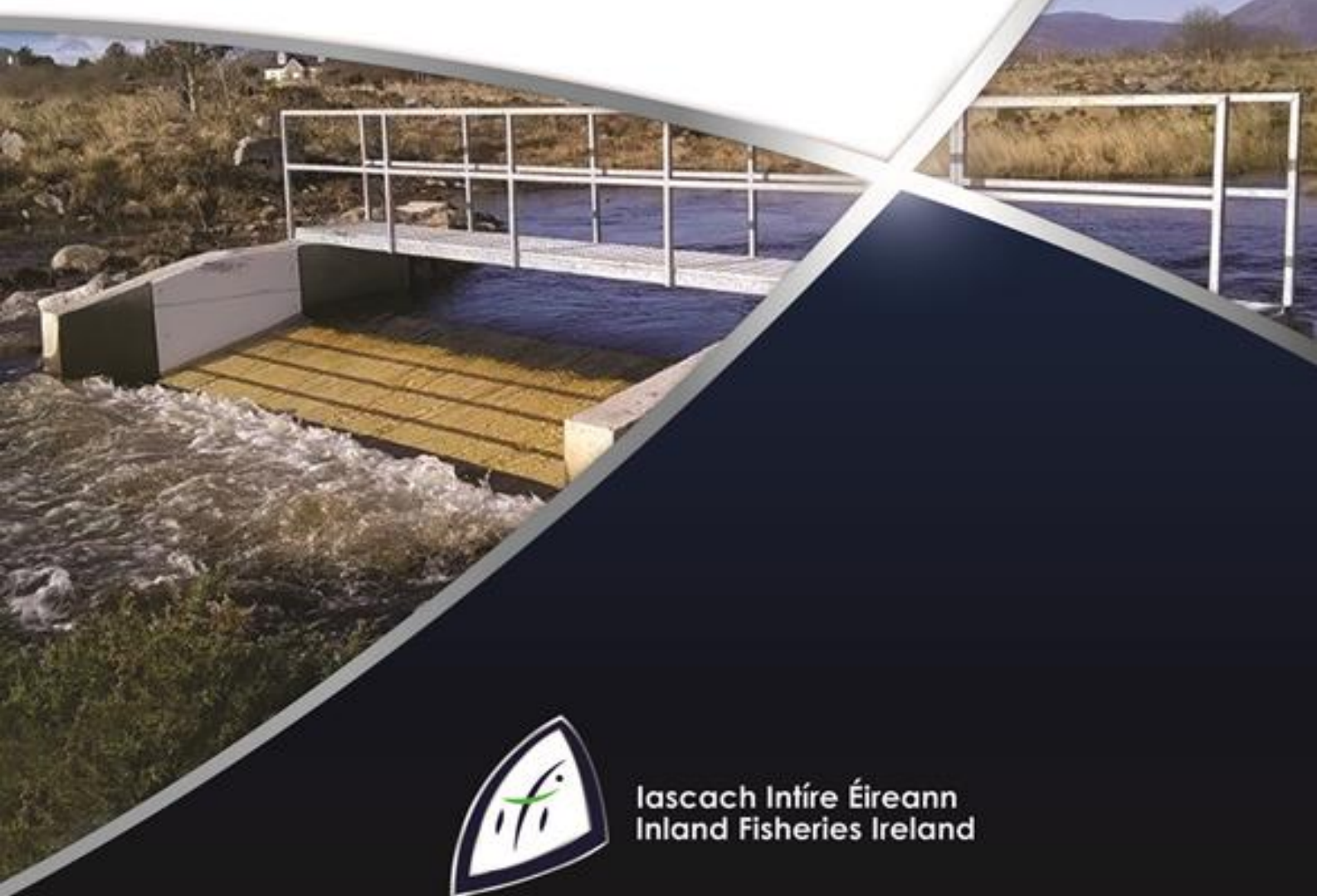


# IFI Consolidated Fish Counter Summary Report

**2016**

IFI/2017/1-4376



Iascach Intíre Éireann  
Inland Fisheries Ireland

# Foreword

Since Inland Fisheries Ireland (IFI) came into existence IFI have consolidated all counters and counter data under the one branch of the organisation and have upgraded the relevant software. In addition a substantial effort has been made to address shortcomings of the old counter network including in particular the upgrading of electrode connections.

The national network of counters operated successfully over the twelve month period of 2016. The down time on all counter sites continues to decrease as solutions are found and spares which have been stockpiled are dispatched efficiently. A number of spare counters are located regionally to reduce the time it takes to get a replacement counter to a site which requires repairs. Repairs carried out on counter sites for the year are predominantly camera repairs. Two sets of Vaki panels were refurbished and upgraded at significant cost in 2016 – it is evident that more of the older Vaki counters will require upgrading in 2017 as some of these are at the end of their viable life.

The reporting and maintenance record section on the web site database automatically contacts those responsible for repairs as well as the Head of Operations to ensure a quick response. The database has been further developed to enable the IFI counter administrators carry out functions which previously had required input from the computer programmer.

IFI have developed a policy, governing data collected by its network of counters. The policy sets out the rules regarding the storage, management and sharing of fish counter data.

A number of counters which are operated by Inland Fisheries Ireland and installed with a project partner are not included in this report. This is in line with IFI Fish Counter Data Policy not to publish the data where the project partner does not consent to the release of such data.

Over the coming year IFI will continue to refine and extend its expertise on salmon counters and identify the new priority rivers for counter installation and the assessment of potential sites.

**Gregory Forde**

Head of Operations

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# Introduction

The following report is a brief review of each of the counters operated by IFI. Information for the report has been gathered over the year by staff operating; maintaining and cleaning counters to ensure accurate counts are available. The data gathered annually is put in context when it is compared to data from prior years. When reviewing data in this context it is possible to understand the importance of consistent counts to add to the cumulative dataset year-on-year.

During 2016 the number of counters which did not provide continuous counts was insignificant as temporary counters were dispatched to cover the sites during repairs. A number of counters were switched off, at certain times (December), to protect them from severe flooding and electrical storms. These counters sites do not have a run of fish in December so data loss is insignificant. The down time on all counter sites for the remainder of the year has decreased as new solutions are found and spares have been stockpiled and are dispatched as required. A number of spare counters are located regionally to reduce the time it takes to get them to a site which requires a repair. The inclusion of a reporting and maintenance record section on the new web site which automatically contacts those responsible for repairs and the Head of Operations this then ensures a quick response. The web site has enabled IFI to achieve consistence practice on all sites by numerous staff uploading the data. IFI have developed a policy, governing data collected by its network of counters. The policy sets out the rules regarding the storage, management and sharing of fish counter data.

# 1 River Fane



Type : Logie

Operating: Jan – Dec 2016

Performance: Good

Verified: Yes

## 1.1 River site and description

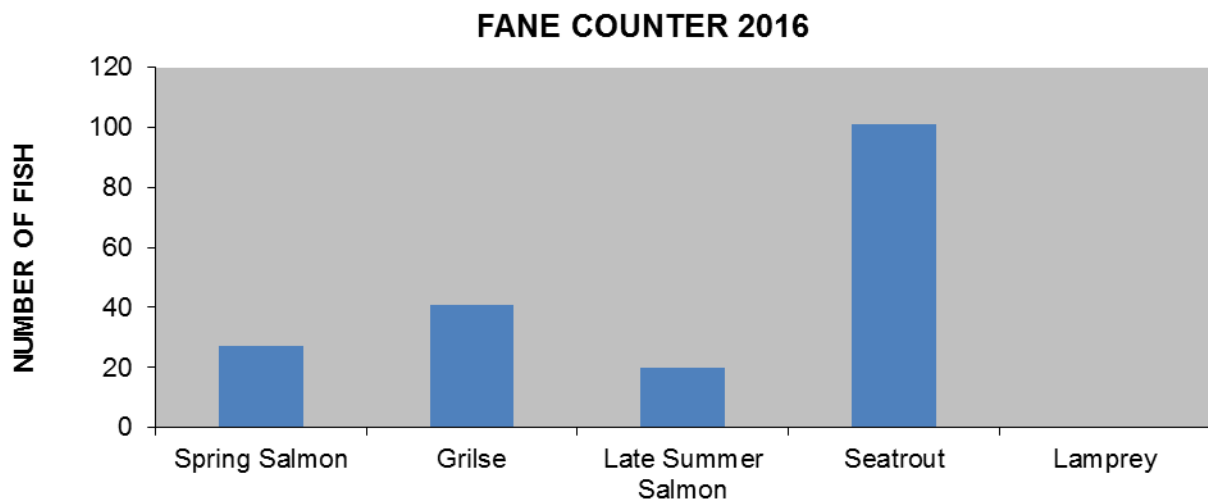
The fish counter is sited at Stephenstown, on the Dundalk to Ardee road. It is a Logie, resistivity, counter with two channels covering the width of the River Fane. The counter is managed by IFI staff from the Dundalk District. The data is downloaded and verified on the computer system which is housed in the Dundalk Salmon Anglers hatchery facility near the weir.

## 1.2 Operation

The counter worked well during the year with maintenance being carried out regularly. The counter works well on this weir. The connections on the weir were upgraded and sealed. New camera cable was laid to upgrade the old cable. The new cable will allow staff operating the site and to change cameras on the weir if necessary. The counter provided a complete data set for 2016.

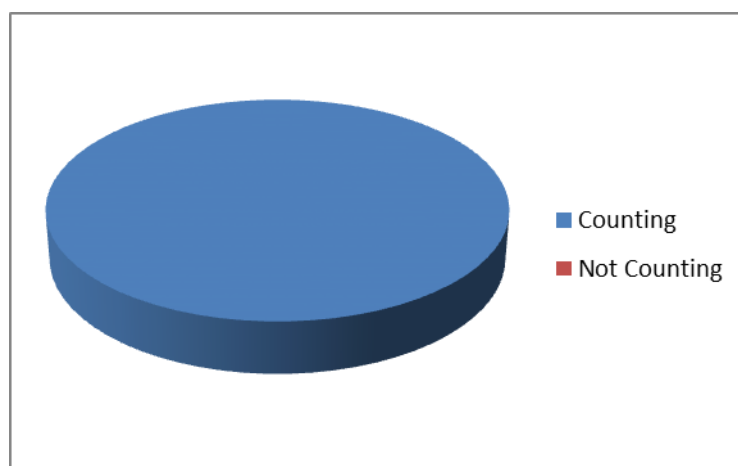
**Table 01: Counter data for the R.Fane**

Fish Species	Number
Spring salmon	27
Grilse	41
Late Summer Salmon	20
Sea Trout	101
Lamprey/Other	0



**Table 02: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
365	0



## 2 River Dee



Type : Vaki

Operating: Jan – Dec 2016

Performance: Good

Verified: Yes

### 2.1 River site and description

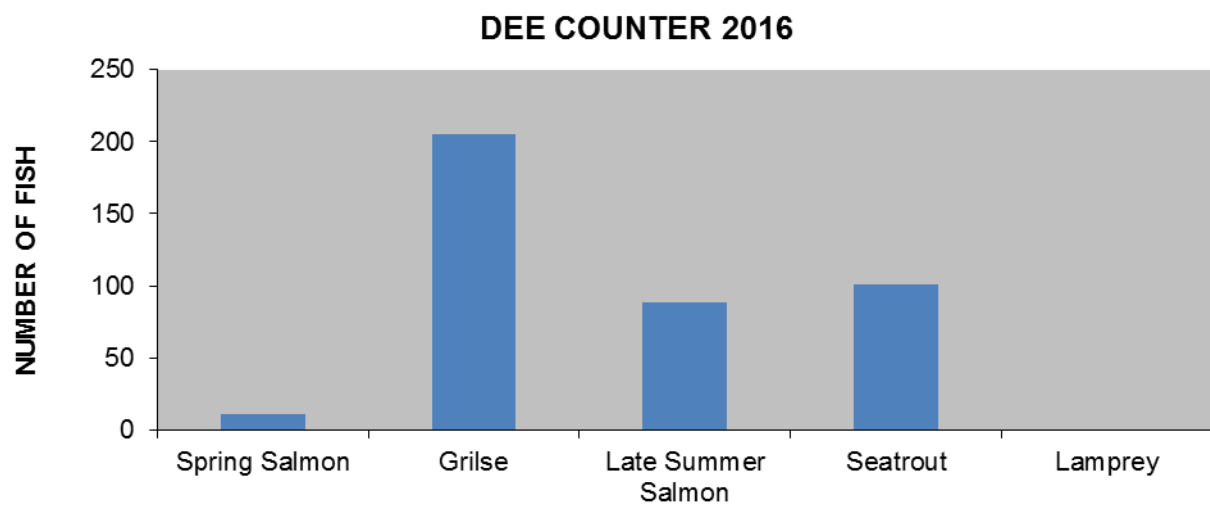
The fish counter is sited at Cappogue, on Drumcar Weir, on the Drumcar to Dunleer road, County Louth. It is a Vaki counter and records the fish as they move up and down through the fish pass on the side of the weir. This counter provides a partial count over the weir and the percentage of the fish counted depends on weather and water levels. This data is uploaded by IFI staff from the Dundalk District and verified on site using the Winari software.

### 2.2 Operation

The Vaki counter has worked well from January to August. This is an older type Vaki which continues to provide accurate data. However, as the newer windows based software is not entirely compatible with the older Winari programme which the counter uses. As a consequence the data from August to December remains unverified. The counter panels continue to work and record data effectively. In relation to the older Vaki counters parts are difficult to source but to date it has counted fish travelling upstream successfully. Staff are looking at ways to fund a new Vaki counter for this site. This counter will need to be upgraded in 2017.

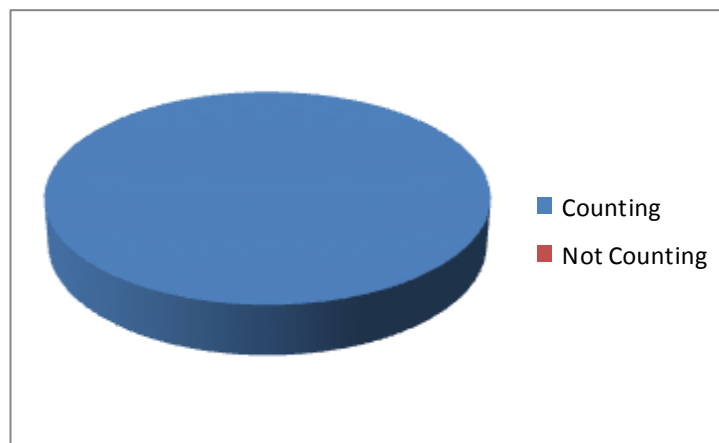
**Table 03: Counter data for the R. Dee**

Fish Species	Number
Spring salmon	11
Grilse	205
Late Summer Salmon	89
Sea Trout	101
Lamprey/Other	0



**Table 04: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
365	0





## 3 Boyne Counter



Counter type: Logie and Vaki

Operating: Jan – Dec 2016

Performance: Good

Verified: Yes

### 3.1 River site and description

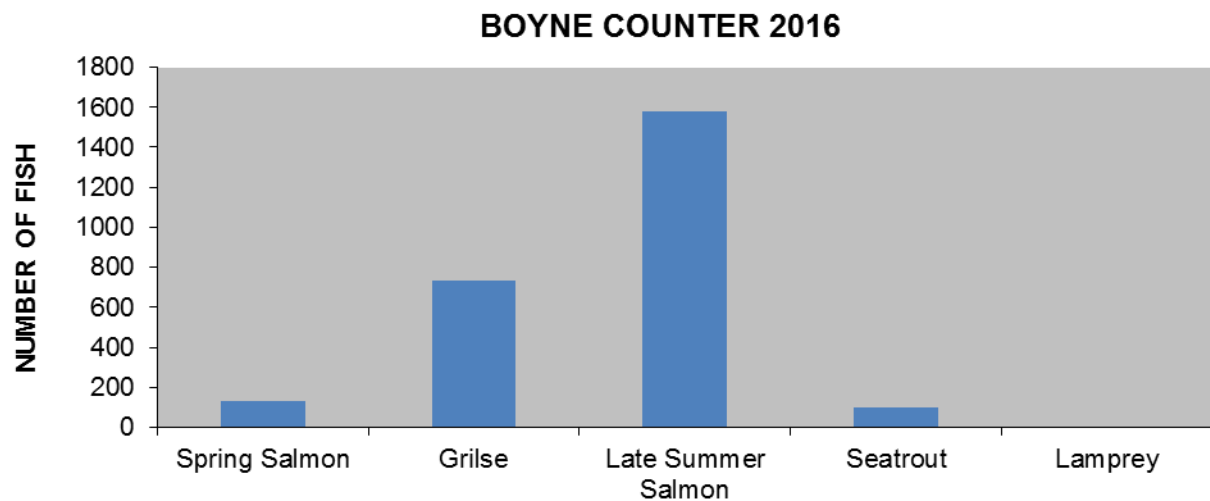
The fish counter on the Boyne is at Blackcastle in Navan, Co. Meath and consist of 6 different channels which count fish travelling up and down the River Boyne system. These are made up of 4 crump weirs which record fish as they pass over the weir and two Vaki counters that count fish as they pass through two tunnels on either side of the crump weirs. The counters account for approximately 20% of the total width of the channel at Blackcastle. The weir at Blackcastle makes up the remaining 80%.

### 3.2 Operation

The counters give an accurate total of the fish that travel through them; the amount of fish that cross up and down across Blackcastle Weir is unknown. This counter provides a partial count of migrating salmon for the river but counts a high percentage of the run of fish. Repairs to the system were confined to replacing cameras and camera cable. One of the cameras was replaced in 2015 with a more modern camera and the second was replaced in late 2016. All the counters on this site worked well for the period and provided accurate data.

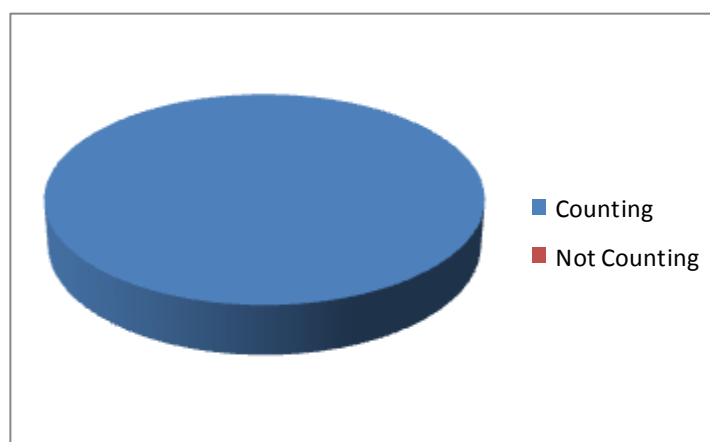
**Table 05: Counter data for the R. Boyne**

Fish Species	Number
Spring salmon	132
Grilse	735
Late Summer Salmon	1576
Sea Trout	0
Lamprey/Other	0



**Table 06: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
365	0



## 4 Slaney Counter



Counter Type: Logie

Operating: Jan – Dec 2016

Performance: Good

Verified: Yes

### 4.0 River site and description

The counter system used on the Slaney is a Logie fish counter in conjunction with a tube fish pass that counts salmon and sea trout which enter the tube on their return to the river from the sea. An underwater surveillance camera is used to verify the fish count recorded. The site of the counter at Clohamon weir is approximately 30 miles from where the Slaney enters the sea through Wexford Harbour. The counter is a partial counter as fish can traverse the weir in flood conditions.

### 4.1 Operation

The counter is both efficient and accurate in terms of the fish that actually move upstream or downstream through the tube, but an unknown proportion of the run by-passes the counter at other points on the weir. The in-stream structure housing the counter was severely damaged in flooding in January and as alternative sites and counting methods were assessed the existing counter site was not operational. The counter was recommissioned in December.

## 5 Kerry Blackwater



Type : Logie

Operating: Jan – Dec 2016

Performance: Good

Verified: Yes

### 5.1 River site and description

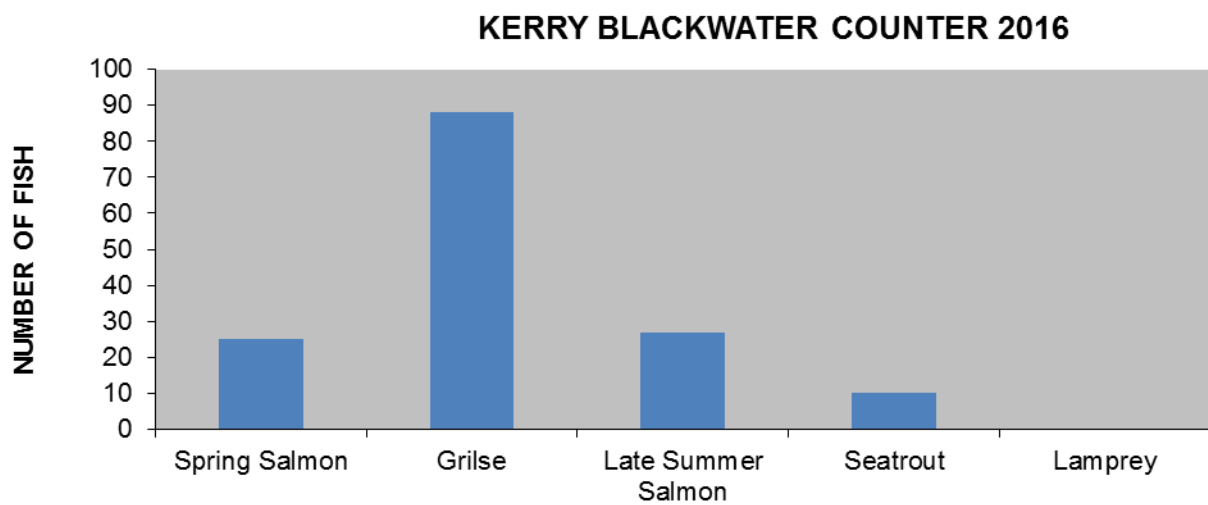
The Kerry Blackwater counter is located one hundred meters upstream of the estuary. It is a Logie restivity counter which operates over three channels and gives a total count for the river. The river is currently open for angling on a catch and release basis. The river is sixteen miles long with one small lake and is considered a spate river.

### 5.2 Operation

The counter operated well during the year. A new counter was installed in 2013 and the system has operated well since. The site has been checked regularly and the system assessed due to the low numbers of fish being recorded crossing the weir. The existing camera was remounted out of the river to ensure it operated throughout the season without damage from flooding. The counter is providing accurate results for the river system.

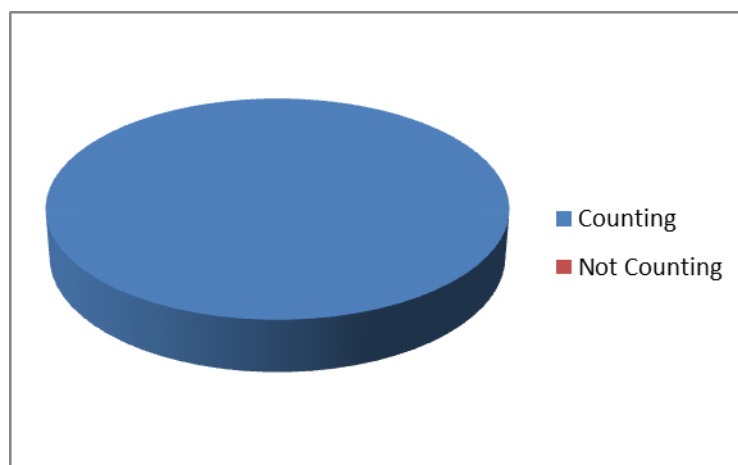
**Table 09: Counter data for the Kerry Blackwater River**

Fish Species	Number
Spring salmon	25
Grilse	88
Late Summer Salmon	27
Sea Trout	10
Lamprey/Other	0



**Table 10: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
365	0



## 6 Waterville



Type : Logie

Operating: Jan –Dec 2016

Performance: Good

Verified: Yes

### 6.1 River site and description

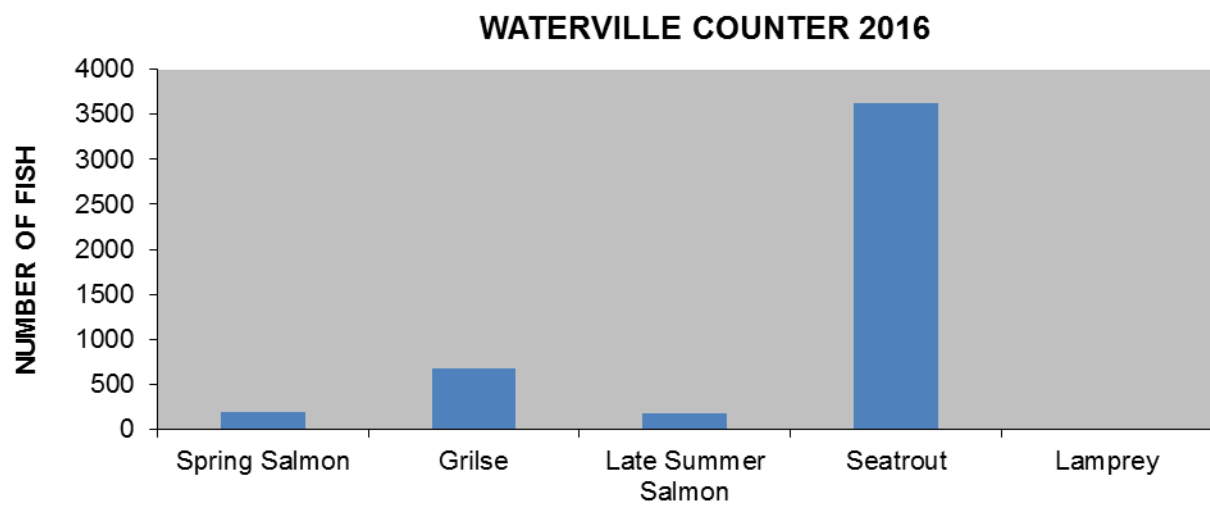
The Waterville counter is located upstream of the estuary in the estate grounds of Waterville house. The counter is a logie restivity counter which operates four counting crumps giving a total count for the river system. The electrodes are spaced primarily for counting sea trout. The data to date has been verified by CCTV camera.

### 6.2 Operation

The counter has operated well over the course of the year and has had no disruptions – this is in contrast to previous years when there were a number of outages. The connections to the counter have been replaced to upgrade the quality of data being collected. The computer which operates the Geovision surveillance camera has also been replaced. Three additional cameras were added in 2014 to facilitate a more extensive verification process. The cabling to three of the cameras was severely damaged in flooding in late 2016 and will need to be reinstated in early 2017.

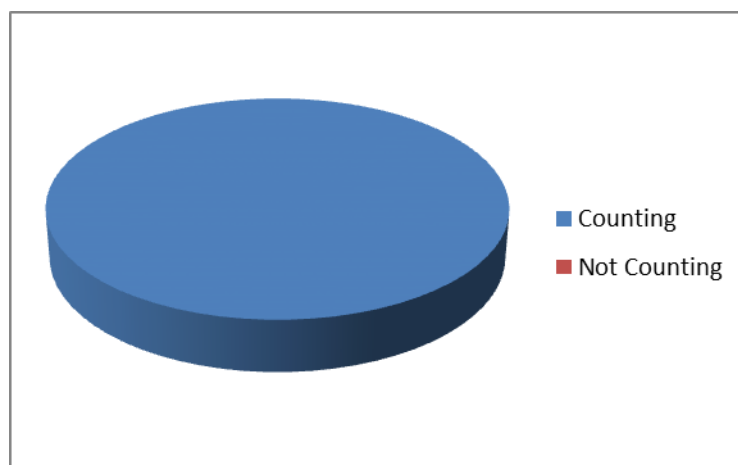
**Table 11: Counter data for Waterville**

Fish Species	Number
Spring salmon	197
Grilse	675
Late Summer Salmon	179
Sea Trout	3624
Lamprey/Other	0



**Table 12: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
365	0



## 7 River Maine



Type : Logie

Operating: Jan –Dec 2016

Performance: Good

Verified: Yes

### 7.1 River site and description

The fish counter on the Maine is a logie restivity counter operating four channels which span the river giving a total count. The counter weir is located upstream of “Marshell’s bridge” and was commissioned in late 2009. The counter site is six miles from the sea but only half a mile upstream of the intertidal zone.

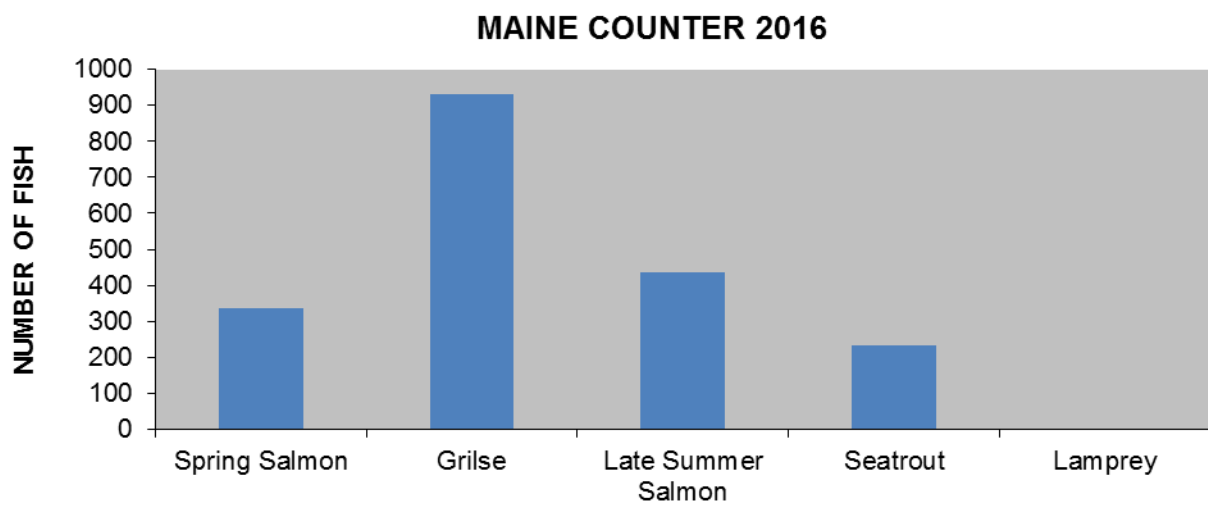
### 7.2 Operation

The counter has operated well for the 2016 season as a result of the completion of upgrades to the connections. The counter was checked and tested a number of times over the summer and is providing reliable data, new cameras have also been installed. Significant debris crossing and getting lodged on the weir has caused an increase in the number of events being recorded. The construction of the weir, which consists of ‘precast crumps’, has significant background noise which affects the accuracy of the counter. Therefore significant operator time is required to verify the data.



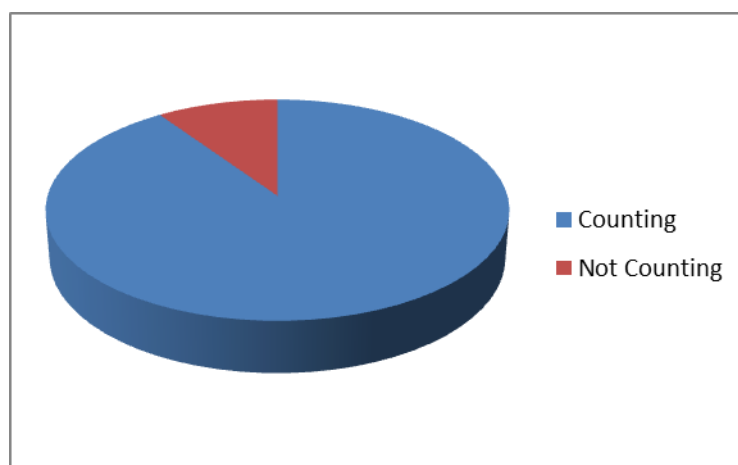
**Table 13: Counter data for the Maine River**

Fish Species	Number
Spring salmon	338
Grilse	930
Late Summer Salmon	435
Sea Trout	235
Lamprey/Other	0



**Table 14: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
331	34



## 8 Feale River



Counter type: Logie

Operating: Jan-Dec 2016

Performance: V.Good

Verified: Yes

### 8.1 River site and description

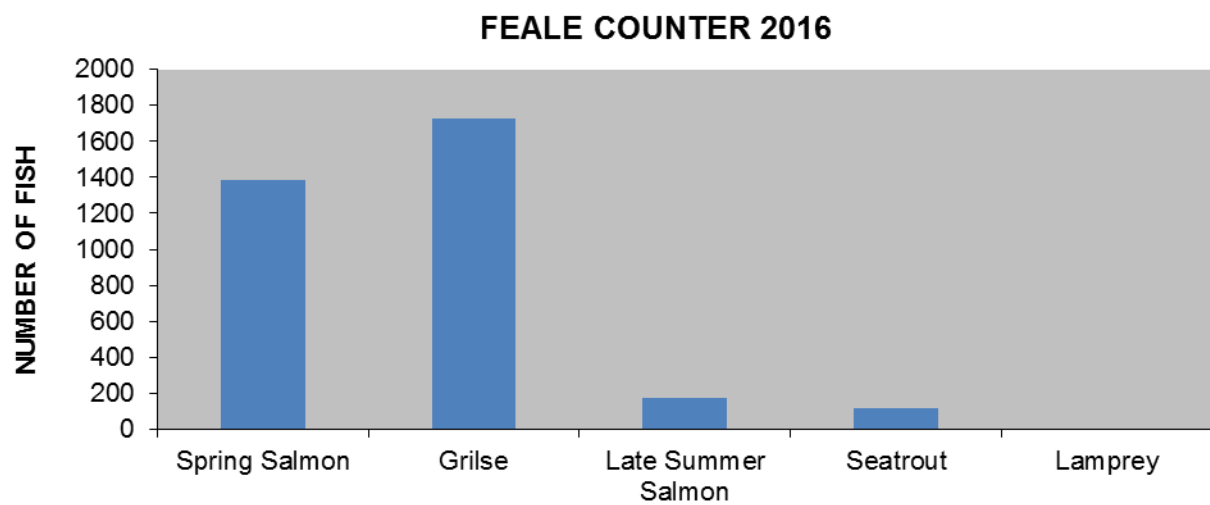
The River Feale rises in the Mullaghareirk Mountains in County Cork and meanders approximately 74 kilometres before joining with the Galey and Bricks Rivers becoming the Cashen River. The River Feale counter is located approximately 5 kilometres downstream of Listowel Town in the townland of Scartleigh at the Kerry County Council water abstraction plant. The River Feale is above its conservation limit and is therefore open for angling.

### 8.2 Operation

The counter is a one channel counter operated on a crump which was installed to assist fish over the large weir. The counter operated well over the course of the summer and provides consistent accurate data. A new camera was installed early in the summer. A small number of fish have been seen by-passing the counter by going over the weir in high water conditions. The counter needs attention in the coming years to ensure it continues to provide accurate information. This counter is set up to count salmon.

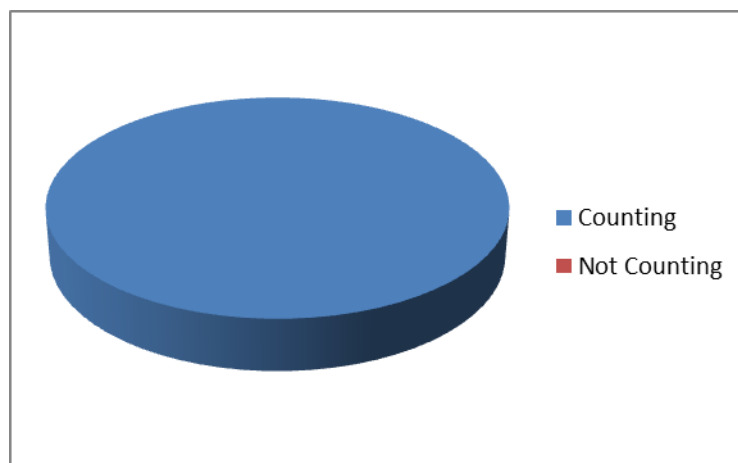
**Table 15: Counter data for the Feale River**

Fish Species	Number
Spring salmon	1382
Grilse	1724
Late Summer Salmon	172
Sea Trout	119
Lamprey/Other	0



**Table 16: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
365	0



## 9 Maigue River



Counter type: Logie

Operation Period: Jan – Dec 2016

Performance: Good

Verified: Yes

### 9.1 River site and description

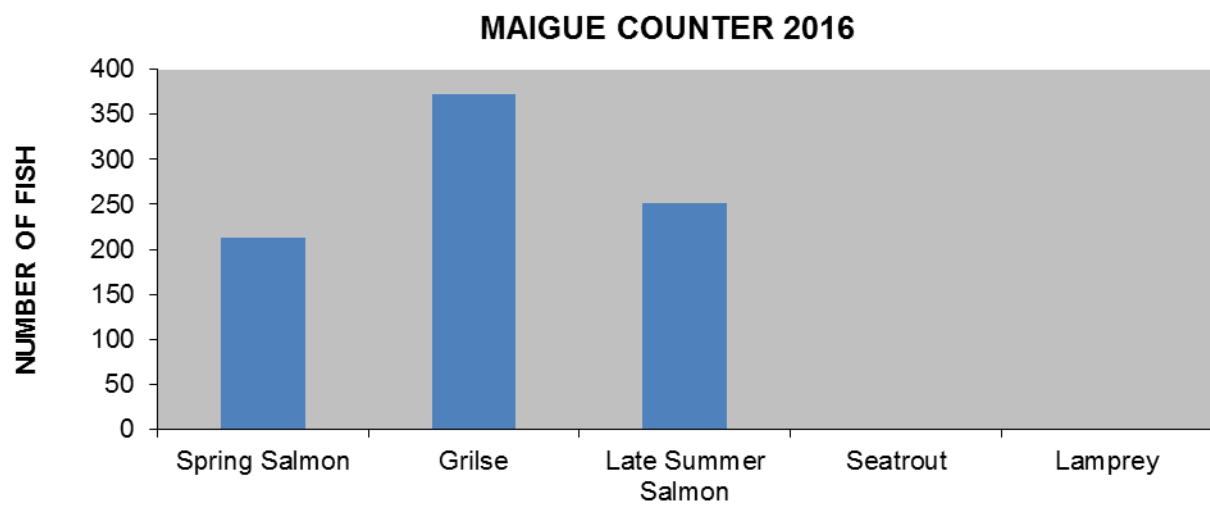
The River Maigue rises at the base of the Ballyhoura and Slievenamuck Mountains in the Galtee Mountain range in south County Limerick. It drains a large catchment area of 1,009km<sup>2</sup> extending from Ballylanders and Kilfinnane in the Southeast, flowing Northwest through the villages of Croom and Adare then turning north into the Shannon estuary at the Ferry Bridge, not far from Kildimo village. The River Maigue catchment area is characterised predominantly by rich pasture land and forms part of the renowned 'Golden Vale' agricultural area.

### 9.2 Operation

The Maigue counter is a ten channel counter. The counter was completed on March 2013 and is a re-engineered crescent shaped weir. The site uses three counters to count all ten channels and therefore requires a greater amount of time to maintain and verify. The counters have operated well. This year the adjacent golf course has been refurbished. This resulted in periods of power loss during the construction of the new course. Efforts to minimise the disruptions included the installation of an independent generator, unfortunately therefore this data set is incomplete for 2016.

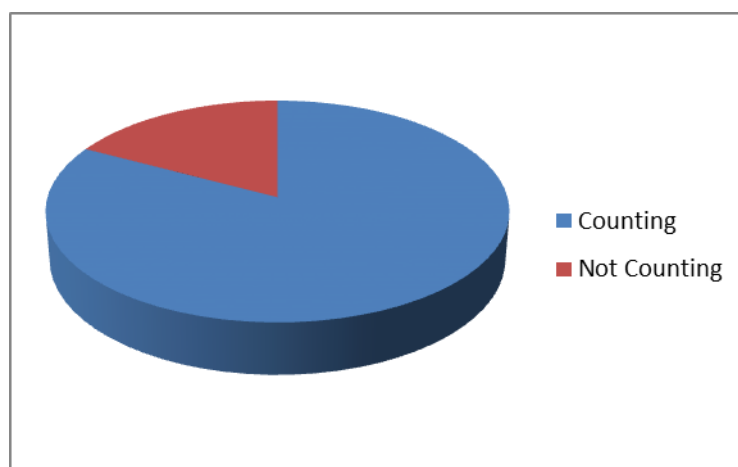
**Table 17: Counter data for the Mague River**

Fish Species	Number
Spring salmon	213
Grilse	372
Late Summer Salmon	252
Sea Trout	0
Lamprey/Other	0



**Table 18: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
302	63



# 10 Mulkear



Counter type: Logie

Operating: Jan-Dec 2016

Performance: Good

Verified: Yes

## 10.1 River site and description

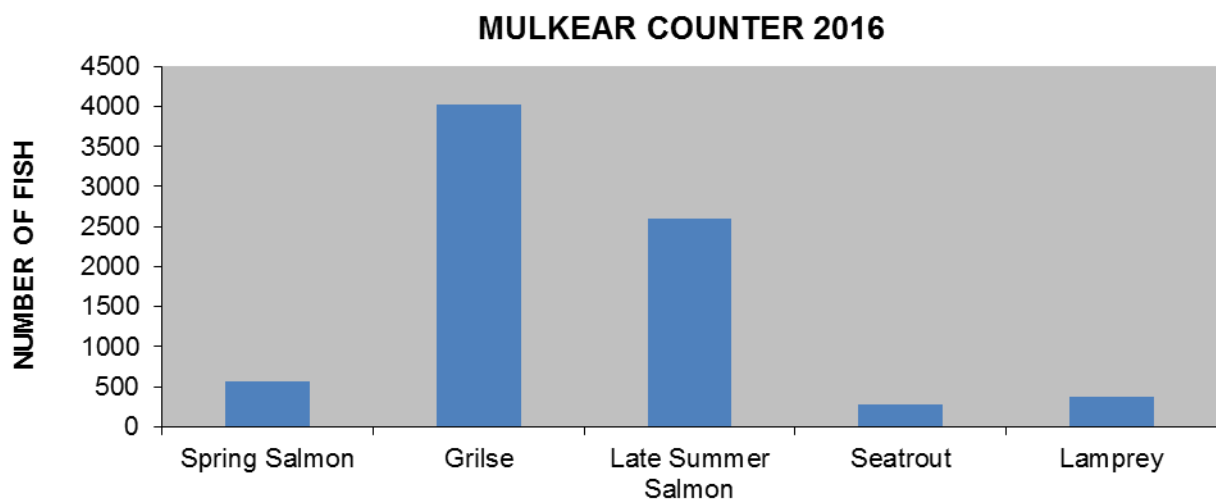
The Mulkear counter is located at Ballyclough on a purpose built crump weir approximately 3 kilometres upstream from where the mouth of the Mulkear River enters the River Shannon. Due to a large road scheme crossing the Mulkear River in 2004 an agreement was reached with the contractors to install a three channel crump weir and counter underneath the main bypass bridge located upstream of Annacotty village also included in the plans was a side channel for eel passage.

## 10.2 Operation

The counter worked well and provided accurate counts for the river during the year. All three crumps were operational and only minimal maintenance was required to keep this counter working. A significant number of lamprey were observed on camera crossing the weir. A total count for lamprey crossing the counter was extracted during the verification process for salmon. The data for lamprey is unverified as it requires significant analysis which is currently underway. The site will require two new cameras to replace the existing cameras mounted high under the motorway bridge during the coming year.

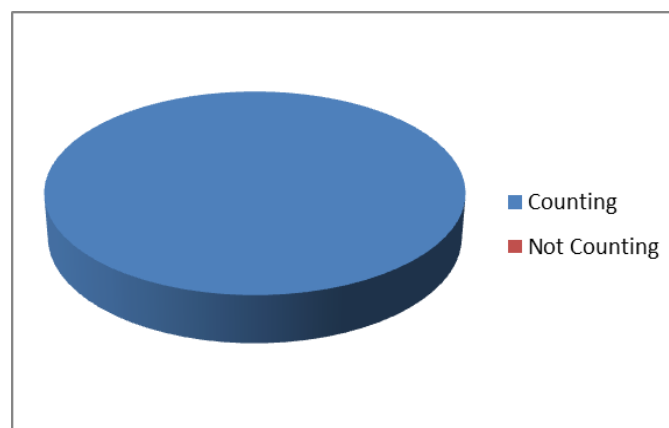
**Table 19: Counter data for the Mulkear River**

Fish Species	Number
Spring salmon	562
Grilse	4032
Late Summer Salmon	2599
Sea Trout	275
Lamprey/Other	367



**Table 20: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
365	0



# 11 Fergus River



Counter type: Logie

Operating: Jan – Dec 2016

Performance: Good

Verified: Yes

## 11.1 River site and description

The Fergus fish counter is a recent addition to the IFI fish counter programme. The counter was installed as part of the flood relief works in Ennis, Co. Clare. It consists of one channel located at the top of the new fish pass. The design of the fish pass is unique to allow lamprey, elvers and salmonids migrate upstream past the old structure which is protected.

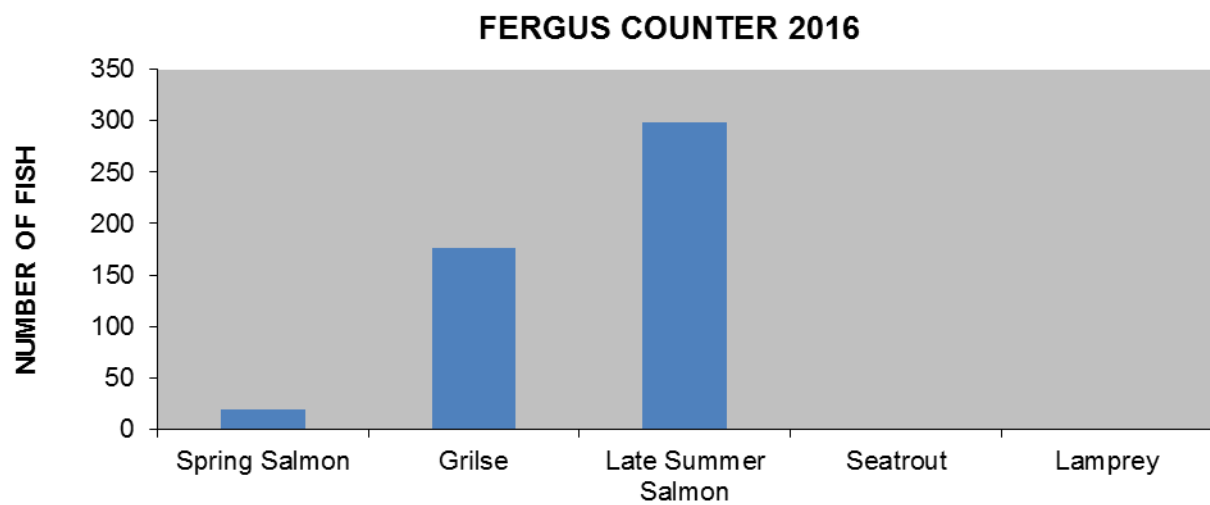
## 11.2 Operation

The counter is housed in the Civic building adjacent to the river. This facilitated an upgrade to the site which includes cameras, computer and verification software which has greatly increased the capabilities of the facility. As the work was completed early in 2016 the site has provided data for the main run of salmon and has allowed IFI to assess the new fish pass. Lamprey have not as yet been detected using the new fish pass by the camera.



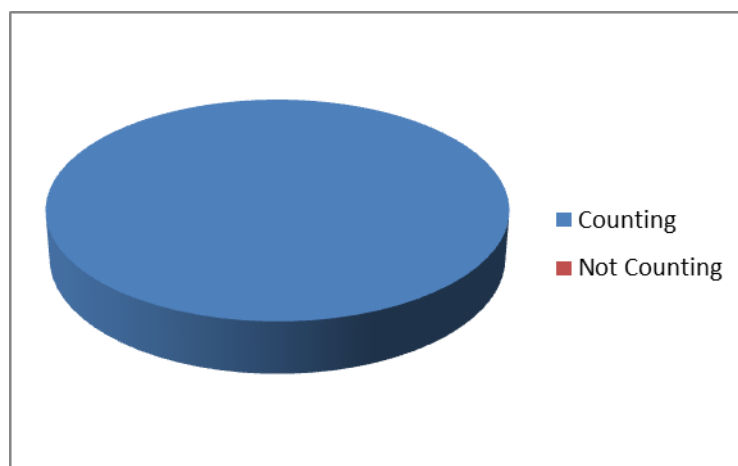
**Table 21: Counter data for the Fergus River**

Fish Species	Number
Spring salmon	19
Grilse	176
Late Summer Salmon	298
Sea Trout	0
Lamprey/Other	0



**Table 22: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
365	0



## 12 Inagh River (Ennistymon)



Counter type: Logie tube

Operating: Jan – Dec 2016

Performance: Good

Verified: Yes

### 12.1 River site and description

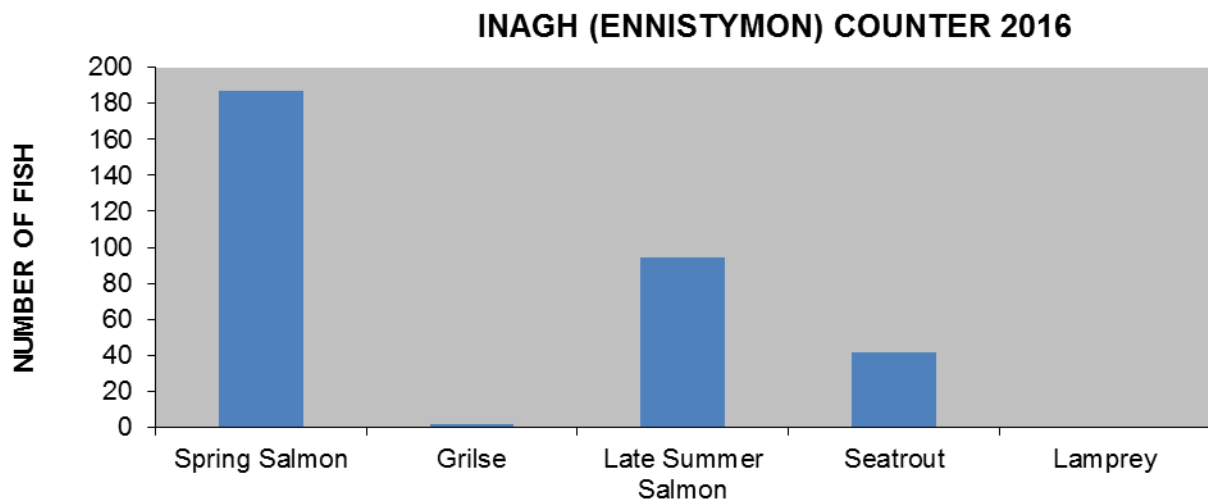
The tube counter in Ennistymon on the Inagh River has been reinstalled after nearly fifty years. This site at the top of the fish pass was the original site of the fish counter which was also a logie tube counter. The current installation has CCTV verification since early January. The counter hut is in a new location and is only accessible to IFI staff.

### 12.2 Operation

The counter was connected in late December 2014. The counter has performed well during 2016. The site has had some interruptions this year due to extensive construction works downstream of the counter. The construction works were to redevelop the hydroelectric station which interfered with the passage of fish through the tube for short periods during the summer.

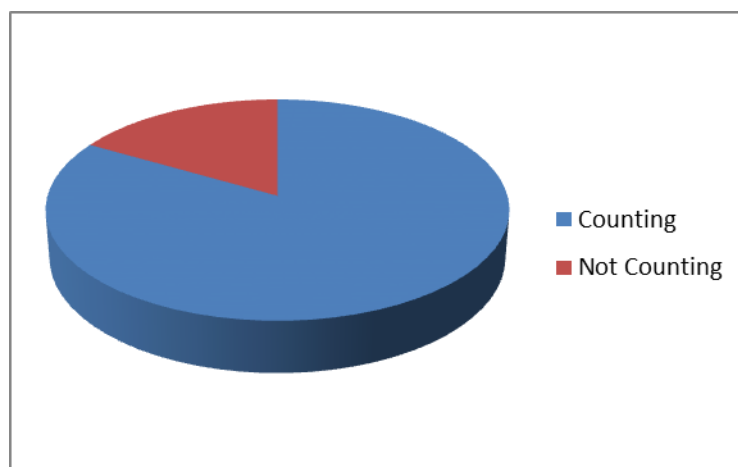
**Table 23: Counter data for the Inagh (Ennistymon) River**

Fish Species	Number
Spring salmon	187
Grilse	02
Late Summer Salmon	94
Sea Trout	42
Lamprey/Other	0



**Table 24: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
304	61



## 13 Dunkellin River



Counter type: Logie

Operating: Jan – Dec 2016

Performance: Good

Verified: Yes

### 13.1 River site and description

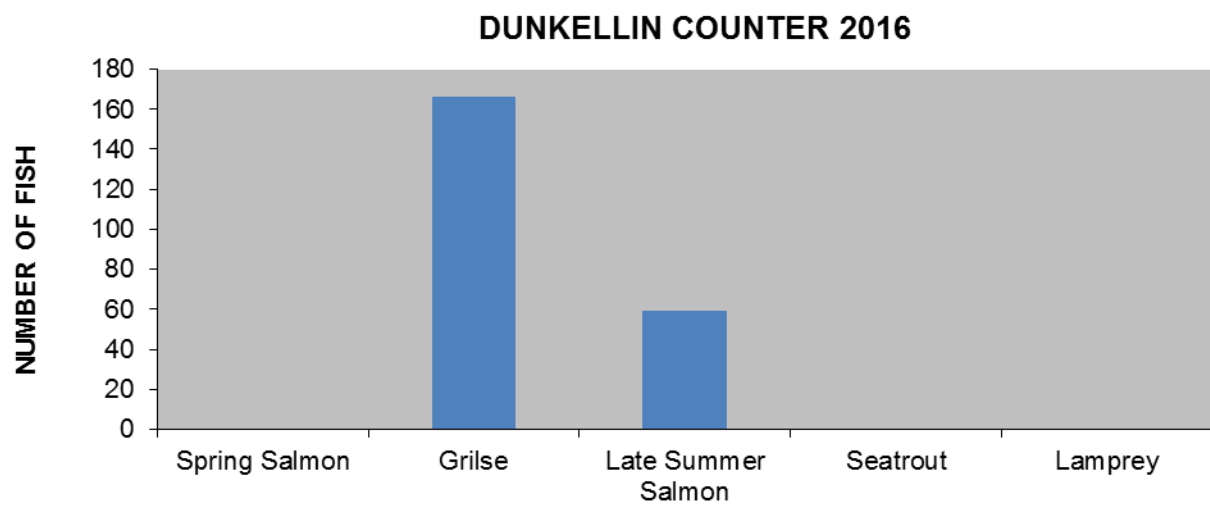
The Dunkellin counter was installed early in 2010 and operational from June of that year. The counter is located upstream of the village of Kilcolgan. The counter is a three channel counter which operates well in medium and low water. This entire area is subject to extensive flooding which can lead to the weir being inundated for significant periods.

### 13.2 Operation

The counter and Geovision systems are working well. The dry summer ensured that this counter counted efficiently for longer periods than in previous years. The fish counting equipment was well maintained and continues to work well when conditions are suitable. The data gathered from the counter would suggest that the fish run later in the year in this river. This counter has difficulty counting accurately in high water levels.

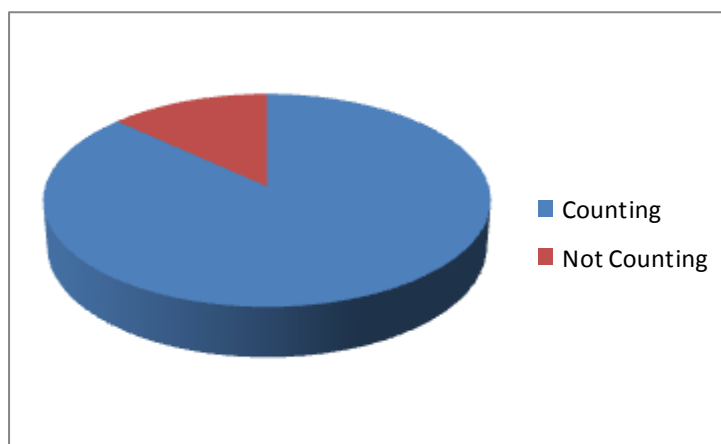
**Table 25: Counter data for the Dunkellin River**

Fish Species	Number
Spring salmon	0
Grilse	166
Late Summer Salmon	59
Sea Trout	0
Lamprey/Other	0



**Table 26: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
323	42



# 14 Corrib Counter



Type : Logie

Operating: Jan – Dec 2016

Performance: V.Good

Verified: Yes

## 14.1 River site and description

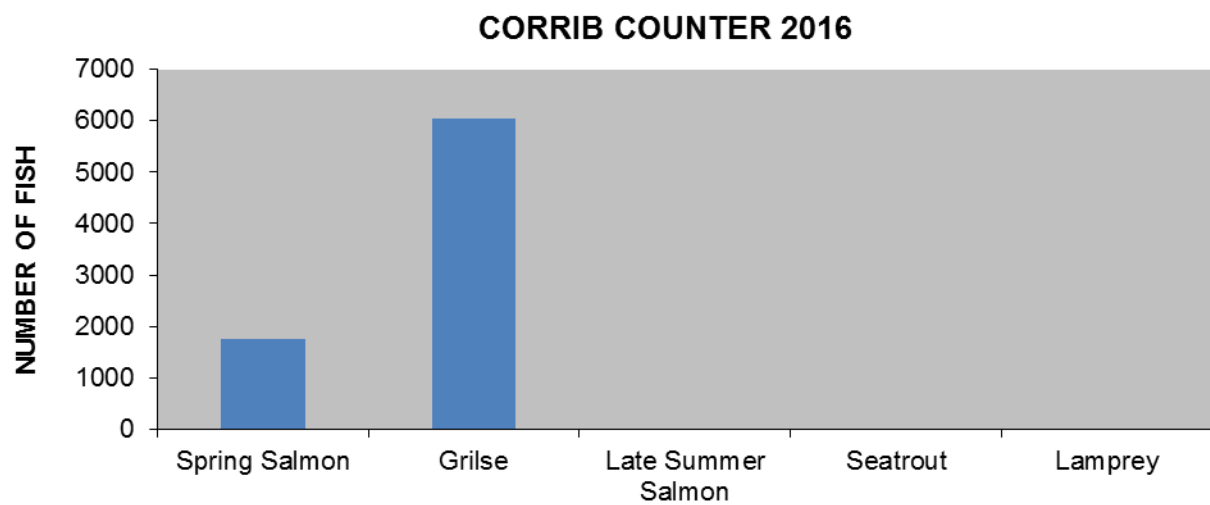
The Corrib counter is situated in a fish pass at the Salmon Weir in Galway. The system it uses is a Logie fish counter in conjunction with a tube fish pass that counts salmon which enter the tube on their return to the river from the sea. An underwater surveillance camera is used to verify the fish count recorded on the counter. Water levels invariably have an impact on the number of fish using the pass as salmon may, in high water, run upstream through opened barrage gates. This is a partial counter as it only counts fish ascending the river through the fish pass.

## 14.2 Counter operation

The counter operated well during the 2016 season. The counter data has been verified and is accurate. The counter worked without interruption and all the data has been verified and uploaded to the counter site. This is a partial count for the river and the percentage of fish using the fish pass varies from year to year depending on the water level.

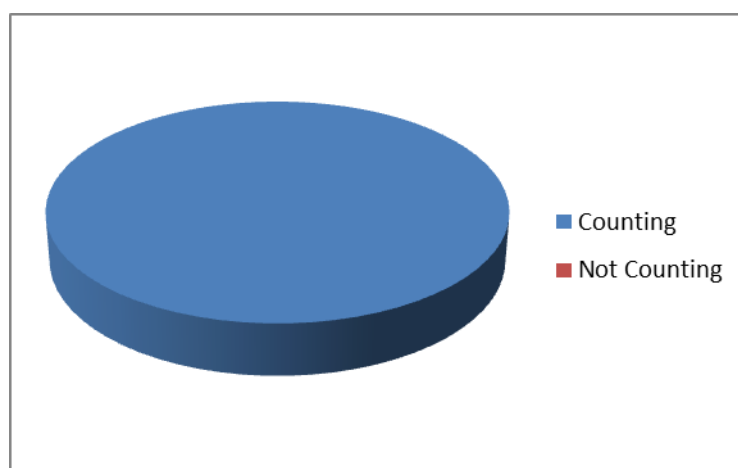
**Table 27: Counter data for the Corrib River**

Fish Species	Number
Spring salmon	1754
Grilse	6039
Late Summer Salmon	21
Sea Trout	0
Lamprey/Other	07



**Table 28: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
365	0



# 15 Owenboliska River



Type : Logie

Operating: Jan – Dec 2016

Performance: V.Good

Verified: Yes

## 15.1 River site and description

The counter is situated downstream of the village of Spiddal. The counter was constructed and commissioned by IFI in 2011 and funded by the salmon conservation fund. The counter operates on a purpose built weir with one counting channel. A verification camera system is also in operation.

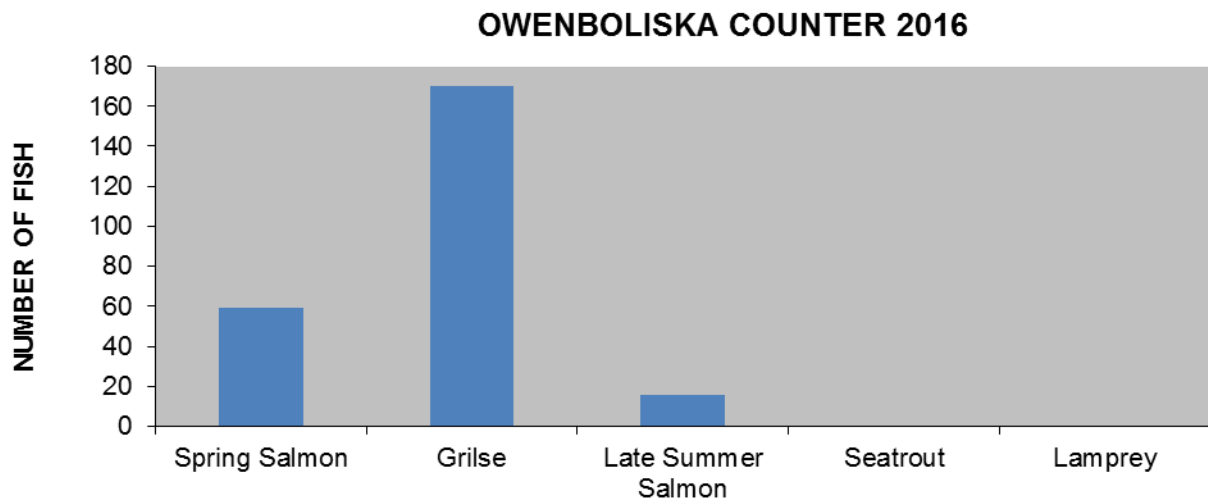
## 15.2 Counter operation

The counter has been operational for the entire season with no problems recorded. The counter and camera has provided unexpected results with greater numbers of salmon and sea trout migrating up the system than was anticipated. This year will be the fourth full year of data recorded for the Owenboliska. Damage to the electrodes from debris was repaired early in the year prior to the run of fish.



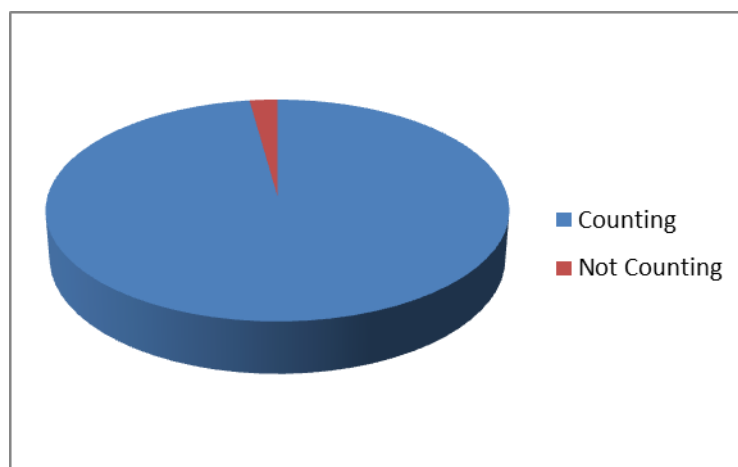
**Table 29: Counter data for the Owenboliska River**

Fish Species	Number
Spring salmon	59
Grilse	170
Late Summer Salmon	16
Sea Trout	0
Lamprey/Other	0



**Table 30: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
357	08



## 16 Casla River



Type : Logie

Operating: Jan – Dec 2016

Performance: V.Good

Verified: Yes

### 16.1 River site and description

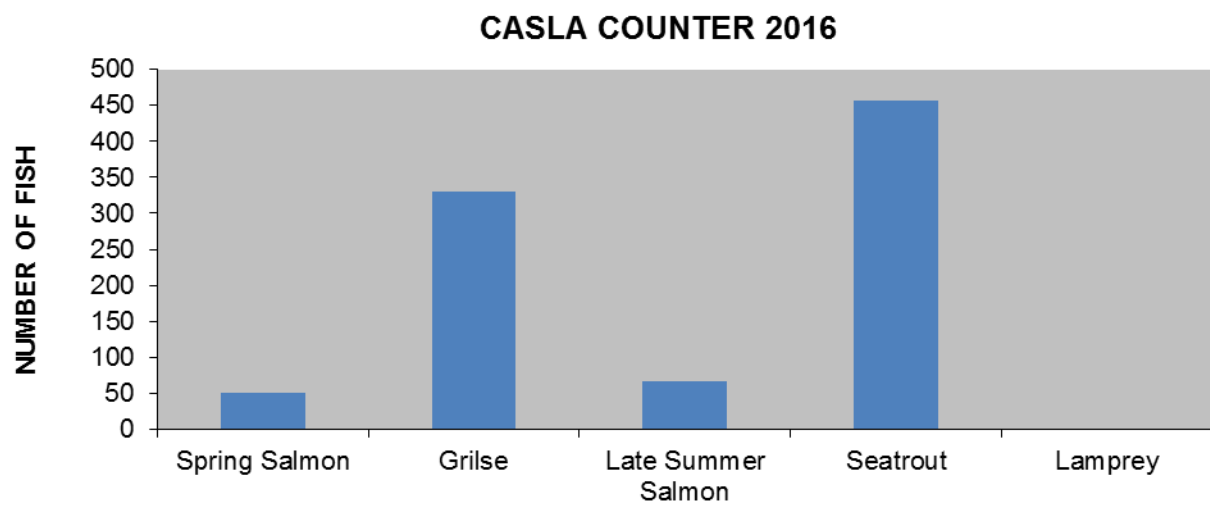
The Casla River is privately owned and is the main river of the Costello and Fermoyale Fishery. The river is six kilometres in length and drains an area of 83km<sup>2</sup> which includes 22 lakes – it is a typical sea trout system. The counter is located at a crump weir situated close to the limits of tidal influence. Under most flow conditions fish will run up over the weir.

### 16.2 Operation

The counter operated very well throughout 2016. The counter hut has been upgraded with the removal of the old pumping equipment and the installation of a new steel door. The computer was changed prior to the upgrade of the hut. The counter has provided accurate counts with no loss of data for the year. Additional upgrades to the weir are planned for early 2017.

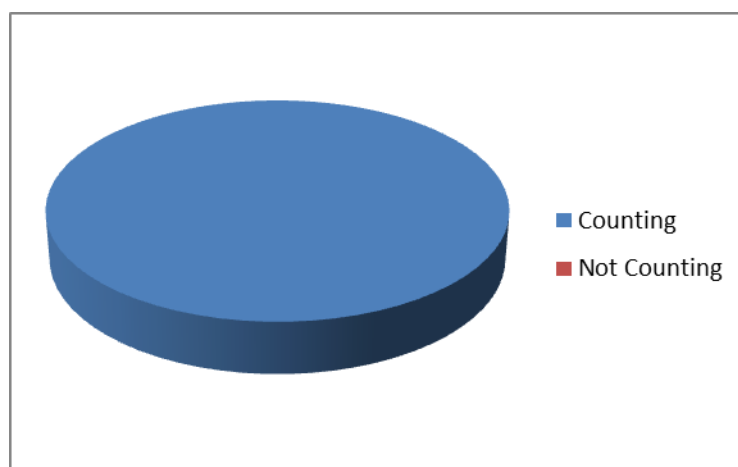
**Table 31: Counter data for the Casla River**

Fish Species	Number
Spring salmon	51
Grilse	331
Late Summer Salmon	66
Sea Trout	457
Lamprey/Other	0



**Table 32: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
365	0



# 17 Invermore River



Type : Logie

Operating: Jan to Dec 2016

Performance: Good

Verified: Yes

## 17.1 River site and description

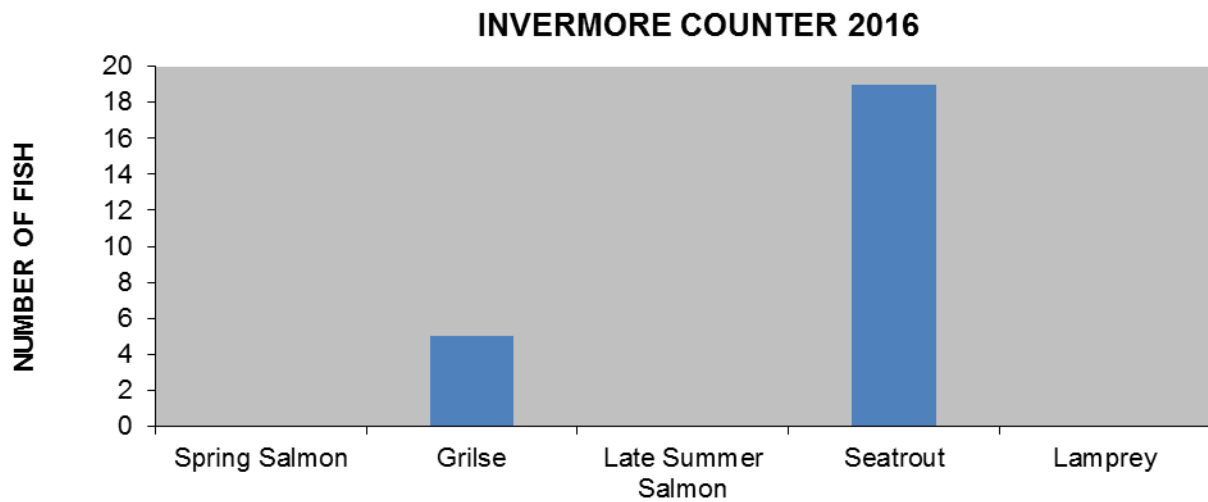
The Invermore counter is located upstream of the old trapping facility 100m above the intertidal zone. A new purpose built weir has been constructed to facilitate the counter. The electrode spacing has been set to count salmon and sea trout. The counts are verified using CCTV and uploaded to the counter site.

## 17.2 Operation

The counter has worked well throughout the year. This is the first full year of operation and has provided accurate information replacing the old trapping system. The counts for the river are accurate and it is hoped to eliminate all back ground noise on the weir to allow the collection of accurate data for the smaller sea trout entering the system over the coming seasons.

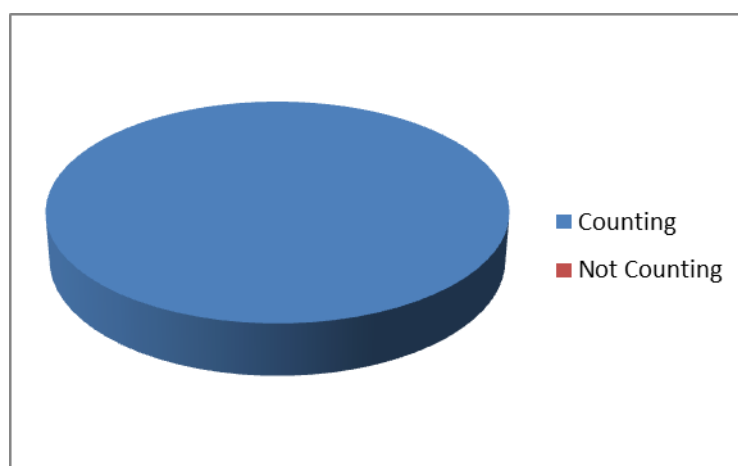
**Table 33: Counter data for the Invermore River**

Fish Species	Number
Spring salmon	0
Grilse	05
Late Summer Salmon	0
Sea Trout	19
Lamprey/Other	0



**Table 34: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
365	0



# 18 Owengowla River



Type : Vaki/ Logie

Operating: Jan - Dec 2016

Performance: Good

Verified: Yes

## 18.1 River site and description

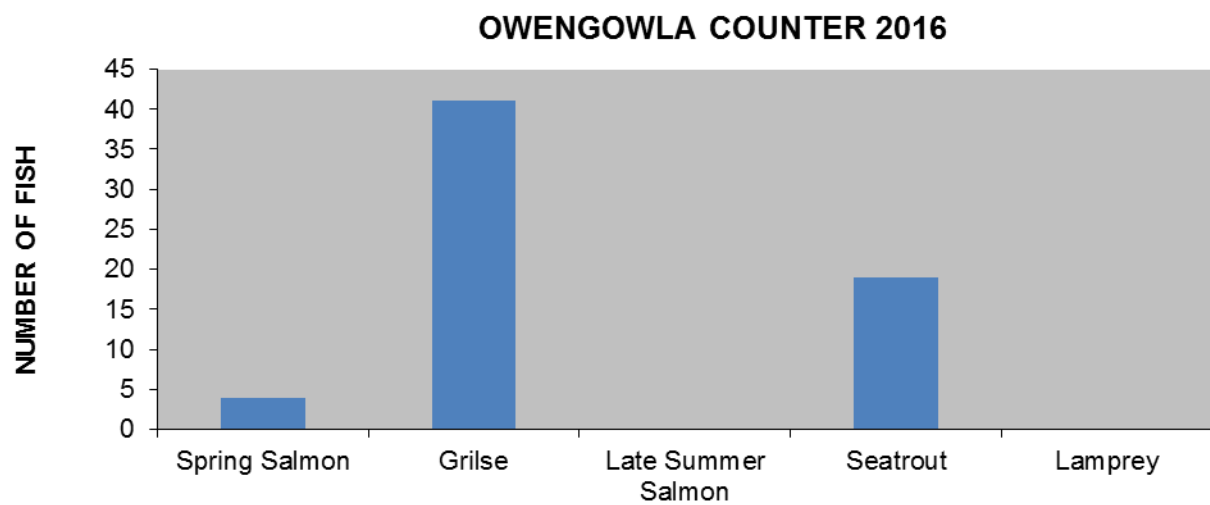
The Gowla counter is located at the old trapping facility 100m above the intertidal zone. This is a new counting facility completed in 2013. The site consists of a two channel weir which is set up to count sea trout. The counter was installed to replace a partial counter and trapping facility.

## 18.2 Operation

The Vaki on this site was removed to facilitate the installation of a crump weir and Logie counter. This is the second year of operation for this counting facility. The site provides a total count for salmon and sea trout for the river. The site has provided accurate counts for 2016 with no breakdowns or loss of data. Camera data for the river suggest a small run of very large salmon enter this system every year.

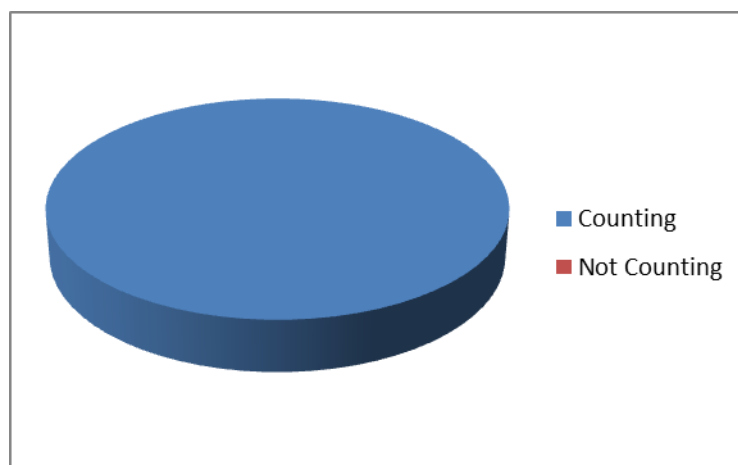
**Table 35: Counter data for the Owengowla River**

Fish Species	Number
Spring salmon	04
Grilse	41
Late Summer Salmon	0
Sea Trout	19
Lamprey/Other	0



**Table 36: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
365	0



# 19 Inagh River



Type : Logie

Operating: Jan – Dec 2016

Performance: V.Good

Verified: Yes

## 19.1 River site and description

The Inagh counter is located on the Inagh River 40 m above Derryclare Lake. It is the location of the first crump weir Logie counter in the country which was installed in the late 1980's. The structure is a purpose built crump weir with one counting channel to facilitate a Logie counter. The counts are verified by CCTV. The fishing rights are privately owned by a syndicate and managed by Lough Inagh Lodge Hotel.

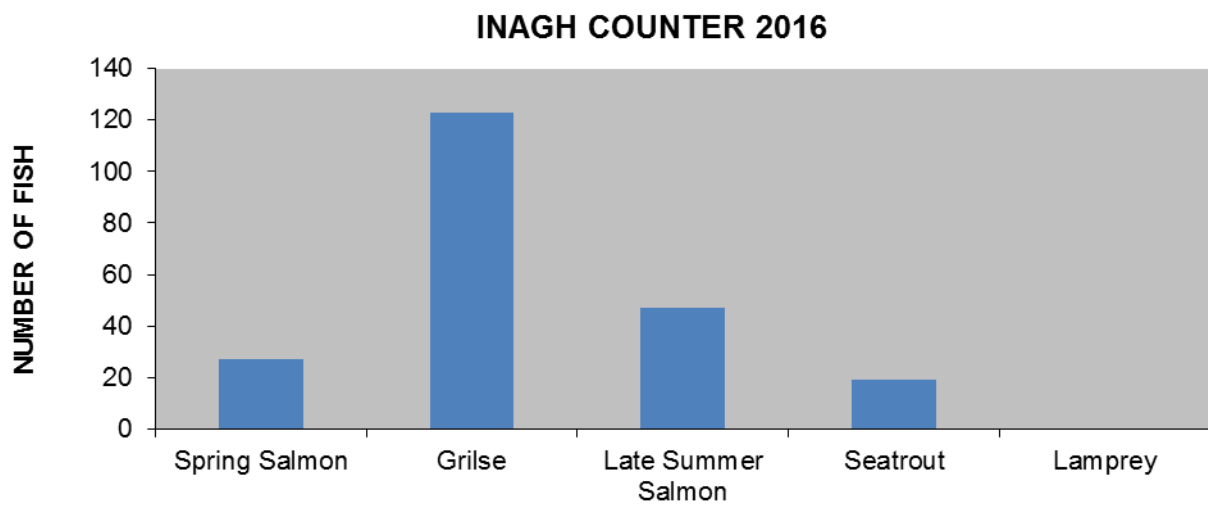
## 19.2 Operation

The counter worked well throughout 2016. The high water all summer caused some difficulties with verification. The counters counts salmon accurately but sea trout can use an alternative channel which is not counted. The counter provided an accurate count for the summer. All data has been verified.



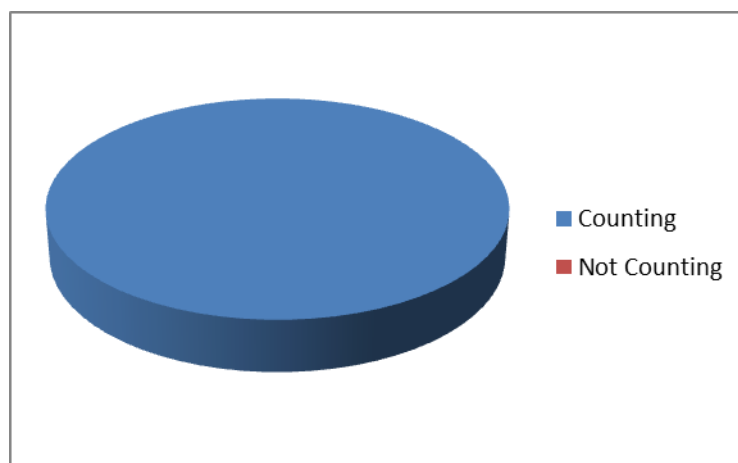
**Table 37: Counter data for the Inagh River**

Fish Species	Number
Spring salmon	27
Grilse	123
Late Summer Salmon	47
Sea Trout	19
Lamprey/Other	0



**Table 38: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
365	0



## 20 Owenglin (Clifden River) River



Counter type: Vaki

Operating: Jan – Dec 2016

Performance: V. Good

Verified: Yes

### 20.1 River site and description

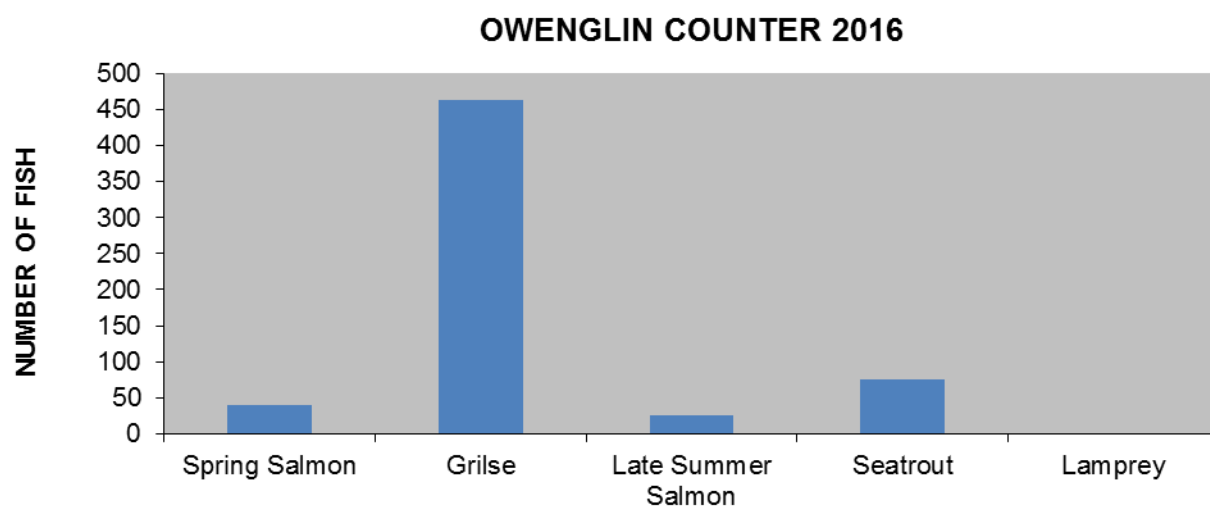
The site of the counter in the Owenglin River is located in the existing fish pass beside an impassable waterfall just upstream of the estuary. The Vaki counter and camera are particularly suited to this type of site. The counter and camera are housed in a stainless steel purpose-built frame which allows the counter to activate the camera and provide video and infra red silhouette images of each fish. The fishing rights to the Owenglin River are privately owned by the Clifden Angling Club. The catchment includes numerous small lakes.

### 20.2 Operation

The counter has operated well over the course of the period when fish were running the system. This Vaki counter sustained damage and has since been repaired. An alternative set of panels were installed to cover the repair period. The original counter is ready to be reinstalled but due to flood conditions and the need to protect the expensive scanner it will not be reinstalled until early 2017.

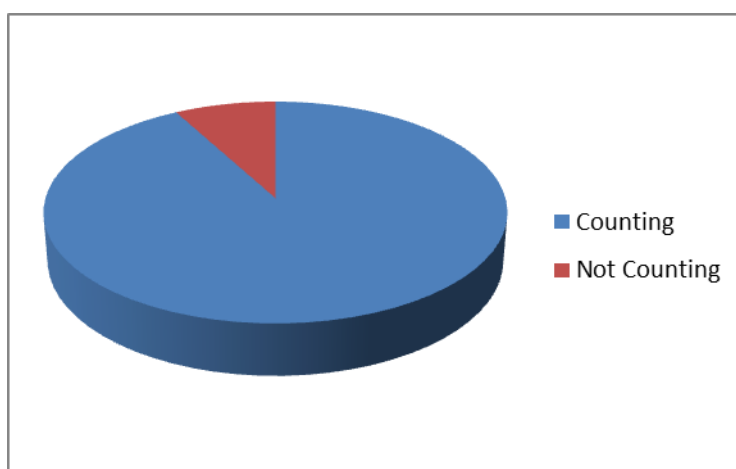
**Table 39: Counter data for the Owenglin River**

Fish Species	Number
Spring salmon	40
Grilse	463
Late Summer Salmon	26
Sea Trout	75
Lamprey/Other	0



**Table 40: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
334	31



## 21 Dawros (Kylemore) River



Counter type: Logie

Operating: Jan – Dec 2016

Performance: V. Good

Verified: Yes

### 21.1 River site and description

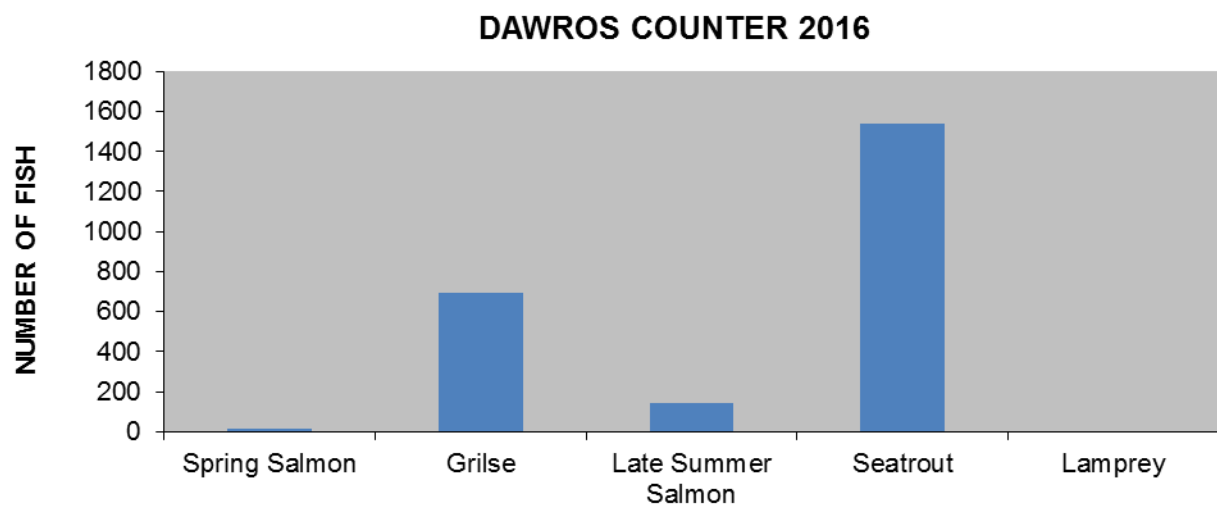
The Dawros is a privately owned river with three groups owning the fishing rights. The river has traditionally enjoyed good salmon and sea trout runs. The system incorporates three lakes (Kylemore Lake, Pollagcapaill, and the Castle Lake) and the Dawros River which enters the sea in Ballinakill Bay.

### 21.2 Operation

The counter operated well during the course of the year. The numbers of fish recorded have all been verified by camera. The figures have proved to be very accurate regardless of the water levels. The counter has two operational crumps. There is a complete set of data for the year.

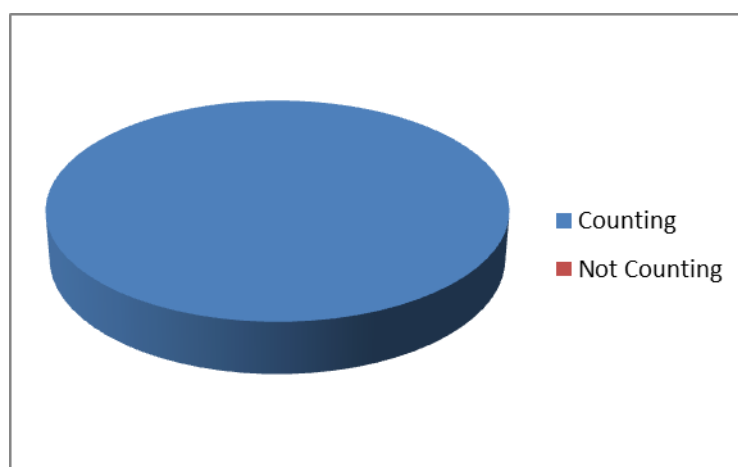
**Table 41: Counter data for the Dawros River**

Fish Species	Number
Spring salmon	17
Grilse	691
Late Summer Salmon	145
Sea Trout	1538
Lamprey/Other	0



**Table 42: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
365	0



## 22 Culfin River



Counter Type: Logie

Operating: Jan – Dec 2016

Performance: V. Good

Verified: Yes

### 22.1 River site and description

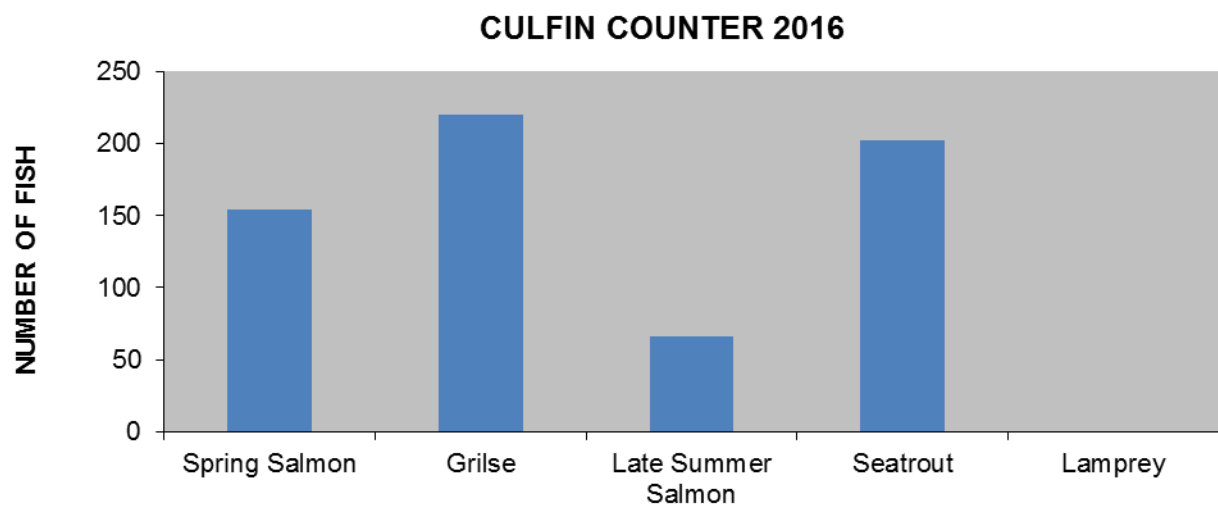
The Culfin counter is located in Lettergesh village down-stream of Lettergesh Bridge. The river is open for angling with a surplus of fish. The structure is a purpose built weir with two counting channels. The counts are verified by CCTV. The fishing rights are privately owned by the Ormsby and Thomson families.

### 22.2 Operation

The counter worked well during the year. The counter has not had any problems and works consistently. The counter has been consistently maintained and has produced accurate verifiable figures. The numbers of fish remain constant each year. A small number of lamprey have been identified crossing the counter every year.

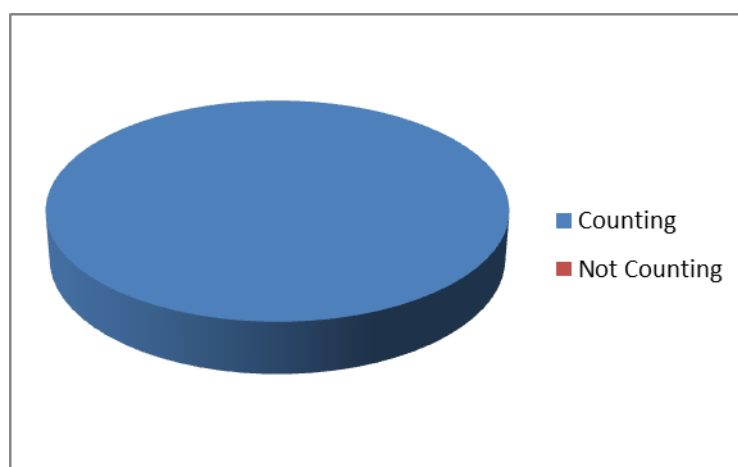
**Table 43: Counter data for the Culfin River**

Fish Species	Number
Spring salmon	154
Grilse	220
Late Summer Salmon	66
Sea Trout	202
Lamprey/Other	01



**Table 44: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
365	0



## 23 Erriff River



Counter type: Vaki

Operating: Jan- Dec 2016

Performance: V. Good

Verified: Yes

### 23.1 River site and description

The Erriff River was leased out by Inland fisheries Ireland Galway to Delphi Mountain Resort in 2016 but the fishery is owned by the state. The River has been one of the principle salmon and sea trout fisheries in the West of Ireland. IFI operates a Vaki counter on the river. The location of the counter is at the top of the fish pass which allows migrating fish to pass the famous Aasleagh falls.

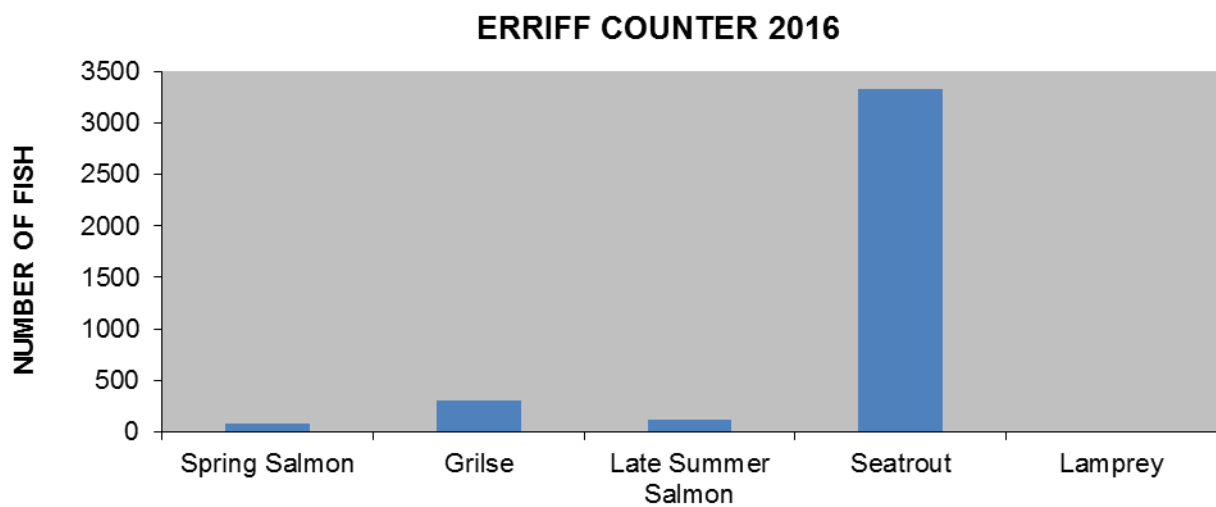
### 23.2 Operation

There was a period when the counter sustained damage due to flooding during this period The data was collected by utilising the trap figures. This unique setup allows IFI to assess the efficiency of the Vaki as a counter. It operated adjacent to a new pit tag reader in 2016. The run of salmon was down in 2016 on previous years. The number of sea trout has increased dramatically on last year as expected. The data is a net figure for wild fish into the system as certain experimental ranched salmon are removed from the trap and are not allowed to access the river to spawn.



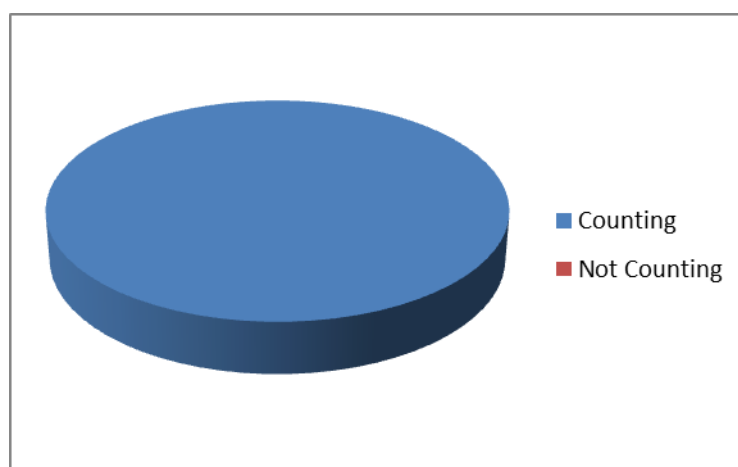
**Table 45: Counter data for the Erriff River**

Fish Species	Number
Spring salmon	83
Grilse	299
Late Summer Salmon	113
Sea Trout	3328
Lamprey/Other	0



**Table 46: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
365	0



## 24 Bunowen River



Counter type: Logie

Operating: Jan-Dec 2016

Performance: V. Good

Verified: Yes

### 24.1 River site and description

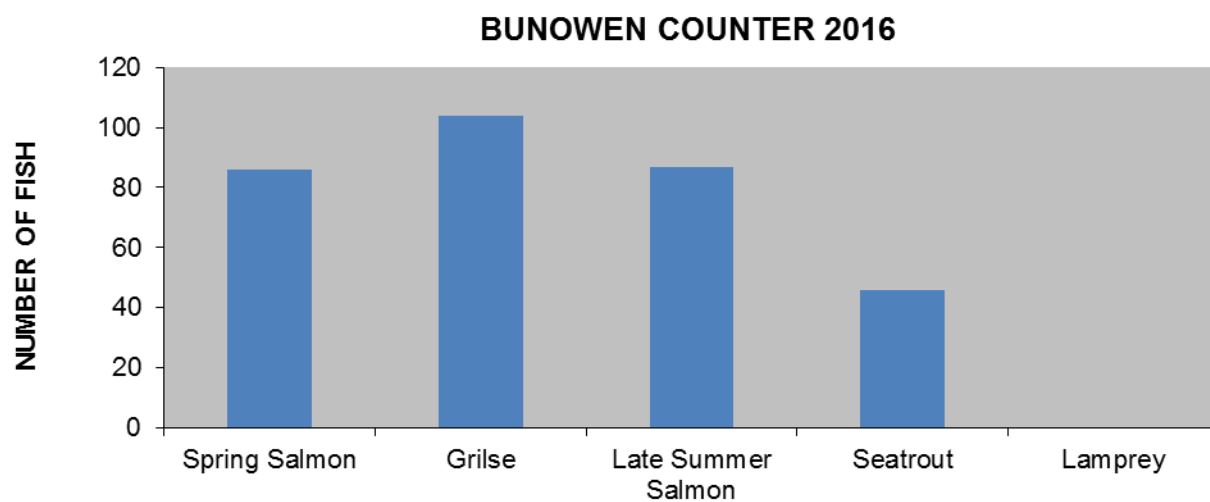
The Bunowen River is partially owned by the state and managed by Inland Fisheries Ireland. There is a small section of the river that is privately owned. The river is 10 kilometres in length and drains an area of 75km squared which includes three lakes. The counter is located beside the IFI store at Ballyhip, Louisburgh, Co. Mayo.

### 24.2 Operation

The counter has performed well over the year and continues to provide an accurate total count for the river. The computer was replaced in early summer to ensure the data was verified on this site. The River was reopened in 2014 with a small surplus. The location of the counter is well upstream off the confluence with the sea. The counter usually records a late run of fish – this is not due to fish entering the river late in the season but is due to fish resting in the deep pools in the lower section of the river over the summer and only ascending the river to spawn in November and December.

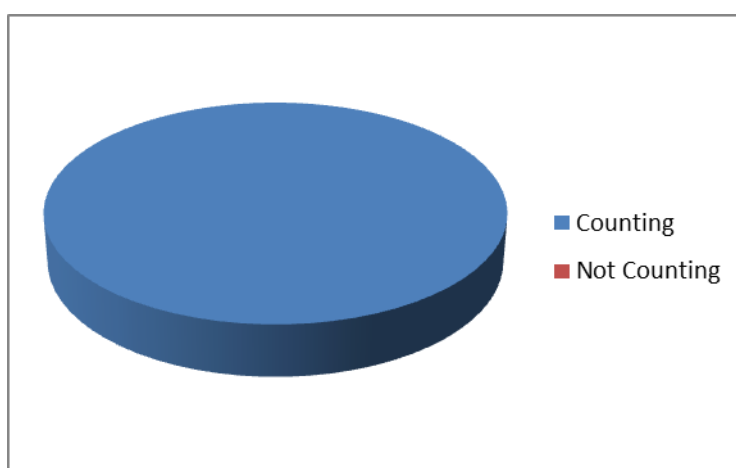
**Table 47: Counter data for the Bunowen River**

Fish Species	Number
Spring salmon	86
Grilse	104
Late Summer Salmon	87
Sea Trout	46
Lamprey/Other	0



**Table 48: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
365	0



## 25 River Moy Counters



Counter type: Logie and one Vaki

Operating: Jan – Sept 2016

Performance: V. Good

Verified: No

### 25.1 River site and description

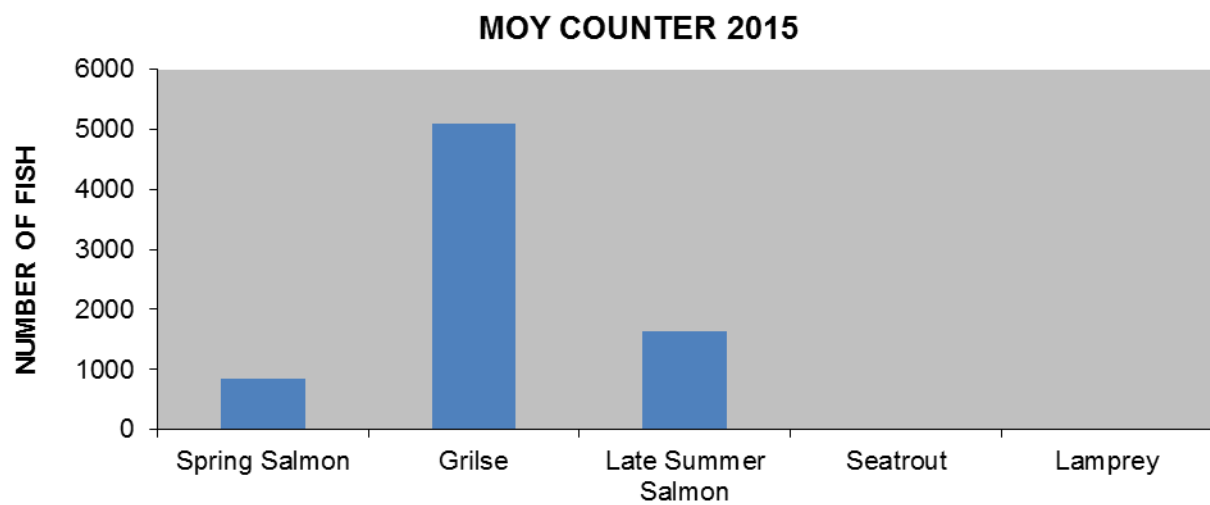
The completion of the refurbishment works on the Ballina Salmon Weir allowed for the reintroduction of the counters on the Moy River. Following an upgrade in 2014 there are now two Logie counter crumps and two Vaki counters which were installed in May of 2012. The counters are located on the site of the refurbished weir. The four counters provide a partial count for the river.

### 25.2 Operation

The counting section of the Moy has been extended this year to two Logie crumps and two Vaki frames. One of the Vaki counters was damaged beyond repair in August 2014. The second Vaki frame worked well over the summer. The Logie in box one worked well. However, most of the fish entering the system passed the weir through the queen's gap this year without being counted because of the summer water levels. The counts from year to year depend on water level and can vary significantly; the facility only provides a partial count. The data for 2016 represents an increase in the run of fish through the counters as there was one less counting channel operating.

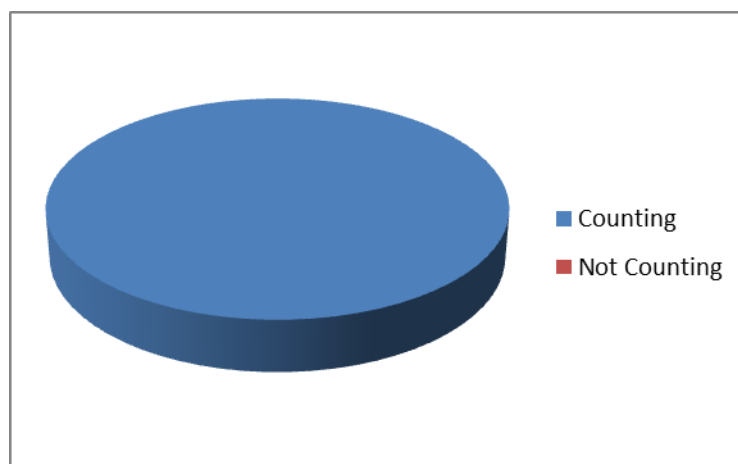
**Table 49: Counter data for the Moy River**

Fish Species	Number
Spring salmon	703
Grilse	5521
Late Summer Salmon	2033
Sea Trout	0
Lamprey/Other	0



**Table 50: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
365	0



## 26 Garavogue River



Type : Vaki

Operating: Jan – Dec 2016

Performance: Good

Verified: Yes

### 26.1 River site and description

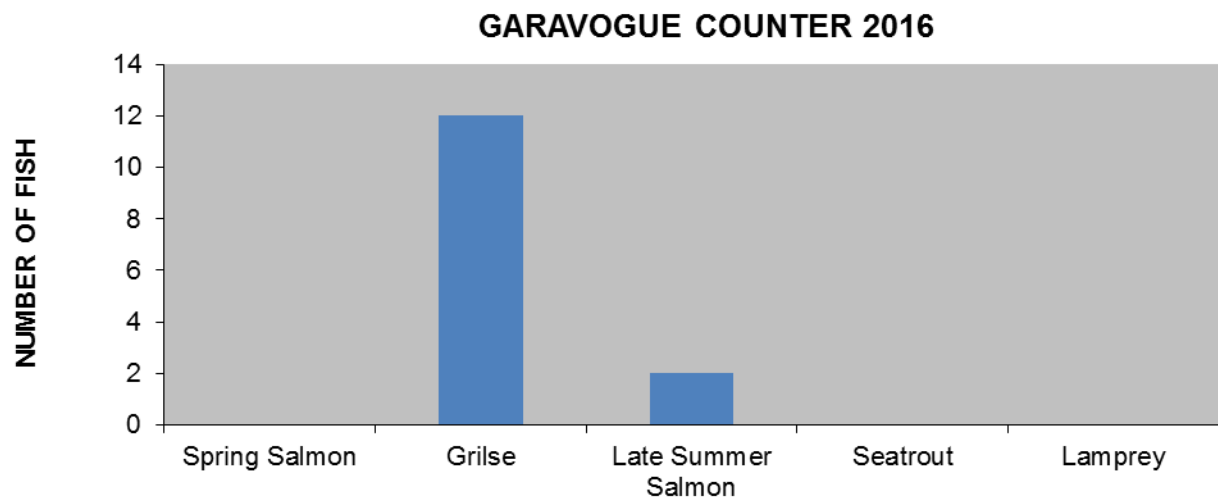
The counter is situated in Sligo town up stream of the estuary. The counter is an infra-red Vaki situated in the fish pass. The counter gives a partial count for the river. Due to the low nature of the weir adjacent to the counter the proportion of fish counted is a small percentage of the overall population.

### 26.2 Operation

The counter was operational for the year. The number of fish using the fish pass is dropping each year. This may not reflect the salmon runs as fish can cross the adjacent weir with relative ease. Fish exit the system over the weir and are not seen by the counter. There is no CCTV in operation at this site which is normal for a Vaki counter site.

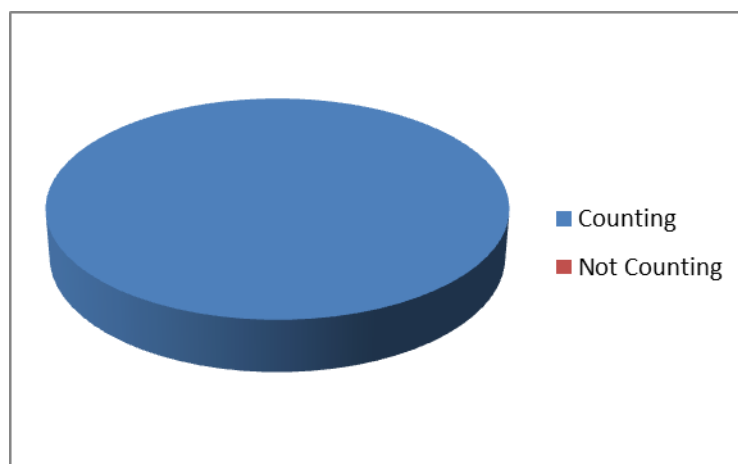
**Table 51: Counter data for the Garavogue River**

Fish Species	Number
Spring salmon	0
Grilse	12
Late Summer Salmon	02
Sea Trout	0
Lamprey/Other	0



**Table 52: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
365	0



## 27 Eske River



Counter type: Logie

Operating: Jan- Dec 2016

Performance: Good

Verified: Yes

### 27.1 River Site and Description

The Eske fishery consists of the 5km River Eske, the 900 acre Lough Eske and its tributaries. The fishery has a run of spring salmon, a good run of grilse and late salmon. The counter at this installation is a resistivity (Logie) counter.

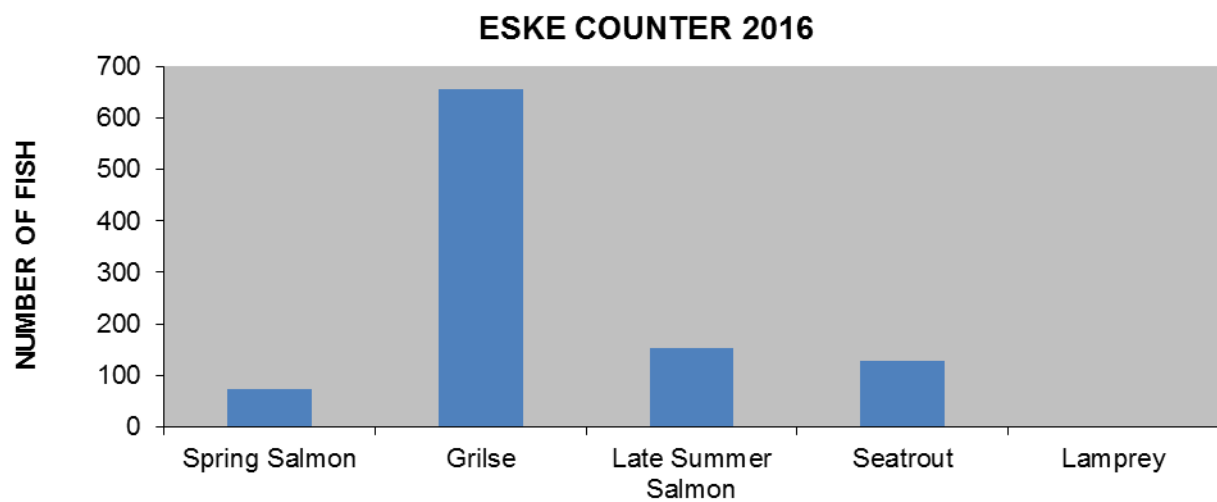
### 27.2 Operation

The counter worked well all year and a full count for the year on all 3 channels was obtained. There were fewer power cuts this year and the U.P.S. coped with all of these since they were of short duration. The counter was downloaded and all data was verified on a weekly basis giving accurate counts for the river. Two new cameras and cables were installed in 2016 and the connections to the weir were upgraded.



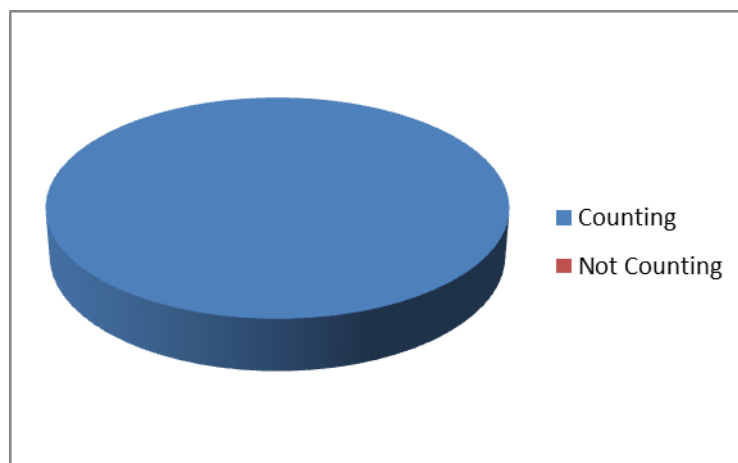
**Table 53: Counter data for the Eske River**

Fish Species	Number
Spring salmon	72
Grilse	657
Late Summer Salmon	153
Sea Trout	129
Lamprey/Other	0



**Table 54: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
365	0



## 28 Eany River



Counter type: Logie

Operating: Jan- Dec 2016

Performance: Good

Verified: Yes

### 28.1 River site and description

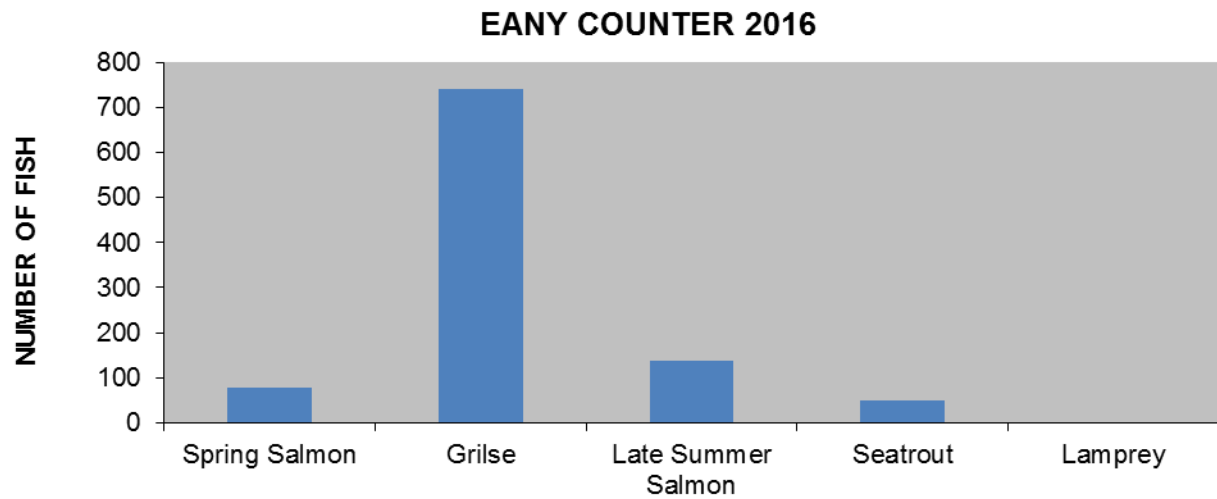
The Eany water fishery is a spate river and forms part of the 125sq km Eany catchment area comprising the Eany water, the lower reaches of the Eanymore and the lower reaches of the Eanybeg. The fish counter is located in the lower section of the river just above the tidal area. The fishery has a small run of spring fish but is noted for its midsummer runs of grilse, late runs of summer salmon and for sea-trout.

### 28.2 Operation

The Logie counter worked well resulting in a fairly comprehensive count for the year for the river. A small number of maintenance issues were sorted out promptly and this ensured a continuous accurate count. All of the data collected by the counter has been verified by CCTV cameras.

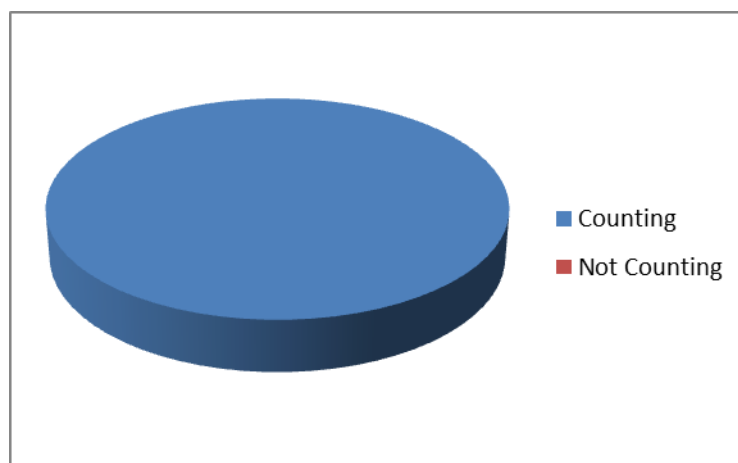
**Table 55: Counter data for the Eany River**

Fish Species	Number
Spring salmon	77
Grilse	741
Late Summer Salmon	139
Sea Trout	49
Lamprey/Other	0



**Table 56: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
365	0



## **Conclusion**

The fish counter programme has operated successfully with almost all the counters sites providing accurate verified data for the year. Investment in the fish counter programme continued with two Vaki frames being refurbished at significant cost and replacing camera equipment at numerous counter sites. A new counter site was added at the end of 2016 on the Lackagh in Donegal which will be operational early in 2017.

Plans for 2017 include the continued maintenance and upgrade of the existing sites to ensure that they all deliver complete data set. The programme continues to require investment in time and money to ensure it can deliver the verified information required and some upgrades of Vaki counters will be required in 2017.

## **Acknowledgements**

The compilation of this report would not be possible without the expert work and efforts made by many staff attending to the counters and the relevant software. I am also indebted to the team of staff who put in the time working on the counters and verifying the results.