored movement and residency in the marine environment. The study was also partially funded through SmartBay's National Infrastructure Access Programme (NIAP) fund. In year 1 of this programme (2016) 30 wild salmon smolts were tagged and released at the Salmon Weir on the River Corrib. 90% of these fish survived to the first set of receivers located in the bay where the Corrib enters. The majority of these fish made the journey in under 24hrs.

In the Dunkellin catchment and surrounding coastal water 10 sea smolts and 26 larger sea trout were tagged and released. Sea trout (smolts and larger fish) displayed several differential movement patterns which are being analysed. Some of the acoustic tags are fitted with accelerometers which transmit acceleration data along with the location data. The acceleration data provides an overall dynamic body acceleration which scales in a near linear fashion with oxygen consumption, and this serves as a proxy of energy expenditure. The acceleration data is in the process of being cross-referenced with the location of the fish itself allowing 'energy landscapes' to be constructed that detail where, when and how sea trout allocate their time and energy in the bay. Such information will allow IFI to assess whether transience or residence in partial locations is a passive or active process when viewed in conjunction with archived hydrographic models of the study area.

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### **Chases Project**

IFI is collaborating with researchers from the Norwegian University of Science and Technology (and other international partners) as part of the 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. IFI will contribute to (a) a joint analysis of historical and current sea trout scales from Ireland and Norway, and (b) use laser ablation inductively coupled plasma mass spectrometry (LA-ICPMS) in a novel way to explore the effect of human activities on sea trout growth and marine residency. 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 the statutory body responsible for advising the Minister for Communications, Climate Action and Environment, on policy and national strategies relating to sea angling in Ireland. The MSF Programme embraces studies on species including bass, elasmobranchs and thick-lipped mullet in addition to regular assessments of fish species status in transitional waters.

### **National Bass Programme**



Bass Specimen

Monitoring and assessment studies on various bass life stages undertaken in 2016 included:

- Annual juvenile bass monitoring was repeated in seven estuaries. Consistent juvenile presence for a minimum of two consecutive survey periods confirmed four as established juvenile bass nurseries.
- A monthly study of juvenile bass habitat over six months in the lower Slaney Estuary established the initial timing of their presence in the estuary and their subsequent winter departure most likely to deeper waters.
- Trawling of sites in the Munster Blackwater (Co. Cork) and River Barrow (Co.'s Carlow, Wexford) transitional waters encountered bass aged 1 year and older consistent with previous years.
- Angler-led bass scale sampling continues to prove a valuable asset for adult bass population structure assessment; 2,700 sets of adult bass scales have been aged since 2013, 349 of these in 2016. Ageing analysis indicated that the 2007 year class continues to dominate catches for the fourth consecutive year.
- The bass tagging programme continues to operate at various venues around the coast. 980 bass were tagged from 2013-2016; 182 were tagged in 2016. Four tagged bass were recaptured in 2016.

Identification of key juvenile bass nursery estuaries – current survey data suggests that few estuaries support juvenile bass populations. This detailed study, involving the analysis of juvenile bass otolith microchemistry by Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICPMS), is being undertaken to determine the elemental fingerprint of juvenile bass from estuaries. A library of elemental fingerprints from around the Irish coast has been established (Ryan et al. 2016) and this paper includes technical considerations around classification of adult bass to nursery of origin. This work has facilitated progression to the next phase of the study; investigating which estuaries provide most recruits to the adult stock.

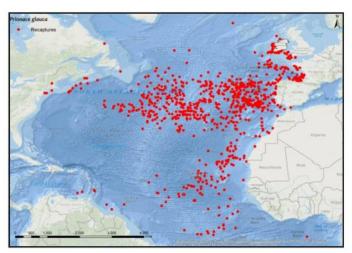
## **Estuarine Fish Sampling**

Estuaries are highly productive habitats which provide shelter and food to marine species and are especially important nursery habitat for juveniles 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 Water Framework Directive. 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:

- Eleven transitional waterbodies were surveyed in autumn 2016. A total of 39 different species were identified across all sites.
- The extensive Nore/Barrow/Suir transitional waterbody (which includes 8 individual water bodies) retained its good ecological status since it was previously surveyed in 2013 due to high species richness (29 different species) and good numbers of species of ecological importance including Twaite shad, eel, salmon and smelt. Dace has established in the upper reaches of this waterbody which is of some concern.
- The Lower Bandon estuary retained good ecological status since it was last surveyed in 2009. A total of 18 different species were identified during the survey.
- Three-spined stickleback dominated the fish fauna in two small coastal lagoons in Kerry, where species richness and/or abundance are normally low, and thereby reducing ecological quality ratings for both.

### Marine Sportfish (Elasmobranchs) Tagging Programme

The long-running Marine Sportfish Tagging Programme was established to study the movements of elasmobranch fish species 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. Over 40,000 sharks, skates and rays have been tagged since 1970, mainly by trained angling charter skippers, under the programme. The co-operative nature of the MSF programme, which relies on catch and release with good handling, is a major contributor to its value and success. Over the years the programme has contributed, in particular, to understanding of the distribution and migration patterns of Blue shark in the North East Atlantic. Updated information (2007-2013) on the Blue shark recreational fishery was published in 2016 (Wogerbauer *et al.*, 2016) through ICCAT (International Commission for the Conservation of Atlantic Tunas). Historical IFI blue shark tagging data contributed to a collaborative international study of blue shark global distribution which was submitted for publication in 2016. IFI tagging data was analysed in 2016 as part of an extensive multi-agency national elasmobranch dataset to classify the relevant species according to their extinction risk (International Union for Conservation of Nature (IUCN 2001)).



Distribution of Irish-tagged Blue shark recaptures

#### Thick Lipped Grey Mullet Study

A small-scale programme was initiated in 2016. Grey mullet distribution data are being mapped and angler-supplied mullet scale samples will be analysed to provide an understanding of the distribution and population structure of grey mullet in Irish waters.



Combined Research and Operations teams carrying out survey work

## **National Eel Monitoring Programme**

The National Eel Monitoring Programme (EMP) has completed 2 three year reporting cycles to the EU (2009 – 2012 & 2013 – 2015). 2016 is the first year in the third reporting cycle (2016 - 2018). The aim of the programme is to fulfil Irelands obligations under the monitoring objectives set out in the national eel management plan.

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The aim of the EMP is to monitor the level of elver recruitment arriving in Ireland and create a long-term time series to track changes in recruitment levels. Elver monitoring was undertaken at 6 sites nationally. The distribution of recruitment was spatially uneven this year with some sites recording very good recruitment (Rivers Maigue (Co. Limerick), Inagh (Co. Clare) and Feale (Co. Kerry) with poor recruitment in the Rivers Liffey (Co. Dublin) and Ballysodare (Co. Sligo). The elver traps were all upgraded during 2016 and the new traps will be installed for the 2017 elver season. The recruitment for Europe has increased in recent years; however the level for 2016 still remains at 11% of historic levels and the endangered status of the stock has not changed. It remains to be seen if this increase in recruitment is as a result of the management measures put in place since 2009 or is just natural variability in the recruitment indices.

The EMP assisted the scientific eel fishery yellow eel programme in 2016. A mark recapture study was undertaken in 3 locations, the study in Waterford Harbour and Munster Blackwater was designed to identify movement of eels within an estuary environment. In Waterford Harbour, 15 nights of fishing within designated zones resulted in a catch of 4,152 eels with 314 eels recaptured during the study (8% recapture rate). Eleven eels were recaptured 3 and 4 times. The study highlighted the movement of eels between the different zones and also site fidelity with eels moving between zones and returning back to zone of capture. In the Munster Blackwater, 521 eels were caught over 15 nights with 38 eels recaptured (11% recapture rate). The eels within the Munster Blackwater showed the same pattern with 23 eels recaptured within the same zone and 14 eels caught in a different zone to initial capture. 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 2,609 eels were re-caught over 9 nights, 107 eels were recaptured, the majority were recaptured twice but 10 eels were re-caught 3 times and 1 four times. 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.

The EMP continues to monitor the impact of *Anguillicola crassus* in the eel population in Ireland. Samples taken in 2016 from Upper and Lower Lough Corrib, Lough Conn and Waterford Harbour showed prevalence rates of 47%, 72% 37% and 61% respectively. However examinations of damage to the swimbladder walls indicate only slight to moderate damage, to date no severe damage has been recorded.

The programme continued to investigate the distribution of eels in the rivers in key catchments. In the River Greese, a subcatchment of the River Barrow, no eels were recorded in 28 sites in the catchment. A quick assessment of 3 neighbouring catchments resulted in only 2 individuals being recorded. It is believed that reduced eel numbers has led to reduced competition and therefore fewer eels moving into smaller tributaries of the River Barrow. The majority of the population is most likely remaining in the River Barrow main channel and canal where productivity is high and competition for food and habitat resources has declined. A second catchment will be surveyed in 2017 to further investigate this potential reduction in the spread of eels within a catchment.

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The silver eel season for 2016 was severely hampered due to lack of rain and low water levels for the whole of Ireland. In the River Fane catchment, only 7 nights were fished in December, with a total catch of 80 kg. The Barrow silver eel site fished 25 nights with a total catch of 193kgs. The season on the River Barrow involved short bursts of migration with no suitable conditions for prolonged movement of eels.

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



Release of eels

#### **Scientific Eel Fishery**

The scientific eel fishery programme was set up in April 2016 upon request by the Department of Communications, Climate Action and Environment (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 the knowledge around eels in Ireland ahead of the next EU review and to inform the management of eel populations which are currently in decline.

For yellow eels, 5 lakes and 2 transitional waters were surveyed in 2016. The lakes included Upper and Lower Lough Corrib (Co. Galway), Lough Conn (Co. Mayo), Lough Ramor (Co. Cavan) and Lough Muckno (Co. Monaghan). The two transitional waters were Waterford Harbour and Munster Blackwater Estuary. Of the lakes sampled in 2016, Upper Lough Corrib had the highest catch per unit effort (CPUE) reported of 7.51 (2,387 eels captured; Table 1)). The majority of the eels (n = 1,970) were caught in one bay which was netted with 2 chains of fyke nets for 4 nights, this leaves a catch of 471 eels for the remaining locations in the lake. It is thought that this congregation is eels moving from the ditches in the bogs which are drying up in the summer forcing the eels back into the lake. The greatest yellow eels catches overall during the summer of 2016 were recorded at Waterford Estuary (CPUE: 22.54, 6,988 eels captured with 4,379 measured over three week survey).

1.1.1

Location	Nights Fished	No eels	Catch per unit of effor		
Upper Lough Corrib	8	2,387	7.51		
Lower Lough Corrib	8	576	1.80		
Lough Conn	8	857	2.68		
Lough Ramor	8	401	3.34		
Lough Muckno	12	2,611	7.25		
Waterford Harbour baited pot	10	5,971	37.32		
Waterford Harbour fyke net	5	1,017	6.78		
Munster Blackwater	15	521	1.39		

Table 5: Breakdown of catch per location for yellow eel surveys

It was planned to operate a silver eel fishery on the outflow of Lough Ramor during the autumn/winter of 2016 however, the dry conditions resulted in no migration of silver eels for the season. The programme has an element of glass eel and elver monitoring, however these surveys will be carried out in 2017.

# Freshwater Aquaculture

IFI operates two fish farms at Roscrea (Co. Tipperary) and Cullion (Mullingar, Co. Westmeath). Rainbow and brown trout were distributed across 27 counties during the period.

# LocationSpeciesNo. of FishRoscreaBrown Trout42,000Rainbow Trout81,000Cullion (Mullingar)Brown Trout5,000Rainbow Trout8,000

#### FISH FARM PRODUCTION 2016

Table 6: 2016 Fish Farm Production

Over the past year the IFI Data and Statistics group have focused on two integrated objectives:

# Capacity-building in statistical analysis using the R statistical software

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Capacity building is being realised through on-going R training workshops at IFI. These workshops have been enthusiastically attended and many staff are actively trying to shift their routine analyses into an R framework. This shift will strongly improve efficiency as many processes, e.g. annual fish sampling reports, can be substantially simplified using R. In addition to regular workshops, the Data and Statistics group now provide collaborative support to IFI staff in implementing robust statistical analysis of fisheries and ecological data.

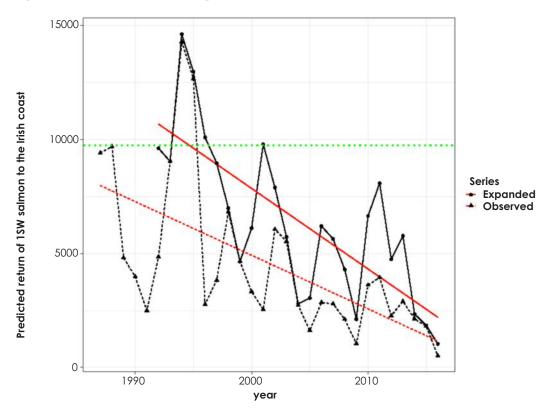
A number of peer-review manuscripts have already been prepared by this route and the novel research involved will ensure that IFI programmes are based on best scientific practice.

# Conduct high-level analysis of existing IFI data to support policy and management

The IFI Research group has an extraordinary archive of environmental data, with potential to yield important management-focused science. The Data and Statistics group is currently engaged in analysis of data pertaining to several core IFI programmes including salmon and sea trout assessment, marine sport fish and WFD monitoring. This work will inform improved sampling and assessment methodologies and ensure that IFI Research activities operate at the highest level. Specific scientific outputs will raise the international profile of IFI staff with positive implications for funding bids and for participation in significant international fisheries management fora. An important component of this work is facilitated by IFI expertise in Geographic Information Systems (GIS) mapping and data synthesis.

#### **IFI Research Newsletter**

The IFI Data and Statistics group now produce a regular newsletter highlighting exciting activities in the Research group. This output is distributed across IFI and has been well-received by many staff. The group is also contributing to the development of the IFI website.



#### **Examples of Current Analysis**

Figure 1 Observed annual returns of salmon to the Erriff River, and an 'Expanded' (predicted) return without sea lice from aquaculture. Returns of 1SW salmon that migrated as smolts in a year of high lice infestation can be reduced by up to 50% compared to fish migrating in low lice years.

#### Habitats Directive and Red Data Book Fish Programme

**The Habitat Directive programme** is directed to support Ireland's obligations in regard to Article 17 reporting for Habitats Directive. The Minister with responsibility for fish is identified in law (SI 477 of 2011) as having responsibility for undertaking the national monitoring under Habitats Directive 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 Red Data Book fish species – char and smelt.

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During 2016, the team undertook a survey programme in relation to adult and larval lamprey, anadromous shads, pollan, char and smelt.

The overall six-year programme plans to re-survey all of the catchments designated as Special Areas of Conservation for lamprey, first surveyed in the 2003-06 period. The work in 2016 was done as Year 4 of this project, with catchment-wide surveys of larval lamprey in the River Suir (144 sites) and River Bonet (20 sites). In order to examine 'trends' in population, as required by the EU Habitats Directive for Article 17 reporting, the project team has established a network of Index Channels that are visited annually or biennially. Sampling is undertaken in 4-6 sites on each Index Channel and 22 Index Channels were included in the survey programme for 2016.

The team examined the migration and spawning of river lamprey in the Avoca catchment as well as status of 'land-locked' sea lamprey in some of our large lakes.

Pollan is present in the Republic in the three large lakes 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 and working closely with RBD staff. Outcomes have been very positive in terms of status of the pollan populations and also in regard to knowledge gained. Lough Allen (Co. Leitrim) was completed in spring 2016 and the three sampling events on Lough Ree (Counties Longford/Roscommon/Westmeath) are scheduled for completion in spring 2017.

Char surveys were completed in lakes in Donegal and Kerry.

The Water Framework Directive has identified 'Connectivity' as important in regard to the natural functioning of rivers. This is consistent with the aims of the Habitats Directive in regard to the migratory fish species travelling between the sea and fresh water. Man-made barriers in rivers impede the passage of migratory fish - relevant to conservation objectives for Atlantic salmon and sea lamprey (Annex II Habitats Directive) and eel (EU Eel Programme). The Habitats team undertook a catchment-wide barrier survey of the Bonet catchment in 2016 and also contributed to a catchment-wide survey of the River Barrow, Co. Carlow, as part of an overall IFI programme to inventory barriers on rivers. Detailed fish passage surveys, using the SNIFFER methodology, were also undertaken on main-stem SAC rivers and in conjunction with RBD staff.

# **BUSINESS DEVELOPMENT 2016**

#### The National Strategy for Angling Development

The National Strategy for Angling Development (NSAD) was launched in February 2016 by IFI following an extensive research and a public consultation process. It is the first comprehensive national framework for the development of Ireland's 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.

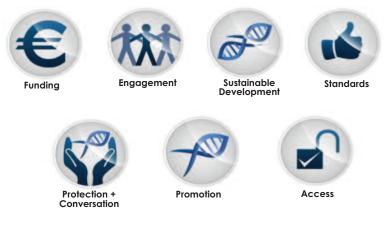
The angling sector contributes €836 million to the Irish economy every year and over 11,000 Irish jobs are supported as a result of angling, often in rural communities where there are less job opportunities available. Effective and sustainable implementation of the strategy will ensure stability of existing jobs and businesses reliant on angling and the creation of new jobs as the economic impact of angling grows. Should future overseas angler 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 IFI's 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, the broad nature of which ensures that the full benefits of angling can be realised.



Further detail on the NSAD may be found here: www.fisheriesireland.ie/607-nationalstrategyforanglingdevelopment

#### Ireland's Inland Fisheries and Sea Angling Resource

# 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 the next five years to implement in full. This will need to be a mix of baseline funding, use of IFI funding mechanisms and wider government investment in outdoor recreation and rural development. IFI ran a number of funding schemes in 2016, outlined below. In addition, nearly 200 stakeholders responded to a Funding Survey released in late 2016 aimed at understanding the view of stakeholders regarding IFI Funding Schemes to inform the improvement of those schemes in 2017 and beyond.

#### **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 2016 Sponsorship Scheme. Further support was awarded in the form of staff support, biosecurity assistance, provision of equipment and preparation of venues at a cost of approximately €100,000 to IFI. In total, some 62 events or initiatives were supported in 2016.



Newport Sea Angling Club's youngest participant Cian Moran, waiting patiently for his first fish of the day during the 2016 National Junior Competition / Daniel Peacock Memorial which was supported by IFI's Sponsorship Scheme

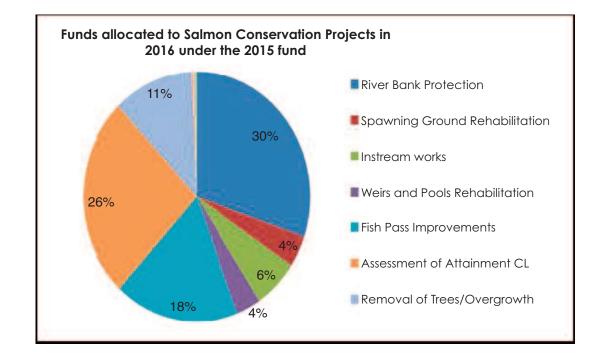
The organisation's socio-economic research programme has shown that such sponsorship promotes economic activity and supports jobs where angling events take place. A partnership research project between IFI, the Irish Research Council and National University of Ireland (NUI) Galway also demonstrated that anglers who participate in angling competitions are likely to spend more money than pleasure anglers.

#### Salmon Conservation Fund

During 2016, funds of €456,271 were allocated to 26 projects. These awards were from Salmon Conservation Funds collected in 2015 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 26 projects, 20 of these were undertaken by fund contributors and six were led by IFI.

#### See Appendix V for the list of projects

Funds were used for river rehabilitation works to assist and facilitate the recovery 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 IFI's website at the following link;



www.fisheriesireland.ie/Salmon-Management/salmon-conservation-fund.html

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

The inland fisheries and sea angling sector has a wide and diverse range of stakeholders and increasingly complicated angling perspectives and expectations. Stakeholders were engaged during the development of the NSAD, where a total of 77 submissions were received.

Engagement via surveys has proved most useful in helping IFI to understand the opinions of our stakeholders across the country and inform improvements going forward. In Spring 2016, over 400 stakeholders responded to our communications survey. This measured stakeholder preferences on communications, feedback on current communication methods and ways to improve engagement in the future.

In conjunction with the Economic and Social Research Institute (ESRI), a voluntary angler panel has been established to garner views and opinions of anglers to inform our research. This will be used to ask anglers about their angling activities and views. Members of the angler panel will be invited to participate in short surveys to elicit their views. By the end of 2016, over 600 anglers had signed up to this panel.

In 2016, almost 700 responses were received to angler surveys forming part of the socio-economics programme. These surveys aimed to understand the value of angling, better understand our stakeholders and inform policy decisions going forward. Surveys undertaken included:

- Bass survey
- Waterville angler survey
- Polish angler preferences survey
- PhD student Coarse angler preferences survey

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.

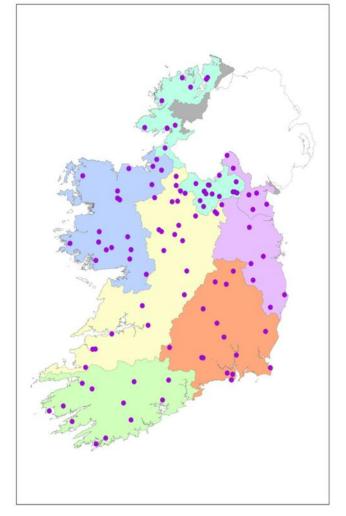
# 3. Ensure sustainable development of the natural angling resource through the design, development and delivery of development projects

Circa 450 sustainable development projects were identified by IFI as part of the NSAD from research, proven need, policy environment, programmatic activity and other key angling aims and needs. These projects, along with third party proposals, will be implemented over the lifetime of the strategy.

In September 2016, IFI was awarded €536,886 to develop key angling projects in rural areas from the Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs as part of the Government's programme to support rural development. The package will see projects delivered in Athlone, Co. Westmeath, Cloone, Co. Leitrim, Claremorris, Co. Mayo, Newscastle, Co. Tipperary, Carrick-On-Shannon and Donamon, Co. Roscommon, Kilconnell, Co. Galway, Gweebarra, Co. Donegal and Ballinalee, Co. Longford. It will invest in projects such as river bank restoration, a fishery recreation hub, access for coarse angling and fishing points which will allow for international match events and upgrade of an existing disabled angling facility to include attractive, accessible lakeside and river bank walks.

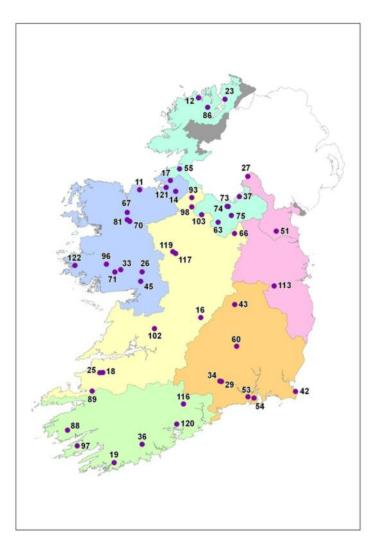
The NSAD Capital Works Fund was launched on 18th October 2016. There was significant media and social media interest in both the launch and announcement of funding awarded, including 63 print articles, 19 regional radio interviews, 1,640 web visits and 540 downloads of funding guidelines brochure. Social media advertising resulted in a reach of 106,324 and 3,128 link clicks and interactions.





All of this resulted in the receipt of over 100 funding applications, from 25 counties, amounting to over €2.2million. A further 90 separate expressions of interest were lodged for less well developed projects. Following rigorous evaluation, IFI awarded funding to 50 separate locally led projects in December 2016 including development of stand and stiles, purchase of boats, walkways for access to angling etc. These projects will further contribute to the delivery of an accessible and sustainable world class inland fisheries and sea angling resource.

The funding scheme highlighted the level of interest out there in developing the angling product nationwide. Further funding opportunities for more complex capital projects are planned for the second half of 2017.



Successful applications granted funding under NSAD Capital Grants Scheme 2016

Details of grants awarded can be found on the IFI website here: www.fisheriesireland.ie/Angling-Information/nsad-capital-grants-scheme-2016.html

#### 4. Ensure protection and conservation of the fisheries resource

Detailed information on protection and conservation successes for 2016 are outlined in the Operations Division's report. 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.

#### IFI 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 presence of invasive species or other threats to the fisheries environment. During 2016, 395 calls were received through the hotline (up 65% on 2015). The most common reason to call the hotline was to report illegal fishing incidents (179 calls), 145 calls related to pollution incidents, 1 call reported the presence of invasive species and 70 were general calls.

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

Better understanding of the state of our fishing product will enable informed marketing and 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.

# 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 deliver on building awareness of inland fisheries and angling, there was ongoing public relations and digital communications activity implemented throughout the year across a number of communications channels. In total, 36 stories were shared with print, broadcast and online media resulting in 789 articles and 66 radio features.

IFI's online channels were active with 210 new webpages created on www.fisheriesireland.ie and 1,804 blog posts generated on www.fishinginireland.info. There were 4,375,113 page views by 662,827 stakeholders at IFI's various websites in 2016, increasing from 631,595 stakeholders in 2015. The primary sites also attracted a new audience, with 430,000 new visitors to the fishinginireland.info website and 70,900 new visitors to the fisheriesireland.ie and 70,900 new visitors to the fisheriesireland.ie website.

The organisation's social media channels followers grew in number, with IFI's Facebook page receiving an increase of 50% 'likes' in 2016 from 2015. The total reach of the Facebook page was as high as 37,700 on a single day. Twitter followers grew to over 2,000 and monthly Tweet impressions were as high as 64,500.

A growing mailing list of engaged angling enthusiasts also received 51 issues of the popular e-zine, the Irish Angling Update.

#### **Promotional Material**

In 2016, IFI produced a new angling brochure for the Boyne Valley in both English and German. Updated versions of the following brochures were also produced: Shannon Sea Angling Guide, Erne & Donegal Coarse Angling Guide, Erne & Donegal Pike Angling Guide (French), and Angling Bye Laws brochure. A number of promotional items to assist with our attendance at trade shows were purchased including a new fabric banner that can easily be transported by aeroplane and a new pop up banner for the Dutch market.

#### **Journalist Visits**

IFI staff work closely with our tourism partners, angling service providers and a range of international angling journalists to ensure that Irish angling gets significant coverage in some of the most popular angling publications worldwide. In 2016, IFI staff assisted directly in organising 10 separate journalists trips and assisted in other trips organised by our tourism partners. The total number of trips is down from the previous year's figure as Tourism Agency strategy prioritises destination over activity marketing.

In 2016, 18 major articles were published in foreign media outlets, including angling magazines. This equated to an advertising spend of approx. €271,000, however editorial content is considered to be far more valuable than advertising features, and the actual value of the articles published would be significantly higher. In addition, two high quality DVDs featuring fishing along the Wild Atlantic Way were produced and distributed free of charge with Blinker magazine which has a circulation of 75,000 in Germany.

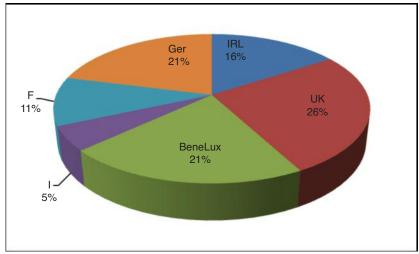


Trout & Salmon magazine – Author, Stan Headley

Conserving, Protecting, Developing, Managing and Promoting

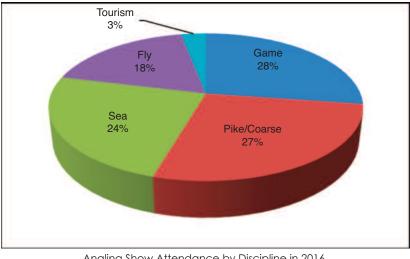
## **Angling Promotion – Trade Shows**

In 2016, IFI attended a total of 20 trade shows spread across Ireland, France, Germany, The Netherlands, Belgium, Italy and the UK. These trade shows were selected for their proven track record in providing effective access to both customers and media. Each trade show provided a slightly different mix in terms of angling disciplines, target markets etc. and IFI chose staff with the appropriate expertise and language skills to ensure that our offering was professional.



Angling Show Attendance by Country in 2016

In some cases, trade partners were invited onto the IFI stand to provide better and more effective marketing opportunities. In total, IFI supported 23 members of the Irish angling industry. Overall, feedback from staff and members of the trade attending the shows was very positive and the shows were judged a success with trade reporting bookings.



Angling Show Attendance by Discipline in 2016

In addition, IFI gave a total of 13 talks during shows in 2016 attracting an audience of over 650 people. A considerable number of leads were generated resulting in a minimum of 14 media visits in 2016 and planned for 2017.

All but three shows (Irish Fly Fair, Shane's Castle & Birr Country Fair) were attended under the Angling Ireland brand. Eleven shows were organised and attended in conjunction with our partners from Department of Agriculture, Environment and Rural Affairs (DAERA) in Northern Ireland. The Loughs Agency participated in six joint trade fairs. It is envisaged to further the cooperation between the three bodies and a joint calendar of events has been agreed for 2017.



Angling Ireland staff from IFI & DAERA working at the Aquafisch Show held in Germany

# 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.

## **Something Fishy**

Something Fishy is an Educational Programme, aimed at Primary school pupils aged between 10-13 years, which informs and educates students on the themes of fish, habitats, angling, water environment and the protection and conservation of Ireland's rivers and lakes. IFI delivers this programme annually, alongside colleagues at the Blackrock Education Centre.

The 2016 'Something Fishy' programme saw 3,776 children from across the country taking part in 118 schools and 11 education centres nationwide. As part of the programme, IFI's Fisheries Officers visited schools and provided classroom based assistance with a full range of resources for teachers and children available on www.somethingfishy.ie. Aside from school based learning, Fisheries Officers also took students into the field to give them practical experience of their work. IFI also undertook a pilot survey of Something Fishy participants to gauge their interest in fishing along with their experiences to help inform further development of the Something Fishy programme. This was answered by over 300 pupils.

Students were invited to submit project entries into the competition with this year's entries addressing the theme 'Focus on Learning'. Scoil Chroí Naofa of Bunninadden, Sligo were named national winners of this year's competition after they wrote, edited and produced a digital and artistic photo story focusing on the life cycle of the salmon.



Children from Scoil Chroí Naofa of Bunninadden, Sligo with the 2016 Something Fishy Award

# **Dublin Angling Initiative**

The Dublin Angling Initiative aims to promote, develop and improve angling in the Dublin and Greater Dublin area. Over 500 children and young people from the areas of Darndale, Jobstown, Mulhuddart and Whitechurch as well as inner city youth projects took part in the programme in 2016. The initiative caters for everyone who is interested in angling, from the complete novice to the more advanced angler with exposure given to each of the different types of fishing. Participants enjoyed free angling tuition courses, fishing trips, family fishing days as well as lessons around the environment and the importance of conservation.

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# **State Fisheries**

IFI has approximately 181 State 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 as such we insist that any angling club that is awarded a licence for a State fishery makes available day/weekly/season tickets to any visiting angler; this ensures that all State fisheries can easily be enjoyed by locals and tourists alike. During the 2016 season, 82 fisheries were under licence to 46 clubs and organisations generating over €54,027 income in licence fees.

## Socio-economics of Inland Fisheries Research Programme 2016

In August of 2015, IFI embarked on a new era of fisheries research; a programme of socio-economic research focussing on recreational fisheries in Ireland. The ESRI were identified as key partners as were the Socio-Economic Marine Research Unit of NUI Galway and a three year joint programme was drawn up. Some of the outputs from 2016 include five papers which were completed and submitted to journals for peer review, the sponsorship of three economics Master's students fisheries related dissertations and the ongoing sponsorship of one PhD student. Research outputs will support policy decisions regarding the management of the inland fisheries resource and angling within Ireland.

# **Salmon Management**

### Salmon and Sea Trout Tagging Scheme

In 2016, based on scientific advice, management recommended the opening or partially opening of 85 rivers (including catch and release options) and the closure or partial closure of salmon and sea trout (over 40cm) fishing in 63 rivers. A system of brown gill tags was in operation in select 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 2016) can be downloaded from the IFI website at www.fisheriesireland.ie/Salmon-Management/wild-salmon-and-sea-trout-statistics.html

## **Bye-laws**

The principal Bye-laws introduced for the 2016 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. 934 of 2015), the opening of fisheries on a catch and release basis (Bye-laws No. 935, 938 and 939 of 2015), and the closure of certain fisheries where it was considered necessary to afford adequate protection to salmon and sea trout stocks (Bye-law No. 320 of 2015).

## **Bye-laws**

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. 936, 2015).

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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. 940 of 2016).

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 for Communications, Climate Action and the Environment (DCCAE) for consideration. Following approval and signing by the Minister, these Bye-laws were enforced by IFI field staff. A list of relevant Bye-laws enacted for 2016 are provided and can be found on the IFI website: www.fisheriesireland.ie/publications/fisheries-legislation-and-regulations.html

# Logistics

The Business Development Division also incorporates Logistics. Logistics staff provide a number of important services to the organisation including the management of local facilities, warehousing, fleet and equipment management and maintenance, national work wear management and procurement services.

In 2016, the division awarded the first **National Trailer Maintenance Contract** to Holden Plant Rentals Ltd. The roll out of this contract demonstrates IFI's commitment to health and safety and enables the board to provide the necessary assurances regarding efficiency and compliance of its trailer fleet.

The Division oversaw the dilapidations of the **Swords laboratory** which were completed on schedule. Handover of the facility to the Landlord took place in May 2016. The contents of the laboratory were transferred for reuse in the new National Logistics and Research Centre in Citywest.

Phase 1 of the **National Logistics and Research Centre** was completed in August 2016. The successful removal and commissioning of equipment transferred from both the Swords laboratory and warehouse ensured that the facility was available for staff occupation in September 2016. Phase 2 works commenced in late 2016 and are due for completion in April 2017. A request for further information from the planning authority regarding the planning permission for Phase 3 was received in late 2016. Planning permission is anticipated in March 2017, with Phase 3 expected to complete in quarter 2 2017. Full occupation of the National Logistics and Research Centre will allow for completion of the rationalisation programme for IFI's Dublin premises in March 2018.

The division operates **procurement** via e-tenders for the organisation. During 2016, a total of 19 tenders were facilitated with multi-annual contracts to the value of €4.3million awarded/pending award.



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# HUMAN RESOURCES 2016

# **HR** Operations

#### Staffing

The approved staffing levels for IFI are set by the Department of Public Expenditure and Reform (DPER). The level set for 2016, remained at 312 whole time equivalent\* (WTE) staff. IFI engages a number of temporary staff to assist in seasonal protection duties at peak times on an annual basis.

During 2016, the overall staffing level increased from 291.7 (WTE) at January 1st to 300.3 (WTE) at December 31st 2016, a net increase of 8.6 (WTE). In 2016, 12.4 (WTE) staff left the organisation through natural turnover, retirements and a career break. IFI continued its recruitment campaign and 21 (WTE) appointments were made. In addition a total of 40 (20 WTE) staff were engaged to assist in seasonal protection and research duties. It is expected that IFI will reach its approved staffing level of 312 during 2017.

#### **Employee Relations**

IFI values the maintenance of excellent employee relations with its staff and with the trade unions that represent and negotiate on their behalf. Nurturing of these relationships is paramount in achieving harmonious employee relations.

Late in 2015, a survey was undertaken with the purpose of obtaining the views of staff in relation to the work of IFI, its workplace and leadership in the organisation. Following completion of the survey a staff consultative group consisting of representatives from all grades within the organisation was formed. The purpose of the group was to consider the results of the survey and recommend areas where improvements could be implemented.

The group worked diligently throughout the year and this culminated in the finalisation of a set of recommendations which were presented in the first place to the Senior Management Team, subsequently to the IFI Board and also to all staff at the staff Corporate Day which was held in early 2017. The group will now work with the management team in determining which recommendations will be implemented into the future.

The 2016, staff Corporate Day which was traditionally held late in a year was delayed until early 2017. The purpose of the delay was to change the emphasis from one of a retrospective evaluation of the previous year's achievements to one that included those achievements but also the 2017 plans.

A significant change in the format on this occasion was that staff from various grades formed the backbone of the presentations on the day.

\*Whole time equivalent (WTE) is a term used to describe staff numbers in units which allow part time and full time staff to be added together. For example: 3.6 WTE might be made up of 3 full time staff and one part time staff member working a three day week.

#### **Training & Development**

As is its standard IFI continues to provide the most effective targeted training and development opportunities to staff which relates to operational requirements and personal development. Training and development requirements are identified through a number of primary sources; Health and Safety and Operation requirements and Personal Development, the latter being identified through the Performance Management and Development System (PMDS).

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#### Training Complete 2016

20 training programmes were delivered for staff of IFI in 2016, over 1,270 training days, averaging 4.3 days per employee. The training cost for 2016 amounted to 1.4% of payroll. As in previous years the quality of the training provided has allowed IFI staff to work more safely, more efficiently and more effectively towards achieving the goals of the organisation and in providing a more professional and customer centric service for our stakeholders.

Training Course	No of Participants	Training (Days)	Total Staff Training (Day		
Basic Boat Training	39	9	351		
Advance Boat Training	12	17	204		
Quad Bike Training	6	1	6		
Cardiac First Responder	2	2	4		
Emergency First Response	1	1	1		
Driver Certificate - CPC	2	1	2		
Health & Safety Induction	26	1	26		
Human Resources Induction	26	1	26		
Manual Handling	22	1	22		
Occupational First Aid	145	2/3	363		
Statistics	21	5	105		
Safe Pass	12	1	12		
FOI – Decision Maker (Basic)	41	1	41		
Fish Health & Welfare	84	1	84		
Communications Workshop	20	1	20		
Fire Warden	1	1	1		
Day Skipper	1	1	1		
Abrasive Wheels	3	1	3		
Total	464		1,272		

Table 7: Training Completed 2016

In addition to the programmes listed IFI has supported a number of staff in pursuing career development learning opportunities through its educational assistance programme.

#### **Chief Executive Officer Remuneration**

The remuneration of the Chief Executive Officer of IFI is in accordance with the Assistant Secretary scale which ranges from: minimum €119,381 to maximum €136,276\*

## Health & Safety

IFI is committed to protecting the safety, health & welfare of employees, customers and those affected by our activities. This entails preventing work-related accidents and occupational illnesses, identifying and assessing potential hazards, maintaining comprehensive risk management and designing a healthy working environment. A number of significant milestones which were achieved in 2016 are outlined here.

IFI places a high value on employee input into health and safety management. In light of this the NOSACQ-50 safety climate questionnaire was completed with staff across the organisation. The questionnaire is an internationally recognised diagnostic tool to measure safety climate and performance. The results of the programme will be used to accurately focus resources towards those dimensions of the safety climate which have been identified as weakest. The results are distributed to staff ensuring health and safety management remains synonymous with integrity and transparency.

A guide to the design and construction of accessible angling structures has been developed. The guide details among other things the critical safety factors to be considered for development projects. The guide looks at employee safety particularly during construction and contains a Safe System of Work Plan. With regard to structure use the safety of the public is considered with particular reference to BS BS5709:2006 [British Standard for Gaps, Gates and Stiles].

Other examples of risk management activities included (i) water analysis for properties identified as "at risk"; (ii) continuation of the radon monitoring programme; (iii) tendering for insurance services (iv) tendering for national security contracts (v) the completion of the IFI workplace biannual risk assessment cycle 2015/16; (vi) on-going accident investigation and claims management.

#### **Incident Reporting 2016**

26 incidents resulting in injury were reported to the Health & Safety Executive in 2016. Of these 10 were reported to the Health & Safety Authority. In an effort to increase the reporting of non - injury incidents e.g. dangerous occurrences and unsafe work practices, a secure and anonymous reporting system has been developed in parallel with formal injury reporting.

\*Note: the scale quoted reflects reductions required under the terms of the Haddington Road Agreement.

# **Regulatory Compliance**

#### Vetting

As part of IFI's Garda Vetting Policy, vetting of workers continued in compliance with the National Vetting Bureau (Children & Vulnerable Persons) Acts (2012-2016).

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#### Freedom of Information (FOI)

In compliance with Section 8 of the Freedom of Information Act 2014, IFI launched its publication scheme in advance of the deadline of April 14th 2016.

There were 5 FOI requests open at the end of 2015 and responded to early in 2016. 15 FOI requests were received during the year; 5 were granted, 6 part-granted, 4 refused. 5 withdrawn and there were no outstanding requests at December 31st.

#### Access to Information on the Environment (AIE)

There were 3 AIE requests responded to in 2016.

#### **Customer Service**

#### Customer Charter and Customer Action Plan 2015-2017

Work on the key Customer Action Plan continued for final delivery by the end of 2017. Two of the 28 action points on the action plan completed during the period were; the stakeholder satisfaction survey was conducted and a Public Consultation Policy was developed for IFI.

#### **Data Protection**

To improve IFI's compliance with Data Protection legislation, the organisation expanded its Data Protection policy suite and arranged for a Data Protection Executive Assessment to be conducted on its compliance with current data protection legislation. A strategy for compliance with current data protection legislation and preparation for the introduction of the General Data Protection Regulation (May 2018) is in progress.

The EU General Data Protection regulation, passed on the 27th of April 2016, represents the most significant development in data protection law since the EU Data Protection Directive in 1995.

# FINANCE & ICT 2016

The role of the Finance and Information and Communications Technology (ICT) Division of IFI is to deliver an effective financial management service to IFI through provision of a comprehensive set of Financial and ICT 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.

The Division is pleased to report on the successful delivery against the goals defined in the agency's 2016 Business Plans. In addition to providing the necessary financial management, co-ordination, and specialist support services to all Divisions and maintaining proper financial records for the agency during 2016, 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.

# **Financial Management**

#### **Budgets and Management accounts**

During 2016, 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.

#### **Audited 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 VII for a copy of the Financial Statements of Inland Fisheries Ireland for Year Ended 31st December 2016

#### Procurement

Management continue to nurture the strong value for money culture inherent throughout the organisation.

#### **Financial and Treasury Management**

The Finance Division, in conjunction with our parent Department, the Department of Communications, Climate Action and Environment (DCCAE), successfully met both strategic and operational funding requirements during 2016.

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#### Funding for 2016

In 2016, IFI received an Exchequer grant of  $\leq$ 26.803 million, of which  $\leq$ 15.662 related to pay, compared to  $\leq$ 15.632 million in 2015 and  $\leq$ 17.618 million in 2013. The total cost of pay in 2016 was  $\leq$ 18.655 million. IFI also generated  $\leq$ 2.6 million in 2016 from other income sources compared to  $\leq$ 2.9 million in 2015; the major contributing factor was the loss on the disposal of fixed assets arising from the exiting of the Swords Laboratory lease. This reduction in own resource income is of concern as until 2015 these funds were sufficient to bridge the funding gap between the pay grant  $\leq$ 15.662 million ( $\leq$ 15.632 2015) and the actual pay cost  $\leq$ 18.655 million ( $\leq$ 19.3 million 2015). This pay gap has continued to widen over recent years and it is predicted that this trend will continue and is likely to cause significant difficulties by late 2018. The risk has been discussed with the Department.

The most significant change in the Exchequer Grant was the increase in the Capital Grant up  $\leq 2.574$  million on 2015 ( $\leq 757k$ ). Of this additional capital  $\leq 129k$  was received in the initial allocation with  $\leq 2.445$  received in the last quarter of 2016.  $\leq 1.2$  million related to the purchase of rigid inflatable boats (RIBs) capable of carrying out single boat patrols at sea,  $\leq 500k$  related to the funding of projects under the NSAD and the balance was to cover upgrades to premises, field equipment and boats.

An additional €0.5 million was generated from the Salmon Conservation Fund during 2016. This fund is due to be disbursed in 2017 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.

# Information & Communications Technology (ICT)

The ICT Division had three main projects for 2016, to implement a disaster recovery solution, introduce SharePoint as the IFI intranet and produce an ICT Strategy.

#### **ICT Strategy**

An IT steering group was established and completed the work on the ICT Strategy during the year and it was adopted by the Board at year end.

#### **SharePoint**

SharePoint was launched within IFI and the uptake by staff was enhanced with training and the facilitation of remote access. A prosecutions database was piloted and with further required adjustments will go live in 2017. By year end SharePoint was the source for all key IFI documents and staff announcements.

#### **Disaster Recovery**

The implementation of a disaster recovery solution was tendered for and implementation commenced by year end. The project is scheduled to be completed in April 2017. This has remedied an area of weakness identified in the ICT Strategy and the ICT Risk Register.

In 2016, there was continued development of policies and procedures to enhance good corporate governance and to reflect best practice. The 2015 draft Annual Report was submitted to the Department of Communications, Climate Action and Environment (DCCAE) by the statutory deadline. Coordinated responses were delivered on 43 Parliamentary Questions.

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#### **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. No protected disclosures were received by IFI in the reporting period up to 31 December 2016.

#### **Internal Audit**

RSM McClure Watters confirmed in the Statement of Internal Financial Control for 2016 that systems are in place to provide satisfactory assurance that objectives relating to key financial systems can be achieved.

#### **Board Review**

As recommended in the Code of Practice for the Governance of State Bodies 2016, the Board of IFI commenced an external review of its performance. A report from this review will be produced in 2017.

#### Audit & Risk Committee

The IFI Audit & Risk Committee comprises 4 members and met on 6 occasions in 2016. Dr Frances Lucy was nominated as Chair of this committee. 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 and has commenced a full and comprehensive review of the organisational and field risks.

#### Audit & Risk Committee Members

Professor Frances Lucy (Chair) Mr PJ Nally Mr Patrick Gibbons Ms Bernadette Orbinski-Burke

The Annual Report of the Audit and Risk Committee for 2016 is contained in Appendix VI.

# Appendices

# Appendix I: Prosecutions 2016

	ERBD	SERBD	SWRBD	ShRBD	WRBD	NWRBD	Total 201
Prosecutions initiated for Fisheries Offences	11	6	24	7	17	17	82
Prosecutions initiated for Environmental Offences	0	0	11	7	2	1	21
Total Prosecutions Initiated							103
Fisheries cases concluded	5	3	12	5	26	3	54
Environmental cases concluded	0	1	8	3	1	2	15
Total Prosecutions Cases Concluded							69

# Appendix II: Reported Fish Kills in 2016

RBD	Location of Fish Kills 2016
Eastern	Harlinstown Stream, Co. Meath
Eastern	Lough Ramor, Upper Blackwater River, (2 incidents)*, Co. Meath
Eastern	Mullagh Lake, Moynalty River, Co. Cavan
Eastern	River Lear, Bailieborough, Lear River, Boyne catchment, Co. Cavan
Eastern	River Matt, Balbriggan, Co. Dublin
Eastern	12th lock Grand Canal, Grand Canal, Lucan, Co. Dublin
Eastern	Grangecastle ponds, Griffeen River catchment, Co. Dublin
Eastern	Blessington Street Basin, Innes Quay, Dublin City
Eastern	Ramparts Dundalk, Ramparts River, Co. Louth
South Eastern	Ballybeg & Breagagh River, Littleton, Co. Tipperary
South Eastern	Dinin River at Esker, Conahy, Co. Kilkenny
South Eastern	Artificial Pond on Ram Stream at Mount Juliet, Thomastown, Co. Kilkenn
South Eastern	Wallslough Pond, Wallslough, Bennetsbridge Road, Co. Kilkenny
South Western	Curragheen River, Co. Cork
South Western	Rooskagh Stream, East Middleton, Co. Cork
South Western	River Flesk tributary of the River Bride, Co. Kerry
South Western	Owentaraglin River, Kiskeam, Co. Cork
South Western	Tramore River, Togher, Co. Cork
South Western	Two Pot River, Chetwynd Viaduct, Co. Cork
South Western	Clashlehane River, Manorwest Tralee, Co Kerry
Shannon	Turlough, Co. Roscommon
Shannon	Hotwater Stretch, Lanesborough, Co. Longford
Western	Bonet River downstream of Dromahair, Co. Leitrim.
Western	Tributary of Unshin River, Co. Sligo
Western	Yellow River (Clare River catchment), Co. Galway
Western	Dawros River (Clare River catchment), Co. Galway
Western	Saint Clerans River (Dunkellin River catchment), Co. Galway
North Western	Shinan Lough, Shercock, Lisnadarragh, Co. Cavan
North Western	Maudabawn Bridge, Canningstown River, Co. Cavan
North Western	Annalore Bridge, Finn River- between Killygoonagh/Creevelea
	& Annamakill, Co. Monaghan

# Appendix III: Angling Development Works 2016

Angling Development Works	ERBD	SERBD	SWRBD	SHRBD	WRBD	NWRBD	Total
Number of Angling Facility Enhancement Projects	7	2	-	15	7	16	47
Investment in Angling Facility Enhancement € (Excluding Salmon Conservation Projects)	10,000	7,000	1,500	553,084	21,788	278,000	€871,372
Number of Stiles, Footbridges, Platforms Replaced	2	2	4	20	49	297	374
Number of New Additional Fishing Spaces Created	25	10		43			78

# Appendix IV: Fishing Licences and RBD Managed Fisheries 2016

Salmon/ Sea Trout Angling Licences	ERBD	SERBD	SWRBD	SHRBD	WRBD	NWRBD	Total
Sold through Distributors & Online	1,036	987	4,608	848	7,674	3,133	18,286
Commercial Salmon Licences Issued	ERBD	SERBD	SWRBD	SHRBD	WRBD	NWRBD	Total
Private Draft Net	-	-	9	1	3	-	13
Public Draft Net under Control of Fishing for Salmon Order (CFSO)			30	28	15	1	74
Special Local Draft Net	- A.	· ·		12	10	8	30
Snap Net	· ·	· · ·	4	· · ·	· ·	-	4
Other	1 A -	· ·	1	· · ·		-	1
Totals	•	· .	44	41	28	9	122
Dealer Licences Issued	ERBD	SERBD	SWRBD	SHRBD	WRBD	NWRBD	Total
Salmon/ Sea Trout Dealers	46	20	32	10	36	11	155
Molluscan Dealers	66	23	26	23	25	6	169
Oyster Dredge Licences	•	•	79	•	111	24	214
IFI Managed Fisheries	ERBD	SERBD	SWRBD	SHRBD	WRBD	NWRBD	Total
Number of Fisheries Managed	1	-	5	17	10	8	41
Derived Revenue (€)	€990		€75,471	€134,462	€247,193	€43,388	€501,50

# Appendix V: Salmon Conservation Fund Allocated during 2016

	IFI Projects Allocated Funding In 2016	Allocated
1	River Erriff, Co. Mayo - Special Area of Conservation habitat protection	€17,500
2	National Salmon Conservation Assessment Project	€84,215
3	River Boyne at Oldbridge, Co. Meath - Restoration works	€50,000
4	River Kells Blackwater, Co. Meath - Construction of a fish pass at weir	€46,000
5	River Lee, Co. Cork - Mink eradication	€3,910
6	National Project - Rotary Screw Traps	€34,406
	Total funds allocated to IFI Applicants	€236,031

	Contributor Projects Allocated Funding In 2016 – (2015 Fund)	Allocated
7	Altnabrocky River, Co. Mayo - Protection of spawning areas	€15,000
8	Upper River Blackwater, Co. Cork - Habitat development work	€15,000
9	Lower Owenmore River, Co. Mayo - River bank protection	€15,000
10	Little Brosna River, Co. Tipperary/Offaly – Phase 2 -	
	Habitat improvement project	€9,000
11	Martry River, Blackwater Boyne Catchment, Co. Meath –	
	Fish habitat improvement	€15,000
12	River Kells Blackwater , Co. Meath – Carnaross fish habitat improvement	€15,000
13	Crana River, Co. Donegal – Fish habitat improvement	€15,000
14	River Fane, Co. Monaghan – Fish habitat enhancement project	€4,892
15	Development of Lackagh & Kilmorgan (Unshin System) Ballisodare	€15,000
16	Muingnakinkee River (Glencullen Tributary) Rehabilitation Works	€15,000
17	East Mayo Anglers Feasibility Study for fish habitat development	€2,000
18	Glen River, Co. Donegal - Phase 1 - Gravel Pit Pool	€15,000
19	Burrishoole River – Repair of the mill race channel to fish passage	€15,000
20	Clare River (Corrib), Cregmore, Galway - Trees & cattle drink	€6,600
21	Nenagh River, Co. Tipperary - Rehabilitation of salmon spawning areas	€15,000
22	River Loobagh, Co. Limerick - Invasive species control pilot	€4,000
23	River Bandon, Co. Cork - Bank restoration at Deasy's Turn	€9,957
24	River Laune, Co. Kerry – Phase 1 - Application for funding of	
	Planning application/ Project management for in-stream works	€5,000
25	Waterville, Co. Kerry - Temperature loggers to establish	
	a long-term catchment-wide water temperature monitoring network	€1,543
26	Upper Nenagh River, Co. Tipperary - Detunnelling a section of river	€12,248
	Total funds allocated to Contributor Applicants	€220,240

Appendix VI: Committee of Inland Fisheries Ireland – Year Ended 31st December 2016

# Audit & Risk Committee

# **Annual Report**

# For year ended 31st December 2016

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### 1.1 Foreword

This annual report for the Audit and Risk Committee of IFI is a synopsis of its key functions and outputs for 2016. 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 2016 focused on compliance and value for money audits and risk management.

In line with the newly launched Code of Practice for the Governance of State Bodies 2016, the Audit & Risk Committee of IFI commenced an internal review of its performance and effectiveness. This review will be reported on and the necessary actions taken in 2017.

Frees day

Professor Frances Lucy Chair of the Audit & Risk Committee

# 1.2 Membership of the Audit & Risk Committee

#### 1.2.1 Current members of the Committee

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

All members of the Audit and Risk Committee 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.

I'm delighted to announce that two new members were appointed to the Committee, bringing a wealth of experience in the areas of governance, financial management and risk management. On behalf of the Committee, I would like to thank Fintan Gorman for his dedication and contribution to the work of the Committee during his term. He resigned from his role on the Committee on November 29th 2016, due to the level of work involved in his role as Chairman of the Board.

#### 1.2.2 Committee Meetings

IFI's Audit & Risk Committee met 6 times in 2016; February 4th, May 16th, June 20th, September 15th, December 1st and 16th.

A CALL STREES

The CEO, Dr Ciaran Byrne and the Head of Finance and ICT, Pat Doherty were invited to attend all meetings. 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 three meetings; February 4th, December 1st and December 16th.

# 1.3 Roles and Responsibilities of the Audit & Risk Committee

- 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 where appropriate 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; 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 consider the major findings of internal investigations and management's response;
- 7. To consider other topics, as defined by the Board including but not limited to: -
  - > Internal procedures and documentation
  - > External Audit
  - Review budgeting control
  - > Code of practice and ethics
  - Cost saving initiatives
  - Performance management/reporting
  - > Management of Risk

Conserving, Protecting, Developing, Managing and Promoting

- 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 should also consider:
  - 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 2016 focused on:

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

- Review of IFI's use of Tetra Communication System with recommendations
- Review of Budgets for 2016 prior to approval by the Board of IFI
- Review of the Audit Programme 2015-2017 with the addition of further audits for completion in 2016:
  - A value for money audit of vehicles and fleet usage
  - A value for money audit of operations (patrols /protection plan /fixed charged penalty system /environmental processes)
  - An audit of the culture of IFI
  - An executive assessment of compliance with Data Protection legislation
  - Audits supporting the completion of the Statement of Internal Financial Control
- Review of a Future Funding Paper for presentation to the Department of Communications, Climate Action and Environment (DCCAE)
- Drove the re-configuration of the IFI Field Risk Register by the Operations Division
- Promoted the formulation of an 'Assurance Statement' formalising management responsibility in risk ownership
- Conducted a review of the IFI Risk Appetite Statement
- Review of the IFI Corporate Risk Register

Review of the IFI Risk Management Policy and the effectiveness of the risk management process

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- Stringent oversight of the Internal Auditors comprehensive review of Fleet Management within IFI
- Review of the IFI Protected Disclosures Policy
- Arranged for IPA to brief members of the IFI Board on the revised **Code of Practice for the Governance** of State Bodies 2016
- Review of the effectiveness of the Audit & Risk Committee

# 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 2017

- Ensure the IFI Internal Audit Plan 2015-2017 continues to be rolled out
- Work with the Comptroller and Auditor General in delivering audit satisfaction
- Ensure value for money Fleet Management is effected in the implementation of the IFI Fleet Management Plan 2017
- Complete a review of the funding status of IFI
- Continue to deliver on the Risk Register roadmap
- Report on the External 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 VII: Financial Statements of Inland Fisheries Ireland – Year Ended 31st December 2016

**INLAND FISHERIES IRELAND** 

### FINANCIAL STATEMENTS

## YEAR END TO 31<sup>st</sup> DECEMBER 2016

#### Inland Fisheries Ireland

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### **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, H12 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, Y21 K2AO

#### Inland Fisheries Ireland General Information Cont.

#### Solicitors continued.

Kelly & Ryan Solicitors, Teeling Street, Sligo, F91 YH66.

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

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

Boland & Quirke, 72, South Mall, Cork, T12VX9A

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.

McMahon & Williams Solicitors, Brooklawn House, Toler Street, Kilrush, Co. Clare, V15 N728

#### **Statement of Board Responsibilities**

Inland Fisheries Ireland was created with effect from 1 July 2010 under the terms of the Inland Fisheries Act 2010. The assets, rights and obligations of the Central and Regional Fisheries Boards were all transferred to Inland Fisheries Ireland in accordance with the Inland Fisheries Act.

#### **Responsibilities of Inland Fisheries Ireland**

Section 46 of the Inland Fisheries Act 2010 requires Inland Fisheries Ireland (IFI) to prepare the financial statements in such form as the Department of Communications, Climate Action and Environment may direct. In preparing these financial statements, IFI is required to:

- select suitable accounting policies and then apply them consistently
- make judgements and estimates that are reasonable and prudent
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Agency will continue in operation
- 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 proper books of account which disclose, with reasonable accuracy at any time the financial position which enables it to ensure that the financial statements comply with Section 46 of the Inland Fisheries Act 2010. The Board is also responsible for safeguarding the assets and hence taking reasonable steps for the prevention and detection of fraud and other irregularities.

On Behalf of the Board of IFI

101

Mr. Fintan Gorman

Dr. Frances Lucy

19 December 2017

19 December 2017



#### **Inland Fisheries Ireland**

I have audited the financial statements of Inland Fisheries Ireland for the year ended 31 December 2016 under 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. The financial statements have been prepared in the form prescribed under Section 46 of the Act, and in accordance with generally accepted accounting practice.

#### Responsibilities of the Board

The Board is responsible for the preparation of the financial statements, for ensuring that they give a true and fair view and for ensuring the regularity of transactions.

# Responsibilities of the Comptroller and Auditor General

My responsibility is to audit the financial statements and to report on them in accordance with applicable law.

My audit is conducted by reference to the special considerations which attach to State bodies in relation to their management and operation.

My audit is carried out in accordance with the International Standards on Auditing (UK and Ireland) and in compliance with the Auditing Practices Board's Ethical Standards for Auditors.

# Scope of audit of the financial statements

An audit involves obtaining evidence about the amounts and disclosures in the financial statements, sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of

- whether the accounting policies are appropriate to Inland Fisheries Ireland's circumstances, and have been consistently applied and adequately disclosed
- the reasonableness of significant accounting estimates made in the preparation of the financial statements, and
- the overall presentation of the financial statements.

I also seek to obtain evidence about the regularity of financial transactions in the course of audit.

In addition, I read Inland Fisheries Ireland's report identify material annual to inconsistencies with the audited financial statements and to identify any information that is apparently materially incorrect based on, or materially inconsistent with, the knowledge acquired by me in the course of performing the audit. If I become aware of any apparent material misstatements or inconsistencies, I consider the implications for my report.



#### Opinion on the financial statements

In my opinion, the financial statements:

- give a true and fair view of the assets, liabilities and financial position of Inland Fisheries Ireland as at 31 December 2016 and of its income and expenditure for 2016; and
- have been properly prepared in accordance with generally accepted accounting practice.

In my opinion, the accounting records of Inland Fisheries Ireland were sufficient to permit the financial statements to be readily and properly audited. The financial statements are in agreement with the accounting records.

#### Matters on which I report by exception

I report by exception if I have not received all the information and explanations I required for my audit, or if I find

• any material instance where money has not been applied for the purposes intended or where the transactions did not conform to the authorities governing them, or

- the information given in Inland Fisheries Ireland's annual report is not consistent with the related financial statements or with the knowledge acquired by me in the course of performing the audit, or
- the statement on internal financial control does not reflect Inland Fisheries Ireland's compliance with the Code of Practice for the Governance of State Bodies, or
- there are other material matters relating to the manner in which public business has been conducted.

I have nothing to report in regard to those matters upon which reporting is by exception.

Patricia Sheehen

Patricia sheehan Comptroller and Auditor General December 2017

#### Inland Fisheries Ireland

#### Statement on Internal Financial Control

In making this statement I have relied on representations made by management of Inland Fisheries Ireland. During the period I January 2016 to 31 December 2016 the Board of IFI was responsible for ensuring that an appropriate system of internal financial control was in operation within the Agency.

The systems which the Board had in place can only provide reasonable and not absolute assurance that assets were safeguarded, transactions authorised and properly recorded and that material errors or irregularities were either prevented or were detected in a timely manner.

The system of internal financial control was based on a framework of regular management information, administrative procedures including segregation of duties, and a system of delegation and accountability. In particular it included:

- Strategic plans and annual budgets which were approved by the Board.
- High level budget reports which reviewed performance against budget and which were reviewed at each Board meeting.
- Senior management meetings consisted of the Chief Executive and Heads of Function along with the Head of Finance which met monthly to examine performance against budget and to discuss financial issues affecting the organisation.
- An Internal Audit function which monitored compliance with policies and procedures and the effectiveness of internal controls within the organisation. The Internal Auditor reported to the Chairperson of the Audit and Risk Committee.
- An Audit and Risk Committee which was made up of a minimum of three Board members and which met six times in the year to 31 December 2016.

The Committee's duties include:

- a) review of annual financial statements before submission to the Board.
- b) discussions as appropriate with the Comptroller and Auditor General's Office.
- c) discussion of any problems and reservations arising from internal and external audit and any matters which auditors may wish to discuss with the committee (in the absence of management where necessary).
- d) review of the external auditor's management letter and management's response.
- e) review of the Boards internal control systems with particular reference to EU funds.
- f) consideration of major findings of internal investigations and management's response.
- g) consideration of other relevant topics, as defined by the Board.

The chairperson of the Audit and Risk Committee reports to the Board.

The Board takes major strategic decisions and meet at regular intervals to monitor performance and plans. The executive management only act within the remit delegated to them by the Board to give effect to Board policy and decisions. The Board's professional advisors are available for consultation by the Board as required.

In respect of the period ended 31 December 2016, there was a review of the effectiveness on the system of internal financial control formally conducted by the Board.

On Behalf of the Board of IFI

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Mr. Fintan Gorman, Chairman

2017

19 December 2017

#### **INLAND FISHERIES IRELAND** STATEMENT OF INCOME AND EXPENDITURE AND RETAINED REVENUE RESERVES FOR THE 12 MONTHS TO 31 DECEMBER 2016

	Notes	2016		2015	
		€	€	€	€
Income					
State and EU Funding					
Oireachtas Grants	2	26,303,338		23,875,624	
Net deferred funding for pensions	I4c	3,514,212	29,817,550	3,635.661	27,511,285
Other Income	3		2,660,665		2,954,681
Total Income			32,478,215		30,465,966
Expenditure					
Administration	4		4,848,625		5,155,434
Operations	5		25,609,887		26,281,389
			30,458,512		31,436.823
Surplus / (Deficit) for the Year before Appropriations			2,019,703		(970,857)
Transfer from / (to) Capital Account			, ,		()
	12		1,442,381		(2,253,690)
Surplus / (Deficit) for the Year after Appropriations			3,462,084		(3,224,547)
Balance Brought Forward at 01 January					
Balance Carried Forward at 31 December			3,420,820		6,645,367
			6,882,904		3,420,820

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

<u>Fiutan Gorman</u> Mr. Fintan Gorman

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#### INLAND FISHERIES IRELAND STATEMENT OF COMPREHENSIVE INCOME FOR THE 12 MONTHS TO 31 DECEMBER 2016

		2016	2015
		€	€
Surplus / (Deficit) for the Year before Appropriations		2,019,703	(970,857)
Experience gains on retirement benefit obligations		1,114,000	6.499.000
Change in assumptions underlying the present value of retirement benefit obligations		(11,068,000)	7.890.000
Total actuarial gain/(loss) in the year	I4b	(9,954,000)	14,389,000
Adjustment to deferred retirement benefits funding		9,954,000	(14,389,000)
Other Comprehensive Income for the year		2,019,703	(970,857)

The Statement of Cash Flows and notes | to |8 form part of these financial statements.

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Mr. Fintan Gorman

Dr. Frances Lucy

19 December 2017

17/12/17

19 December 2017

#### **INLAND FISHERIES IRELAND STATEMENT OF FINANCIAL POSITION AS AT 31 DECEMBER 2016**

	Notes	2016	2015	
		€	€	
Fixed Assets				
Property, plant and equipment	9	18,515,620	19,958,015	
Current Assets				
Inventory		239,758	185,270	
Cash and cash equivalents		12,240,138	7,636,682	
Receivables	10	731,123	1,175,512	
		13,211,019	8,997,464	
Current liabilities (amounts falling due within one year)				
Payables		6,328,115	5,576,658	
		6,328,115	5,576,658	
NET CURRENT ASSETS/(LIABILITIES)		6,882,904	3,420,806	
TOTAL ASSETS LESS CURRENT LIABILITIES BEFORE PENSIONS		25,398,524	23,378,821	
Deferred retirement benefit funding asset	l4c	113,391,679	99,923,467	
Retirement benefit obligations	I4b	(113,391,679)	(99,923,467)	
TOTAL ASSETS LESS CURRENT LIABILITIES		25,398,524	23,378,821	
NET ASSETS/(LIABILITIES)		25,398,524	23,378,821	
Reserves - representing Net Assets Transferred to Inland Fisheries Ireland				
Capital account	12	18,515,620	19,958,001	
Surplus on Income and Expenditure and retained Revenue Reserves		6,882,904	3,420,820	
		25,398,524	23,378,821	

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

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Mr. Fintan Gorman

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#### **INLAND FISHERIES IRELAND** STATEMENT OF CASHFLOWS FOR THE 12 MONTHS TO 31 DECEMBER 2016

#### **Net Cash Flows from Operating Activities**

Net Cash Flows from Operating Activities	2016	2015
	€	€
Excess Income over Expenditure	2,019,703	(970,857)
Depreciation and Impairment of Fixed Assets	1,435,368	1,519,873
(Increase)/Decrease in Receivables	444,389	1,839,958
Increase/(Decrease) in Payables	751,457	(166,534)
(Profit) / Loss on sale of fixed assets	531,750	(148,075)
Net interest	9,058	8,236
(Increase)/Decrease in Inventory	(54,488)	34,138
Net Cash Inflow/(Outflow) from Operating Activities	5,137,237	2,116,739
Cash Flows from Investing Activities		
Payments to acquire Property, Plant & Equipment	(1,475,659)	(3,788,997)
Proceeds from the disposals of Property Plant & Equipment	950,936	163,508
Net Cash Inflow/(Outflow) from Investing Activities	(524,723)	(3,625,489)
Cash Flows from Financing Activities		
Net interest	(9,058)	(8,236)
Net Cash Inflow/(Outflow) from Financing Activities	(9,058)	(8,236)
Net Increase / (Decrease) in cash and cash equivalents	4,603,456	(1,516,986)
Reconciliation of net Cash Inflow/(Outflow) to movement in net funds		
	2016	2015
	€	€
Increase / (Decrease) in cash	4,603,456	(1,516,986)
Cash and cash equivalents at the begining of the year	7,636,682	9,153,668
Cash and cash equivalents at the end of the year	12,240,138	7,636,682

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

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For the year ended 31 December 2016

#### 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 2016 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.

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.

For the year ended 31 December 2016

#### I. Accounting Policies continued

<u>Other Revenue</u>

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)	MotorVehicles	20%
(iii)	Field Equipment	25%
(iv)	Laboratory Equipment	33 /3%
(v)	Boats	10%
(vi)	Trailers	10%
(vii)	Engines	20%
(viii)	Furniture and Office Equipment	20%
(ix)	Computers	331/3%

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.

For the year ended 31 December 2016

#### I. Accounting Policies continued

#### 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 yearend are included in the Payables figure in the Statement of Financial Position.

#### Retirement Benefits

Inland Fisheries Ireland previously established its own defined benefit pension scheme, funded annually on a pay-as-yougo 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 I 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 which are remitted to the Department of Communications, Climate Action and Environment. 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.

For the year ended 31 December 2016

#### I. Accounting Policies 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.

#### k) Critical Accounting Judgements and Estimates continued

#### **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

#### 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:

		2016	2015
Inland Fisheries Ireland		€	€
Current Expenditure Grant		23,472,530	23,118,000
Capital Expenditure Grant		2,830,808	757,624
		26,303,338	23,875,624
		2017	2015
3 Other Income		2016	2015
		€	
Contract work		510,793	614,050
Fish Farm income		294,513	277,338
Permit Income		503,179	476,067
Licence Income			
Rod	484,968		
Commercial Fishing	40,714		
Part X Dealers	38,180		
State Fisheries	74,012	637,874	636,000
Salmon Conservation Funding		436,451	102,473
Fines & Forfeitures (a)		195,281	107,959
Fishery Rates		240,122	219,403
Department of Social Protection - Community Employment		233,633	253,380
Profit (Loss) on Sale of Fixed Assets		(510,848)	148,075
Rural Recreation Fund		45,440	-
Miscellaneous		95,129	119,936
		2,660,665	2,954,681

(a) During 2016 amounts, totalling €17,475 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 (2015: € 22,192).

	Notes	2016	2015 €
4 Administration Staff costs and Board Members' fees	6	<u>    €                                </u>	3,417,107
Office expenses	8e	394,126	352,203
Bank interest	oe	12,932	13,067
Advertising & public information		28,154	23,696
Publicity & promotion		139,738	165,320
Professional fees		88,833	100,112
Audit fee		23,000	24,010
Board expenses		30,302	45,384
Legal Fees		34,319	72.896
Insurance		20,853	20,180
Depreciation	9	665,820	615,039
Computer Expenditure	8d	93.674	109,118
Miscellaneous	8b	119,507	153,815
Bad debt provision	8b	6,419	43,487
·		4,848,625	5,155,434
		2016	2015
5 Operations		€	€
Staff costs	6	19,905,938	20,456,045
Office expenses	8e	660,736	712,112
Lease costs		133	332
Safety		317,531	203,235
Training		208,116	403,838
Legal Fees		163,661	193,026 499,548
Professional fees	8e	534,951 76,293	499,546
Repairs & maintenance	oe	234,106	
Field supplies	8c	496,240	22,42  499,689
Development Works	8c	113,470	94,922
Development Supplies		1,307,652	1,124,099
Running & upkeep of vehicles & boats	Ga	33,641	33,517
Laboratory expenses		159,212	299,108
Purchase of fish & fish food		139,870	133,857
Insurance	9	769,548	904,834
Depreciation	8b	138,345	100
Dilapidations Miscellaneous	8b	203,607	270,861
Computer Expenditure	8d	90,597	220,602
Licence and permit commission		56,240	60,718
Licence and permit commission		25,567,735	26,281,389
Total expenditure		30,458,512	31,436,823

Hospitality Expenditure for staff was € 1,352 in 2016
Legal Fees are for prosecution cases under fisheries legislation and corporate legal advice. IFI did not pay compensation during 2016

#### 6 **Remuneration and Other Pay Costs** 2016 2015 € € 16 794 159 Salaries & wages 16.515,419 a Board Members fees 56,770 52,854 7 865,684 Travel & subsistence - National 877,555 45,753 Travel & subsistence - International 38 697 6.114.702 Pension costs I4a 5.608,445 23,096,886 23,873,152 Included in salaries and wages are:

• amounts totalling €1.2m paid to 247 staff (2015: €1.2m paid to 252 staff) in relation to unsocial hours payments to staff,

• redundancies of € 100,692 - paid in 2015 to 2 staff under Department of Public Expenditure Reform's Targeted Voluntary Redundancy scheme (Nil Redundancies 2016)

• Total Compensation paid to Staff:

b

€13.424.792
€8,218
€1,228.623

• Total added years for pension purposes or early retirement without normal actuarial reductions paid: € 21,328

	2016	2015
Number of employees	Number	Number
Managerial & clerical	59	51
Research / technical	256	245
Other		I.
Total Staff		297

Range of total employee benefits Number of Employees 2016 2015 From То € 60,000 € 69.999 20 13 -€ 70,000 € 79,999 7 -2 € 80.000 -€ 89,999 € 90,000 € 99,999 5 -€ 100,000 -€ 109.999 -€ 110,000 € 119,999 -€120,000 € 129,999 --I € | 39,999 € 130,000 -

#### The following amounts were paid to Board members for the 12 months ended 31 December 2016 7

Board	Mileage & Subsistence	Fees & Remuneration	Meetings Attended	Mileage & Subsistence	Fees & Remuneration	Meetings Attended
	2016	2016	2016	2015	2015	2015
Brendan O'Mahony ( Former Chair)	-	-	-	5,556	5,985	7
Fintan Gorman (Current Chair) <sup>G,A,E</sup>	11,005	11,970	16	10,571	9,833	14
Lal Faherty <sup>A,F</sup>	-	-	-	4,493	3.848	6
Dr Frances Lucy <sup>A,E</sup>	3,087	-	14	3,644	-	8
John Geary <sup>B,H</sup>	-	-	-	3,082	6,466	8
Marcus MacMahon <sup>B,H</sup>	-	-	-	2,231	2,689	9
Peter John Nally <sup>A</sup>	3,961	7,695	10	4,939	7,695	10
Martin McEnroe <sup>C.D</sup>	4,647	7,695	14	6,274	7,695	10
Niall Greene <sup>D</sup>	812	7,695	12	3,456	7,695	9
Sean Coady <sup>C, D</sup>	5,670	8,535	14	569	948	I.
Patrick Gibbons <sup>A,C</sup>	430	7,457	16	-	-	-
Bernadette Orbinski Burke <sup>A, J</sup>	479	3,848	7	-	-	-
Fidelma McGuirk <sup>D,K</sup>	-	1,875	3	-	-	-
	30,091	56,770	-	44,815	52,854	-

The total number of meetings held in 2016 was 21 (2015: 16 meetings).

Some members also servo on Board Subcommittees:

<sup>A</sup> denotes Audit Sub Committee

<sup>B</sup> denotes Property Sub Committee

<sup>c</sup> denotes Protection Sub Committee

<sup>D</sup> denotes Salmon Sub Committee

<sup>E</sup> denotes Fish Farm Sub Committee

F term ended June 2015

<sup>G</sup> appointed Chairperson 1 July 2015

<sup>H</sup> term ended November 2015

<sup>1</sup> appointed to the Board 13 January 2016 - 5 year term

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<sup>J</sup> appointed to the Board I July 2016-5 year term

<sup>K</sup> appointed to the Board 4 October 2016

	Notes	2016 €	2015 €
	-		
a Running & upkeep of vehicles & boats Vehicle Insurance		86,384	71,350
		268,794	223,650
Vehicle repairs & maintenance Vehicle fuel			
Boat Insurance		475,542	552,520
		38,436	29,000
Boat repairs & maintenance		294,163	110,340
Boat fuel		37,001	33,045
Covert Car Hire		5,626	4,108
Storage of Boats & Vehicles		10,843	9,970
Other running costs		90,863	90,116
Miscellaneous		1,307,652	1,124,099
Miscellaneous Magazines / periodicals		3,608	1,764
Meeting Expenses		16,271	15,754
Courier		6,392	8,175
Facilities Expenditure		76,609	88,631
Fish Vaccines		2,463	5,496
		29,029	48,601
Hatchery Costs Accommodation Consumables			440
		19,642	19,057
Domestic supplies		68,687	70,095
Cleaning		35,841	
Security		71,803	37,881
Equipment repairs & maintenance		6,419	62,386
Bad Debts Provision		-	43,487
Bad Debts Write Off			-
Equipment under €500		(8,430)	62,416
Dilapidations		138,345	-
Sundry		1,199	3,980
		467,878	468,163
Development Expenditure			
Sub-contract / plant hire		428,873	377,864
Development supplies		113,470	94,922
Rehabilitation Works		57,014	77,397
Angling Works		10,353	44,428
	-	609,710	594,611
	=		
Computer Expenditure			
Computer consumables		(1,136)	17,350
Computer software		6,764	19,689
Computer Maintenance & Licencing	_	178,643	292,681
		184,271	329,720
Office expenses			
Printing & stationery		60,095	54,312
Postage & telephone		109,083	105,215
Mobile phones & Broadband & Antennae Mast	s	107,005	103,213
& Off-Site Communication		217,161	212,902
Rent & rates		264,577	294,950
Heat & light		290,088	309,778
Repairs & maintenance	_	190,151	135,783
		1,131,155	1,112,940

9 Property, Plant & Equ	ipment					
	Land, buildings,			Field & lab	Furniture,	
	fisheries &			equip. incl	office equip. &	
	hatcheries	Motor vehicles	Boats & engines	Trailers	computers	Total
	€	€	€	€	€	€
Cost or valuation						
At I Jan 2016	21,329,513	6,471,130	5,161,948	4,720,909	2,702,565	40,386,065
Reclass I 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 I Jan 2016	3.991.387	5.012.959	4,687,920	4,486,380	2,249,404	20.428.050
Reclass I 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						
At I January	17,338,126	1,458,171	474,028	234,529	453,161	19,958,015
Net Movement for the year	r (1,030.200)	(337,401)	(186,780)	86,213	25,773	(1,442,395)
At 31 December	16,307,926	1,120,770	287,248	320,742	478,934	18,515,620

#### In Respect of Prior Year

	Land, buildings, fisheries &			Field & lab equip. incl	Furniture, office equip. &	
	hatcheries	Motor vehicles Bo	oats & engines	Trailers	computers	Total
	€	€	€	€	€	€
Cost or valuation						
At I Jan 2015	19,136,044	6,368,171	5,132,009	4,603,572	2,779,714	38,019,510
Reclass I Jan 2015	0	(40,705)	36,465	6,625	(2,385)	0
Additions for year	2,195,871	1,253,721	49,726	173,206	116,473	3,788,997
Disposals for year	(2,402)	(1,110,057)	(56,252)	(62,494)	(191,237)	(1,422,442)
At 31 December 15	21,329,513	6,471,130	5,161,948	4,720,909	2,702,565	40,386,065
Depreciation At I Jan 2015	3,579,563	5,611,483	4,531,511	4,362,144	2,230,484	20,315,185
Reclass I Jan 2015		(40,705)	25,861	11,330	3,514	0
Charge for year	412,158	543,775	186,007	175,053	202,880	1,519,873
Disposals for year	(334)	(1,101,594)	(55,459)	(62,147)	(187,474)	(1,407,008)
At 31 December 15	3,991,387	5,012,959	4,687,920	4,486,380	2,249,404	20,428,050
Net Book Value						
31 December 2014	15,556,481	756,688	600,498	241,428	549,230	17,704,325

Net Book Value						
31 December 2015	17,338,126	1,458,171	474,028	234,529	453,161	19,958,015

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

Trade debtors etc. 502,574	2015
Trade debtors etc. 502 574	i
11 ade debitors etc. 502,57 1	579,970
Accrued Income 74,650	360,935
Bad debt provision (341,790)	(347,772)
VAT on Long Term Lease prepayments 204,635	249,259
Other prepayments 291,054	333,120
731,123	,175,512

In 2015, trade debtors in the amount of  $\in$ 566,615 in respect of fishery rates were written off as irrecoverable by IFI on the basis that such debtors were statute barred. The bad debt provision was reduced by a similar amount, as IFI had previously provided for such debtors. There is no overall impact on IFI's deficit for 2015 as a result of these transactions.

#### II Analysis of payables

		2016	2015
		€	€
Deferred Income			
Deferred Contract income	159,545		87,198
Department Culture, Heritage and the Gaeltacht - Rural Recreation Fund	615,466		93,387
Tourism Recreational Angling Measure (TRAM Funds)			30.633
National Strategy for Angling Development	500,000		· ·
Total Deferred Income		1,275,011	211,218
Funds held in trust		2,909,807	3,014,740
Salmon Conservation Fund		2,143,297	2,350,700
Trade creditors and accruals		6,328,115	5,576,658

Pension arrears for deceased pensioners of € 17,860 are included in 2015. These were paid out in 2016

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

The Fund is being managed by Inland Fisheries Ireland and is accounted for as a Creditor on the statement of financial position. Where Inland Fisheries Ireland incurs direct expenditure on projects related to Fund activities it is reimbursed from the Fund. IFI's direct expenditure is charged to the Income and Expenditure and retained revenue reserves. Reimbursement from the Fund is accounted for by Inland Fisheries Ireland as Other Income (Note 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 2016 are disclo	sed below.	
	2016	2015
	€	€
Opening Balance	3,014,740	2,688,132
Receipts	504,606	509,415
Interest earned	6,771	16,726
Expenditure		
Insurance SCF Employer		
and Public Liability	(12,965)	(12,705)
Room Hire	(338)	
To third parties	(166,556)	(84,355)
To IFI*	(436,451)	(102,473)
Closing Balance	2,909,807	3,014,740
*Accounted for by IFI as Other Income.		

	Deferred Contract Income	Rural Recreation Fund	TRAM Funds	NSAD	Total
Opening Balance	87,198	93,387	30,633		211,218
Receipts in year	146,901	536,886		500,000	1,183,787
Released to Income and Expenditure	(74,554)	(45,440)			(119,994)
Transfer TRAM Funds		30,633	(30,633)		
Closing Balance	159,545		-	500,000	1,275,011

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

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

• 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

	2016	201	
	€	€	
Balance at I Jan	19,958,001	17,704,311	
Fransfer (to) / from Income and Expenditure and retained revenue reserves			
Fo fund fixed asset purchases	1,475,659	3,788,997	
Amount Released on Disposal of Fixed Assets	(1,482,686)	(15,434)	
djustment for Opening IFI Balance 2010	14		
mortisation in line with asset depreciation	(1,435,368)	(1,519,873)	
	(1,442,381)	2,253,690	
alance	18,515,620	19,958,001	

#### 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 2016.

#### 14 Retirement Benefit Costs

	2016	2015
Analysis of total Retirement benefit costs charged to the Statement of Income and Expenditure and	Retained	
a Revenue Reserves	€	€
Current service costs	3,369,000	4,103,000
Interest on retirement benefit scheme liabilities	2,758,000	2,558,000
Employee contributions	(518,555)	(546,298)
	5,608,445	6,114,702
b Movement in Net retirement benefit obligations during the financial year		
Net retirement benefit obligation at 1 January	(99,923,467)	(110,676,806)
Current Service Cost	(3,369,000)	(4,103,000)
Interest Costs	(2,758,000)	(2,558,000)
Experience gains on retirement benefit obligations	1,114,000	6,499,000
Change in assumptions underlying the present value of retirement benefit obligations	(11,068,000)	7,890,000
Total actuarial gain/(loss) in the year	(9,954,000)	14,389,000
Pensions paid in the period	2,612,788	3,025,339
Net retirement benefit obligation at 31 December	(113,391,679)	(99,923,467)

#### c Deferred Funding for Pensions

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

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

	2016	201	
	€	€	
Funding Recoverable in respect of current year Retirement benefit costs	(6,127,000)	(6,661,000)	
State Grant applied to pay retirement benefits	2,612,788	3,025,339	
	(3,514,212)	(3,635,661	

The deferred funding asset for retirement benefits as at 31 December 2016 amounted to €113,391,679 (31 December 2015: €99,923,467)

		2016 €	2015 €	2014 €	2013 €	2013 €
d	History of defined benefit obligations Defined benefit obligations	(113,391,679)	(99,923,467)	(110,676,806)	(91,397,726)	(99,346,705)
	Experience gains / (losses) on defined benefit scheme liabilities Percentage of Scheme Liabilities	<b>1,114,000</b> 1%	6,499,000 6.5%	(828,000) 1%	6,405,000 7%	700,000 0.7%

#### 14 Retirement benefit costs Cont.

The total amount recognised in the Statement of Comprehensive Income amounts to -€9,954,000 (Experience gain/loss €1,114,000 and changes in assumptions -€11,068,000)

f General Description of the Scheme

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

Section 50 of the Inland Fisheries Act 2010 states - The pension payments and other superannuation liabilities of the Central Board and each of the regional boards in respect of their former employees become on the establishment day the liabilities of IFI.

The valuation used for FRSI02 disclosures has been based on a full actuarial valuation 31 December 2016 by a qualified independent actuary taking account of the requirements of the FRS in order to assess the scheme liabilities at 31 December 2016 of IFI.

The principal actuarial assumptions were as follows:	31.12.16	31.12.15
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	1.90%	2.30%
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 2016, 2036.

Year of attaining age 65	2016	2036
Life expectancy - male	21.0	22.6
Life expectancy - female	23.6	25.1

#### 15 Lease Commitments

Lease commitment payable after five years relates to a warehouse on Ballysimon Road, Limerick. At 31 December 2016 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	195
Payable within two and five years	250
Payable after five years	138
	583

Operating lease payments recognised as an expense were € 217,558 (2015: € 253,613)

#### 15 Bank Balance

Included in IFI's year end bank balances of  $\in$  12.24 million are amounts of  $\in$  4.025 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.

#### 17 Chief Executive Officer's Remuneration

The Chief Executive's remuneration comprised of:	
	2016
	€
Basic Annual Salary	135,806
Employer PRSI	13,329
Total	149,135

The CEO's pension entitlements do not extend beyond the standard entitlement in the model public sector defined benefit superannuation scheme.

The CEO received recoupment of travel and subsistence of  $\in$  9,730 in 2016 (2015:  $\in$  12,028). There were no payments made to Dr. Ciaran Byrne, Chief Executive Officer, under performance related pay schemes in the period.

#### **18** Approval of Financial Statements

The financial Statements were approved by the IFI Board on the 19th December 2017

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