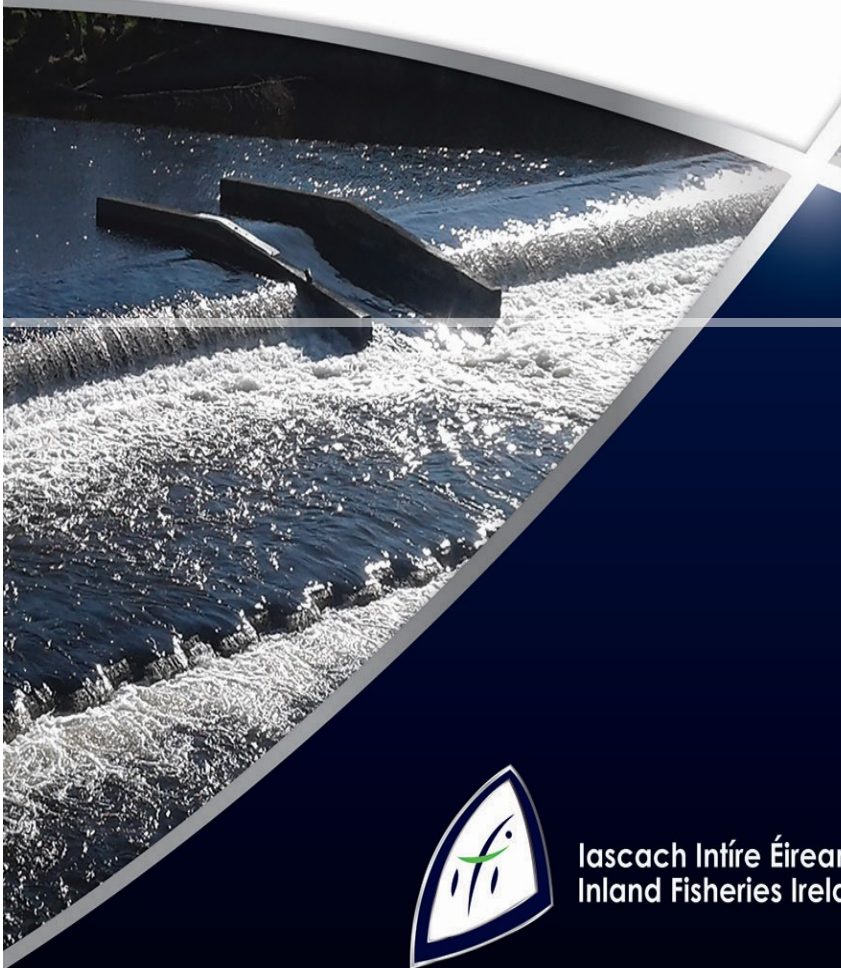


# IFI Consolidated Fish Counter Summary Report

2020

IFI/2021/1-4540



Iascach Intíre Éireann  
Inland Fisheries Ireland



## Foreword

Since Inland Fisheries Ireland (IFI) came into existence IFI has consolidated all counters and counter data under the one branch of the organisation. In addition, a substantial effort has been made to continually upgrade the counter network and up skill and train new operators to ensure IFI operates the best data collection service available.

IFI allocates time each year to plan and look for current trends and future developments which could be incorporated into the fish counter programme. The future development of the counter network is constantly evolving with issues of compatibility, software and availability of hardware all requiring management as the programme looks to secure its long-term future. Remote access solutions are being investigated to assist in reducing the carbon footprint of the programme while increasing the download capability. These issues have been incorporated into a risk-based assessment plan for the management of the programme.

The national network of counters operated successfully over the twelve-month period and remained unaffected by the global pandemic. 2020 was a very successful year for the programme. One third of the counter sites have been successfully upgraded with high-definition technology and recording equipment. Sites identified in the five-year plan for structural upgrades have advanced into the planning and environmental assessment stage. Additional smaller structural projects which did not require significant funding or planning were completed.

IFI have 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.

**Gregory Forde**

Head of Operations



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## Introduction

The following report is a brief look at 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 previous years. When reviewing data in this context it is possible to understand the importance of consistent counts of fish to add to the cumulative dataset for each river year on year. The fish counter programme is focused on counting salmon nationally, but a small number of counters are specifically configured to count sea trout. The accuracy of the sea trout counts depends on the size of the fish and the water conditions at the time.

During 2020 the number of counters which did not provide continuous counts was insignificant as temporary counters were dispatched to cover the sites during repairs. The national network of counters operated successfully over the twelve-month period. Despite the global pandemic new recording equipment and high-definition cameras were successfully installed on ten sites and IFI hope to complete ten more in 2021.

The inclusion of a reporting and maintenance record section on the new counter data management portal automatically contacts those responsible for repairs and the Head of Operations ensures a quick response time. The web site has been further developed to enable the IFI administrators to carry out function which previously had required the input from the programmer. The portal 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 2020

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

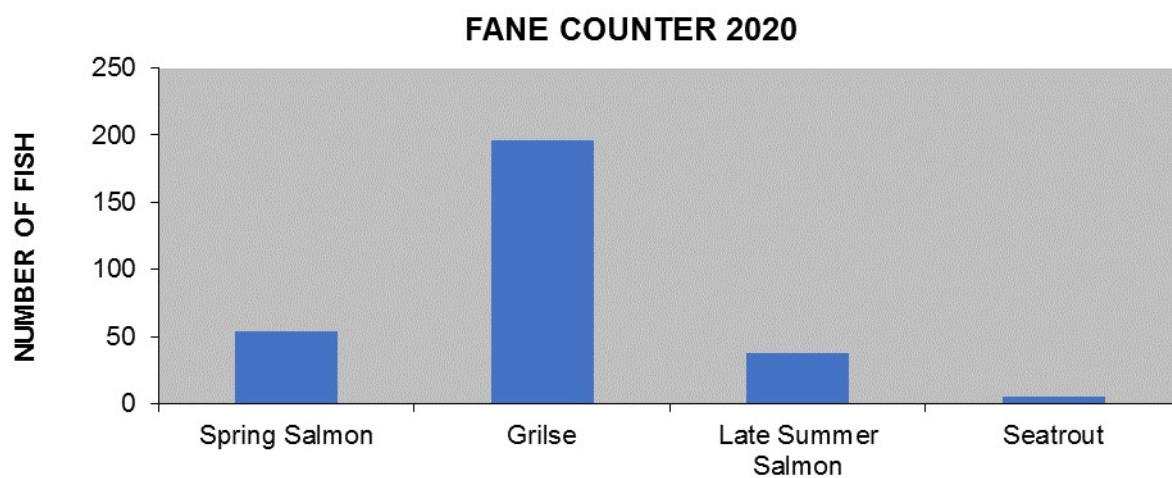
The counter worked well during the year with maintenance was carried out regularly. The counter experienced seven days offline in February due to storms. A new camera and cable were installed to replace and existing one which has been damaged over the winter. Counter hardware was tested during the year and calibrated. Cleaning the weir face can be difficult with limited access. The counter provided good data for 2020. Its hoped to upgrade the recording equipment with high-definition equipment in 2021.



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

Fish Species	Number
Spring salmon	54
Grilse	196
Late Summer Salmon	38
Sea Trout	05

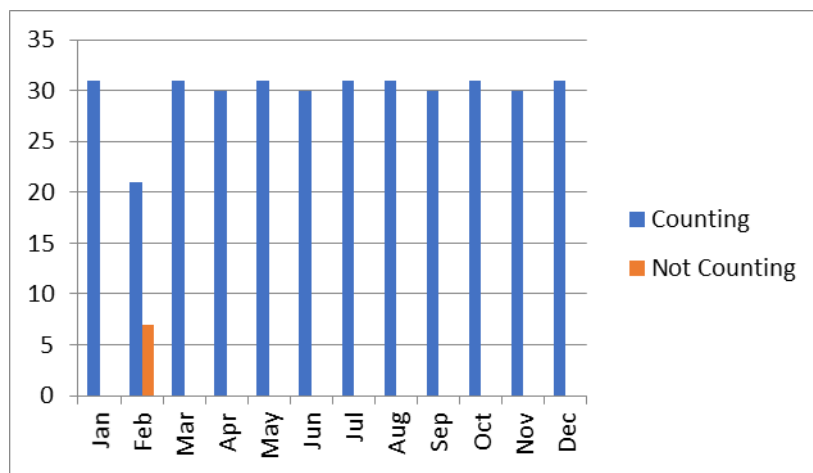
**Graph 01: Fane Counter 2020**



**Table 02: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
358	07

**Graph 02: Counter Operational & Non-Operational (Days)**



## 2 River Dee



Type : Vaki

Operating: Jan- Dec 2020

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 is a partial counter and the percentage of the fish counted depends on weather and water levels. This data is uploaded by IFI staff from the Dundalk District. The data is verified on site using the Winari software.

### 2.2 Operation

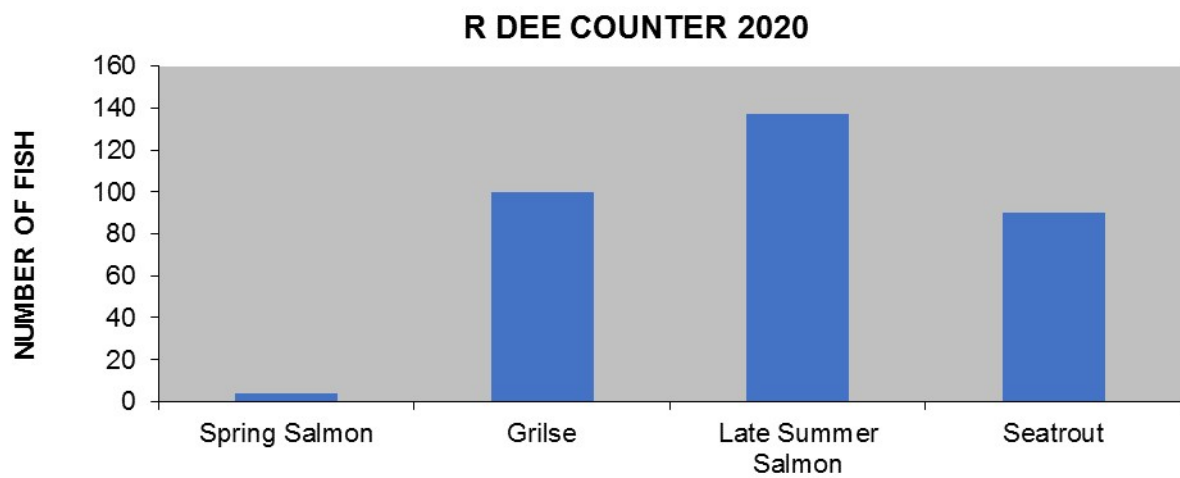
A new Vaki Riverwatcher had been purchased for the site and was installed in 2019. The instream panels needed additional protection to prevent them getting damaged in flood conditions. The protection barrier was fabricated and installed, and the counter has recorded data ever since. A comprehensive set of data is available for the river for 2020. A small number of fish may be able to make it over the weir thus bypassing the counter in flood conditions.



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

Fish Species	Number
Spring salmon	04
Grilse	100
Late Summer Salmon	137
Sea Trout	90

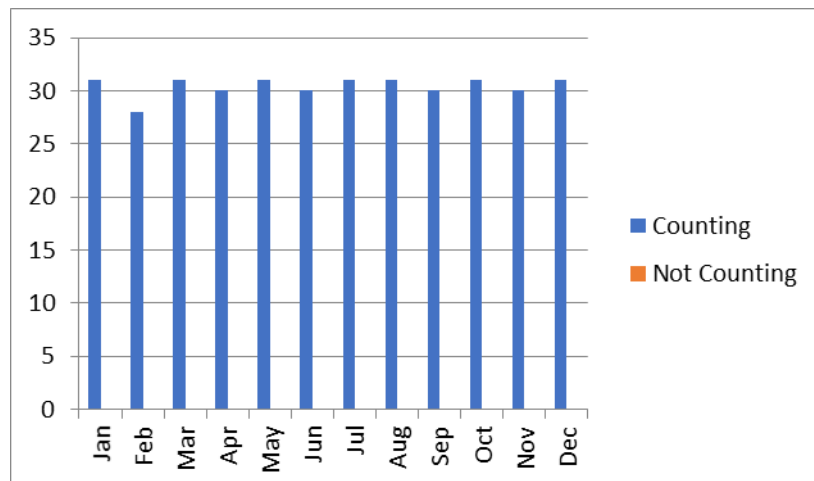
**Graph 03: River Dee Counter 2020**



**Table 04: Counter Operations**

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

**Graph 04: Counter Operational & Non-Operational (Days)**



## 3 Boyne Counter



Counter type: Logie and Vaki

Operating: Jan – Dec 2020

Performance: Good

Verified: Yes

### 3.1 River site and description

The Fish counters at Blackcastle in Navan, Co. Meath consist of 6 different channels which count fish travelling up and down the River Boyne system. These are made up of 4 crumps 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

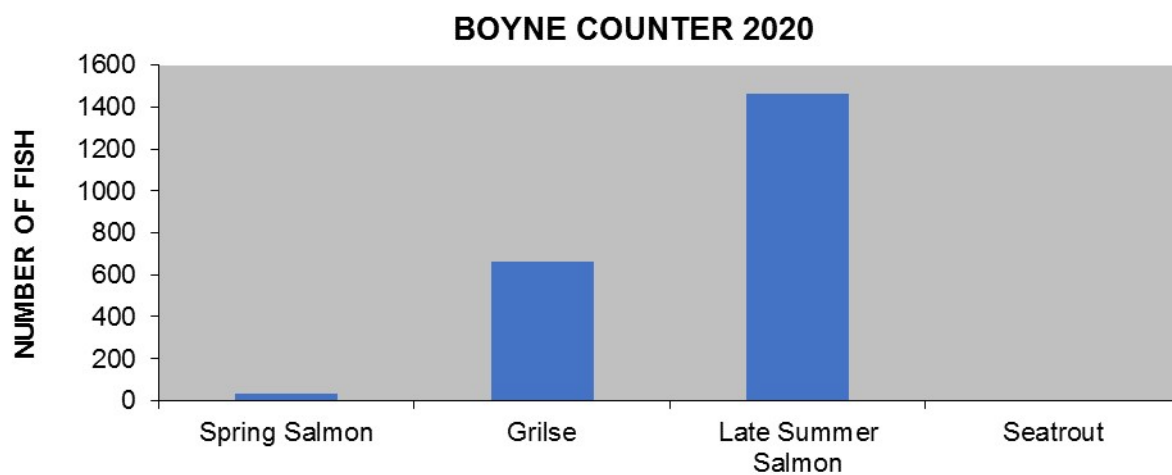
The counters give an accurate total of the fish that travel through them; the number of fish that cross up and down across Blackcastle Weir is unknown. This counter provides a partial count but counts a high percentage of the run of fish. The counter functioned well throughout the year. The hardware used to download the counter has had some minor upgrades during 2020 and will be upgraded to full high definition in 2021. Five days of counting were lost due in February during changeover of equipment – however, not a lot of fish would be expected to be travelling upstream at this time of the year.



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

Fish Species	Number
Spring salmon	33
Grilse	660
Late Summer Salmon	1462
Sea Trout	0

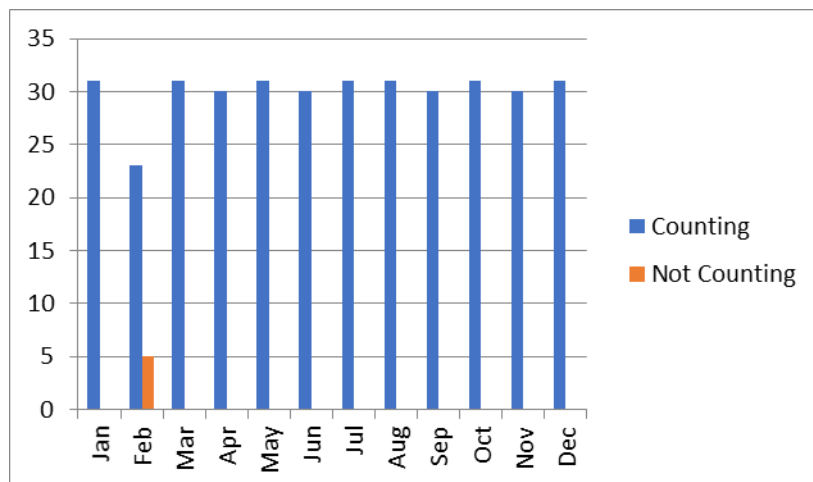
**Graph 05: Boyne Counter 2020**



**Table 06: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
360	05

**Graph 6: Counter Operational & Non-Operational (Days)**



## 4 Liffey (Island Bridge)



Counter Type: Vaki

Operating: Jan – Dec 2020

Performance: V Good

Verified: Yes

### 4.0 River site and description

The fish counter is at Island bridge, 5km west of Dublin city centre. It is an older Vaki counter and was recently transferred to IFI from the Marine Institute. The data is downloaded and verified locally on computer system which is housed in a hut beside the weir.

### 4.1 Operation

This is the first year of full operation of the counter by IFI staff, our sincere thanks to Nigel Bond, Marine Institute for his assistance and guidance during the handover. Maintenance was carried out on a regular basis and the counter performed well. Some fish bypass the counter particularly at high tide and in flood conditions. Additional works to upgrade the facility from a health and safety perspective are ongoing.

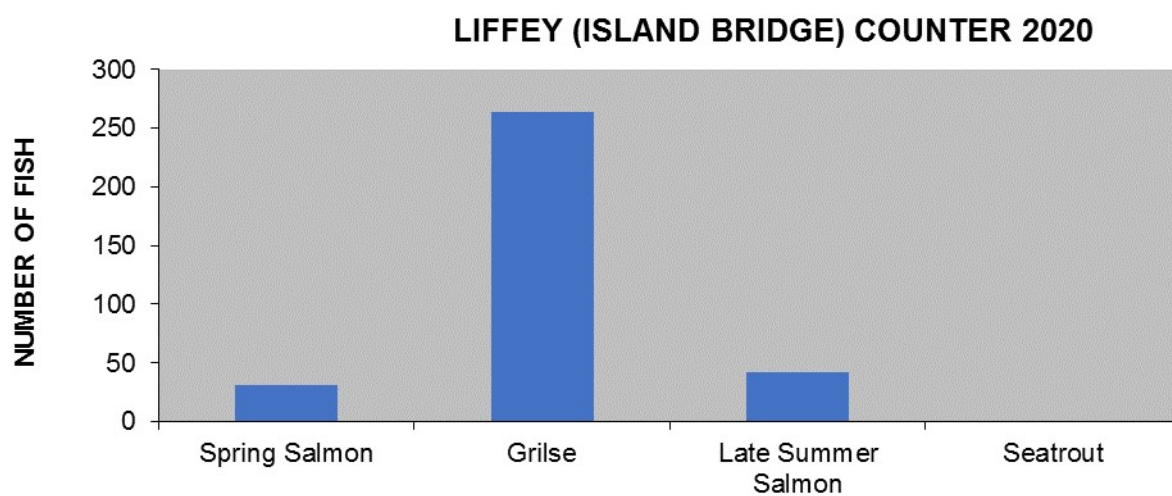




**Table 07: Counter data for the R. Liffey**

Fish Species	Number
Spring salmon	31
Grilse	264
Late Summer Salmon	42
Sea Trout	105

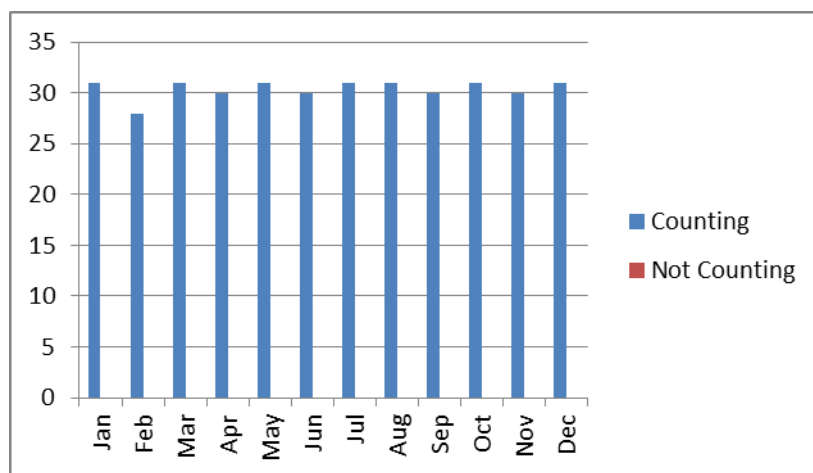
**Graph 7: Liffey (Island Bridge) Counter 2020**



**Table 08: Counter Operations**

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

**Graph 8: Counter Operational & Non-Operational (Days)**



## 5 Slaney Counter



Counter Type: Logie

Operating: Jan – Dec 2020

Performance: Good

Verified: Yes

### 5.0 River site and description

The 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 on the counter. 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.

### 5.1 Operation

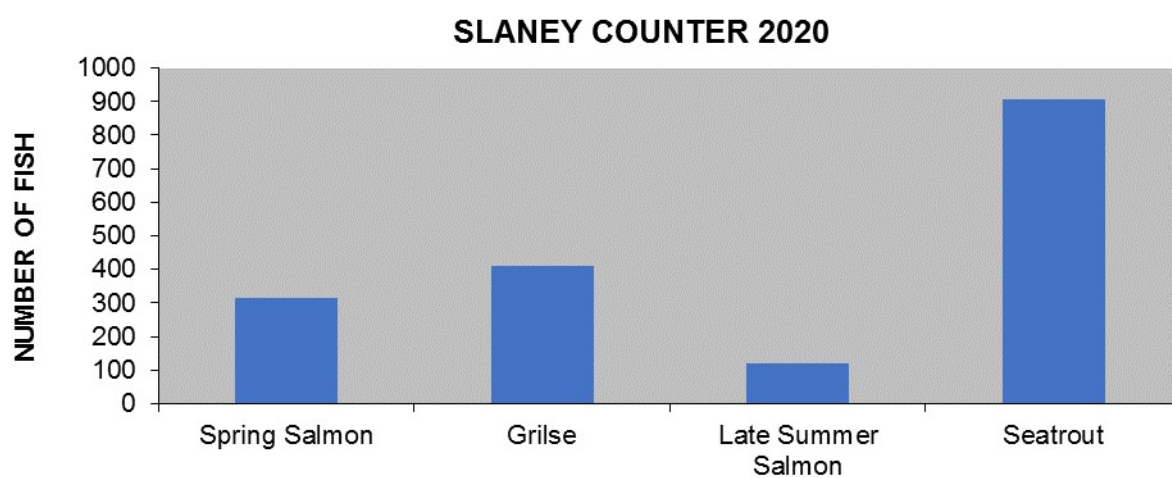
The counter is both efficient and accurate in terms of the fish that move upstream or downstream through the tube, but an unknown proportion of the run by-passes the counter at other points on the weir. The Covid lockdown during the year limited access to the site and data, as the counter hut is on the grounds of a processing yard which was locked down. However, the automatic counter continued to record and the data was retrieved when the lockdown was lifted.



**Table 09: Counter data for the R. Slaney**

Fish Species	Number
Spring salmon	314
Grilse	410
Late Summer Salmon	120
Sea Trout	905

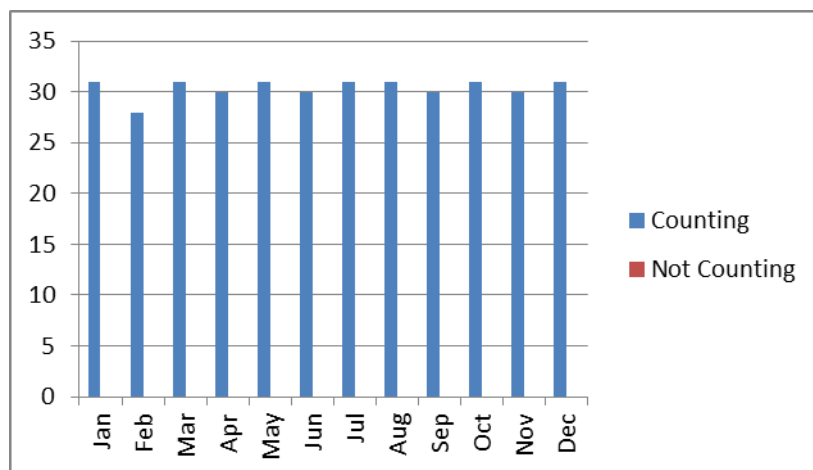
**Graph 09: Slaney Counter 2020**



**Table 10: Counter Operations**

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

**Graph 10: Counter Operational & Non-Operational (Days)**



## 6 Kerry Blackwater



Type : Logie

Operating: Jan – Dec 2020

Performance: Good

Verified: Yes

### 6.1 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 only. The river is sixteen miles long with one small lake and is considered a spate river.

### 6.2 Operation

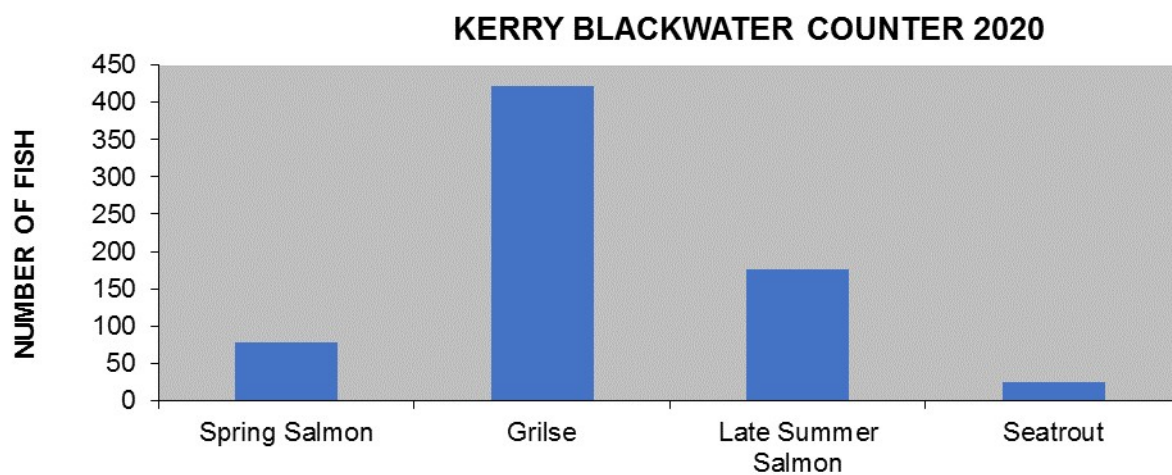
The counter operated well during the year. The site has had a substantial upgrade to the cameras and recording equipment. The site now has high-definition cameras on each crump. The counter has been reconfigured and tested several times during the year to ensure it continues to count as accurately as possible. This site was downloaded regularly, and data verified and uploaded. This is a site which would benefit from remote access. The site doesn't count many sea trout as it has been configured to count salmon as accurately as possible.



**Table 11: Counter data for the Kerry Blackwater River**

Fish Species	Number
Spring salmon	78
Grilse	421
Late Summer Salmon	176
Sea Trout	24

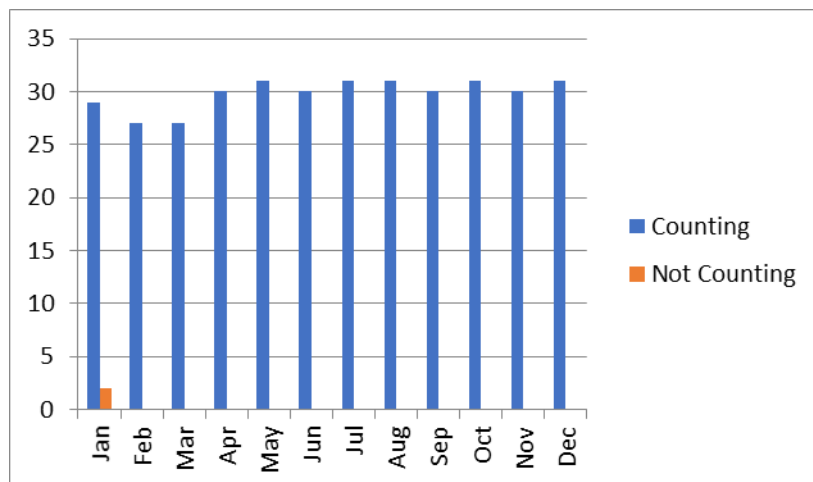
**Graph 11: Kerry Blackwater Counter 2020**



**Table 12: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
363	02

**Graph 12: Counter Operational & Non-Operational (Days)**



## 7 Waterville



Type : Logie

Operating: Jan –Dec 2020

Performance: v Good

Verified: Yes

### 7.1 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.

### 7.2 Operation

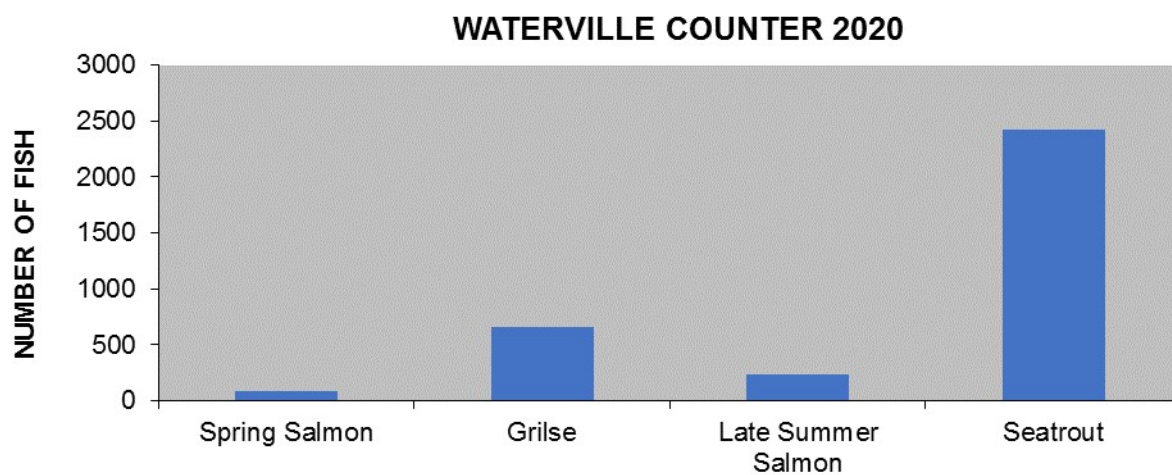
The fish counter hardware is in Waterville house which was closed for a significant time during the year due to Covid-19. However, prior to the lockdown new recording hardware and remote access had been set up on the site. This allowed operators to access the counter and cameras daily. The experiment to establish remote access to the site has proved very successful during a year of significant lockdowns and has protected the staff in Waterville house and staff of IFI.



**Table 13: Counter data for Waterville**

Fish Species	Number
Spring salmon	89
Grilse	662
Late Summer Salmon	231
Sea Trout	2,426

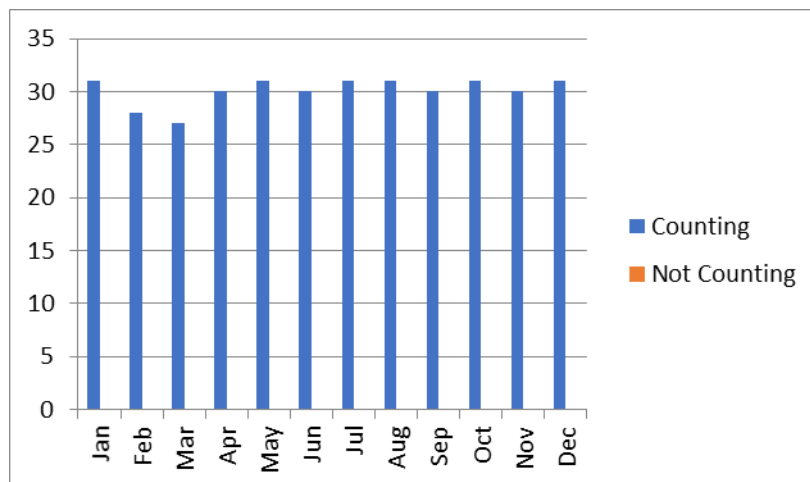
**Graph 13: Waterville Counter 2020**



**Table 14: Counter Operations**

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

**Graph 14: Counter Operational & Non-Operational (Days)**





## 8 River Maine



Type : Logie

Operating: Jan-Dec 2020

Performance: Good

Verified: No

### 8.1 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 “Marshall’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.

### 8.2 Operation

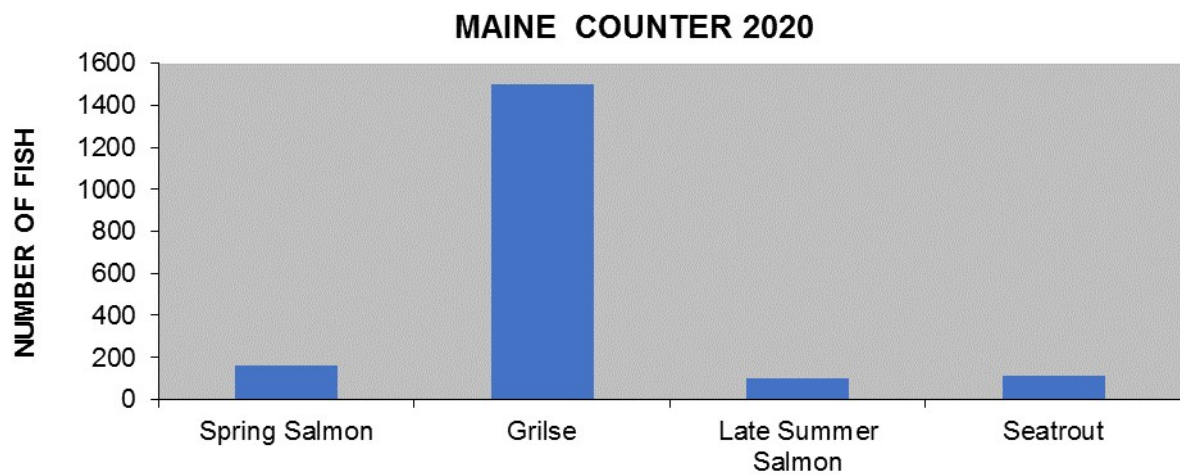
The counter has operated well for the 2020 season as a result of the completion of upgrades to the connections. The site has had extensive upgrades to the recording equipment and installation of high-definition cameras. The counter was checked and reconfigured a number of times during the year to ensure the best count possible was available. 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 has precast crumps, has significant background noise which affects the accuracy of the counter. The data from this weir has been downgraded to unverified due to the level of background noise on the weir. The department engineers are assessing the weir and significant repairs are proposed once a report is available.



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

Fish Species	Number
Spring salmon	163
Grilse	1,501
Late Summer Salmon	103
Sea Trout	112

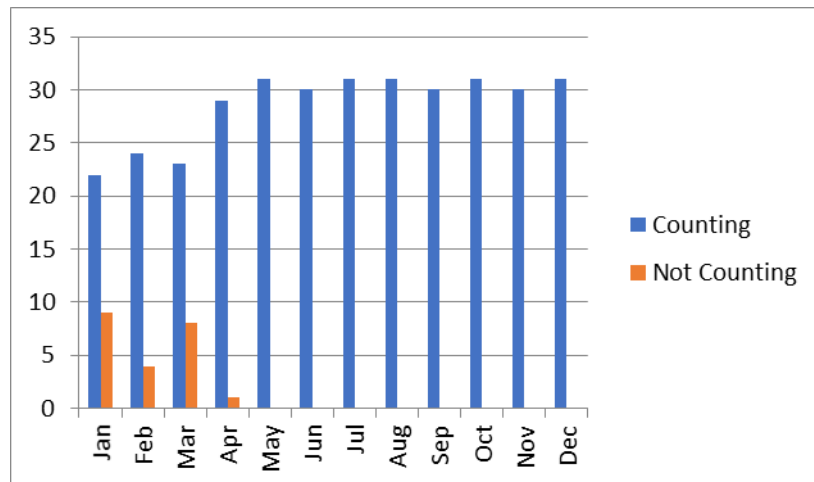
**Graph 15: Maine Counter 2020**



**Table 16: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
343	22

**Graph 16: Counter Operational & Non-Operational (Days)**



## 9 Feale River



Counter type: Logie

Operating: Jan-Dec 2019

Performance: V. Good

Verified: Yes

### 9.1 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 below its conservation limit and is therefore open on a catch and release basis.

### 9.2 Operation

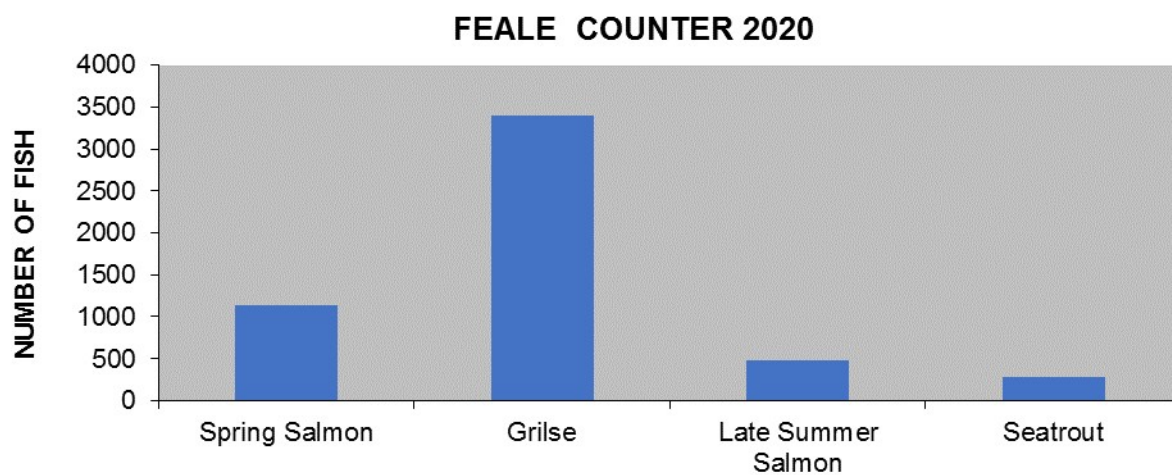
The counter is a one channel counter operated on a crump which was installed to assist fish over the large weir. The counter operated well over the course of the summer. This counter provides consistent accurate data. New high-definition cameras were installed on site with upgraded hardware to assist our ability to verify fish crossing the weir. A small number of fish have been seen by-passing the counter by going over the weir in high water conditions. This counter is set up to count salmon. Downtime on the site was during upgrade work to install new equipment.



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

Fish Species	Number
Spring salmon	1,143
Grilse	3,403
Late Summer Salmon	487
Sea Trout	280

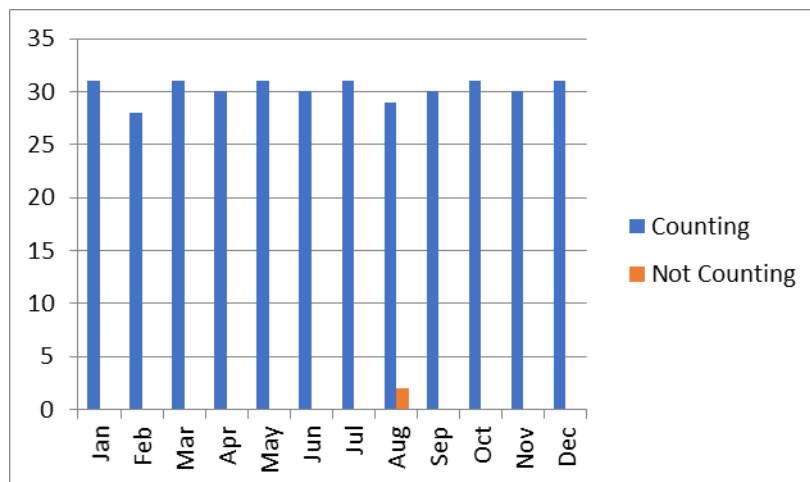
**Graph 17: Feale Counter 2020**



**Table 18: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
363	02

**Graph 18: Counter Operational & Non-Operational (Days)**



## 9 Maigue River



Counter type: Logie

Operation Period: Jan – Dec 2020

Performance: Good

Verified: No

### 10.1 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 pastureland and forms part of the renowned 'Golden Vale' agricultural area.

### 10.2 Operation

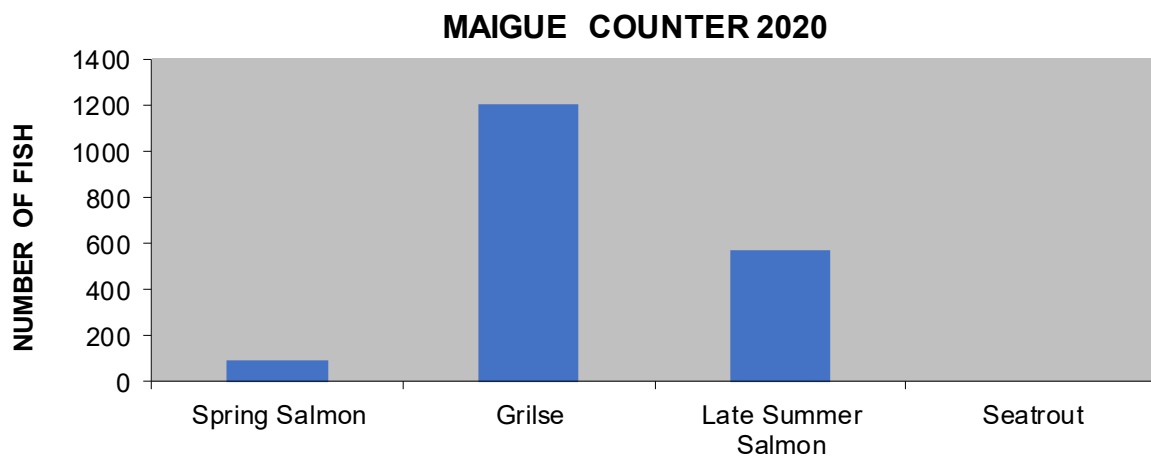
The Maigue counter is a ten-channel counter. The counter was completed in March 2013 and is a re-engineered crescent shaped weir. The site uses three counters to count all ten channels and therefore requires a greater amount of time to maintain and verify. In 2020 the counter was operational and worked well. The counting weir requires work after each winter to connections and electrodes due to significant debris and velocity of water during flood events. Counting of fish in the winter floods is very limited.



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

Fish Species	Number
Spring salmon	91
Grilse	1,201
Late Summer Salmon	571
Sea Trout	0

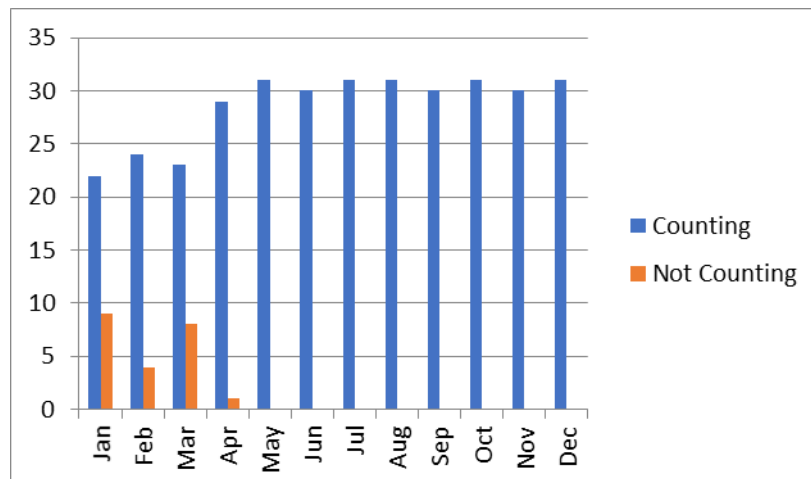
**Graph 19: Maigue Counter 2020**



**Table 20: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
343	22

**Graph 20: Counter Operational & Non-Operational (Days)**



## 11 Mulkear



Counter type: Logie

Operating: Jan-Dec 2020

Performance: Good

Verified: Yes

### 11.1 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.

### 11.2 Operation

The counter worked well and provided accurate counts for the river. All three crumps were operational and only minimal maintenance was required to keep this counter working. The counter site has been significantly upgraded and now has high-definition cameras on all crumps and new recording hardware. The upgraded site was vandalised, but these cameras have since been replaced and greater security installed. The site will provide verified counts for 2021.

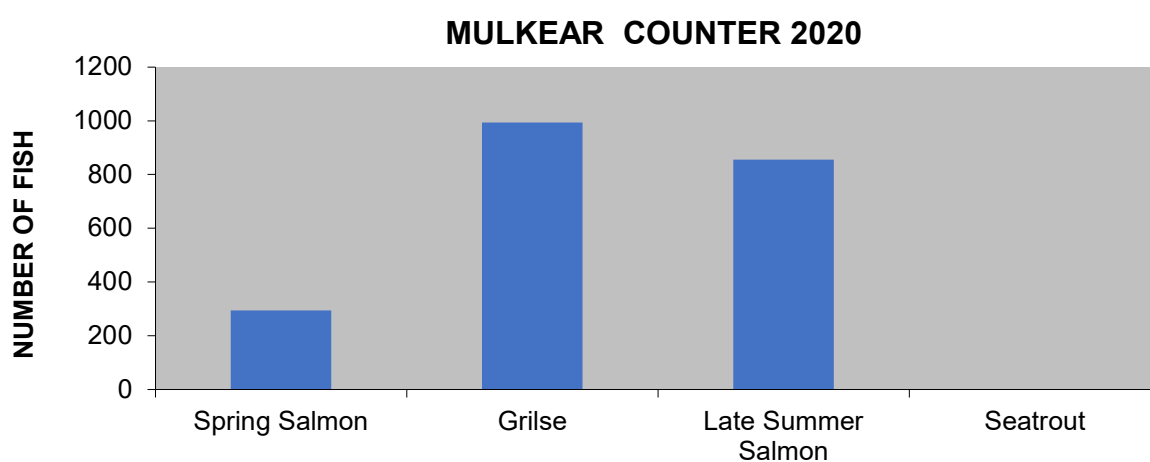




**Table 21: Counter data for the Mulkear River**

Fish Species	Number
Spring salmon	293
Grilse	994
Late Summer Salmon	856
Sea Trout	0

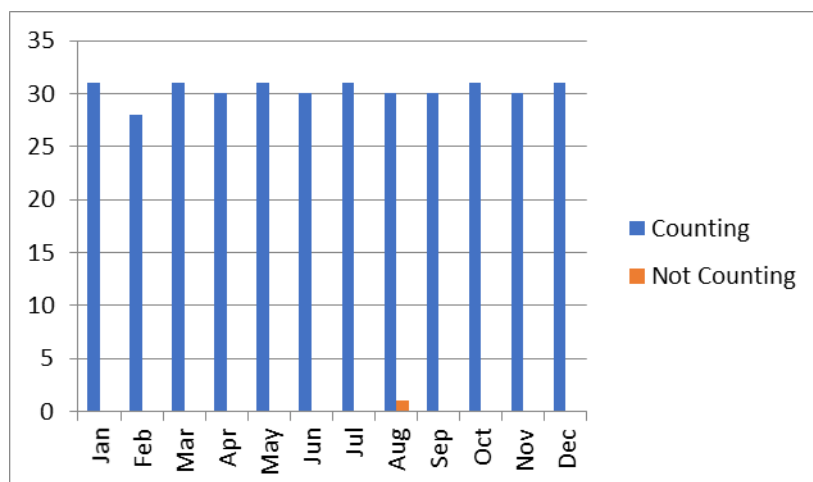
**Graph 21: Mulkear Counter 2020**



**Table 22: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
363	02

**Graph 22: Counter Operational & Non-Operational (Days)**



## 12 Fergus River



Counter type: Logie

Operating: Jan – Dec 2020

Performance: Good

Verified: Yes

### 12.1 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. 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 to migrate upstream past the old structure which is protected.

### 12.2 Operation

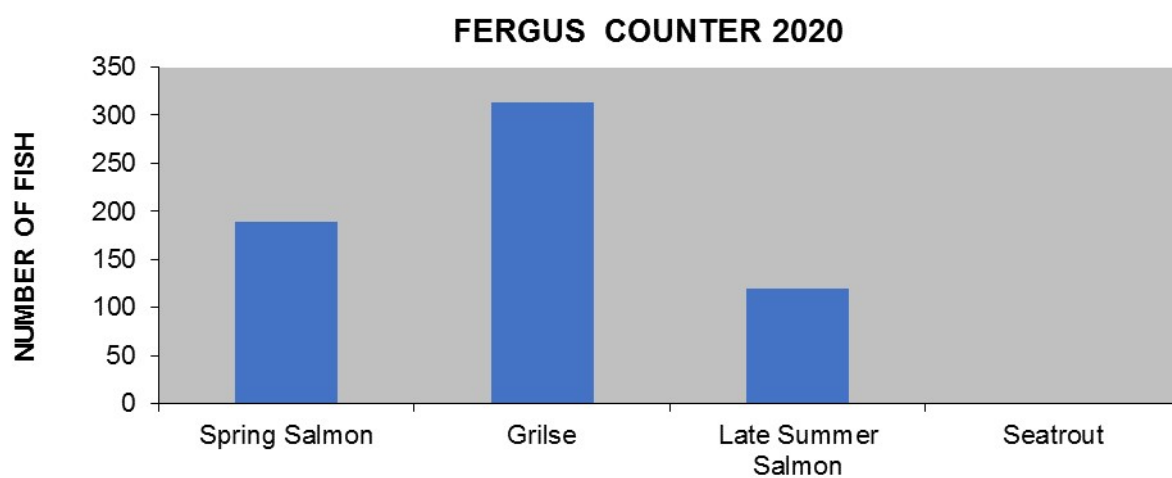
The counter is housed in the civic building adjacent to the river. This facilitated an upgrade to the site which includes cameras, computer and verification software which has greatly increased the capabilities of the facility. An additional underwater camera has been installed at the site to assist with verification. The civic building is now occupied which has limited the access during lock down, however the counter data is retrieved in post lockdown periods, verified and uploaded to website.



**Table 23: Counter data for the Fergus River**

Fish Species	Number
Spring salmon	189
Grilse	313
Late Summer Salmon	119
Sea Trout	0

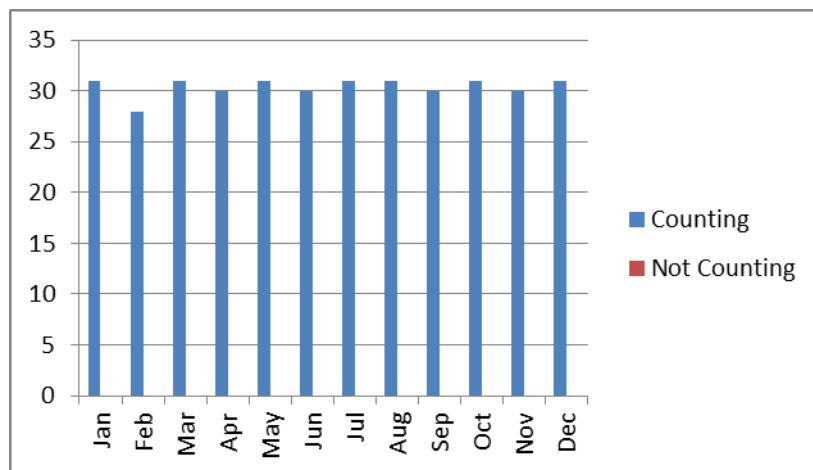
**Graph 23: Fergus Counter 2020**



**Table 24: Counter Operations**

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

**Graph 24: Counter Operational & Non-Operational (Days)**



## 13 Inagh River (Ennistymon)



Counter type: Logie tube

Operating: Jan – Dec 2020

Performance: Good

Verified: Yes

### 13.1 River site and description

The tube counter in Ennistymon on the Inagh River was 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.

### 13.2 Operation

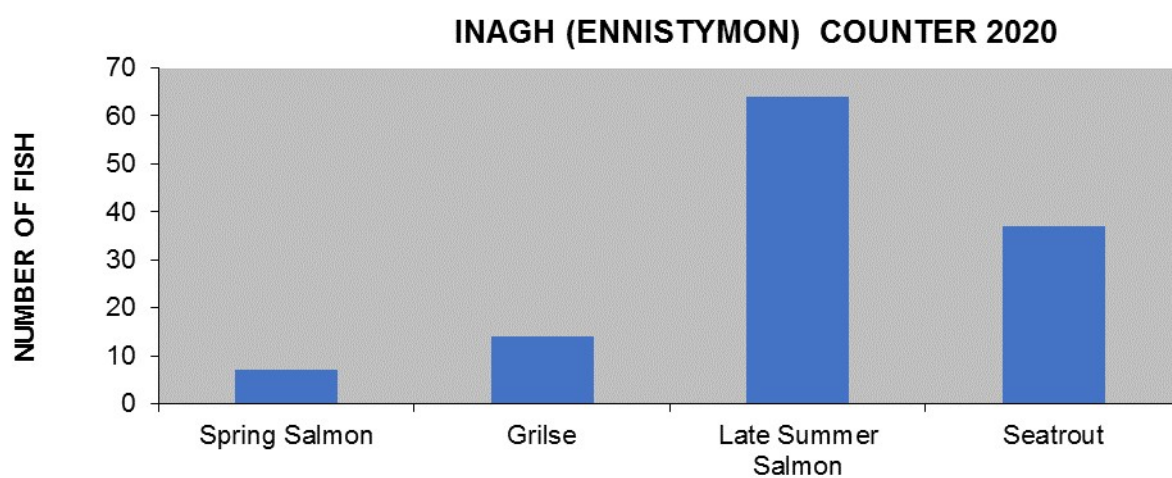
The counter was connected in late December 2014. The counter has performed well during the year. The run of fish into the system was very low. The cabinet used to house the recording equipment has been damaged due to vandalism and will need repairing. Fish running this system must enter an extensive fish pass to make it above the falls and enter the river and be counted.



**Table 25: Counter data for the Inagh (Ennistymon) River**

Fish Species	Number
Spring salmon	07
Grilse	14
Late Summer Salmon	64
Sea Trout	37

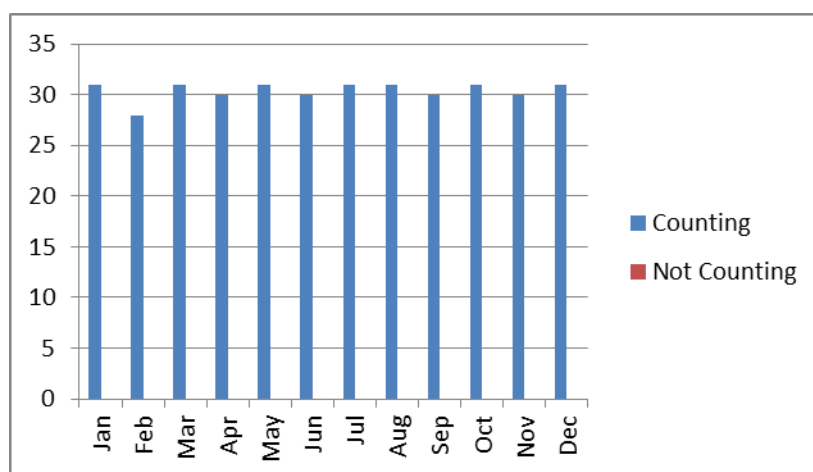
**Graph 25: Inagh (Ennistymon) Counter 2020**



**Table 26: Counter Operations**

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

**Graph 26: Counter Operational & Non-Operational (Days)**



## 14 Dunkellin River



Counter type: Logie

Operating: No operational

Performance: n/a

Verified: No

### 14.1 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 this can lead to the weir being inundated for significant periods.

### 14.2 Operation

The counter equipment was removed to facilitate an OPW main drainage scheme and a new counter site will be constructed in 2021 where all the relevant equipment will be re-installed. The new counter site is located further up the catchment.

## 15 Corrib Counter



Type : Logie

Operating: Jan – Dec 2020

Performance: V.Good

Verified: Yes

### 15.1 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 run, in high water, through opened gates. This is a partial counter as it only counts fish ascending the river through the fish pass.

### 15.2 Counter operation

The counter operated well during the 2020 season. The counter data has been verified and is accurate. The counter worked well without interruption and all the data has been verified and uploaded to the web 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.

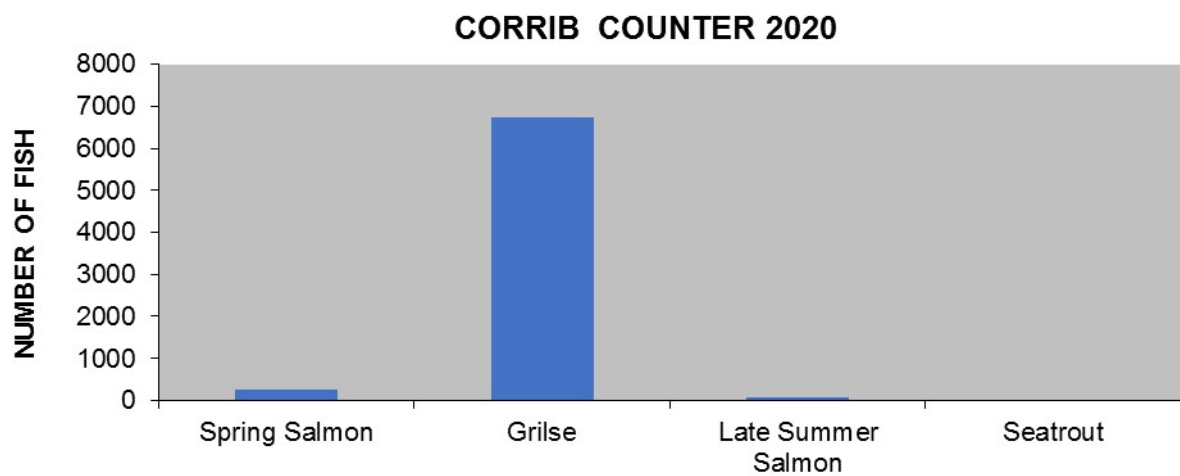




**Table 27: Counter data for the Corrib River**

Fish Species	Number
Spring salmon	258
Grilse	6,737
Late Summer Salmon	71
Sea Trout	0

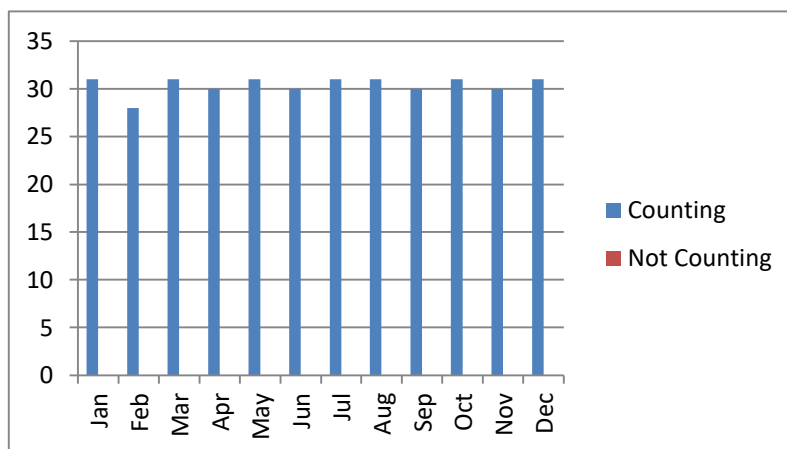
**Graph 27: Corrib Counter 2020**



**Table 28: Counter Operations**

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

**Graph 28: Counter Operational & Non-Operational (Days)**



## 16 Owenboliska River



Type : Logie

Operating: Jan – Dec 2020

Performance: V.Good

Verified: Yes

### 16.1 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 was funded by the conservation stamp fund. The counter operates on a purpose-built weir with one counting channel. A verification camera system is also in operation.

### 16.2 Counter operation

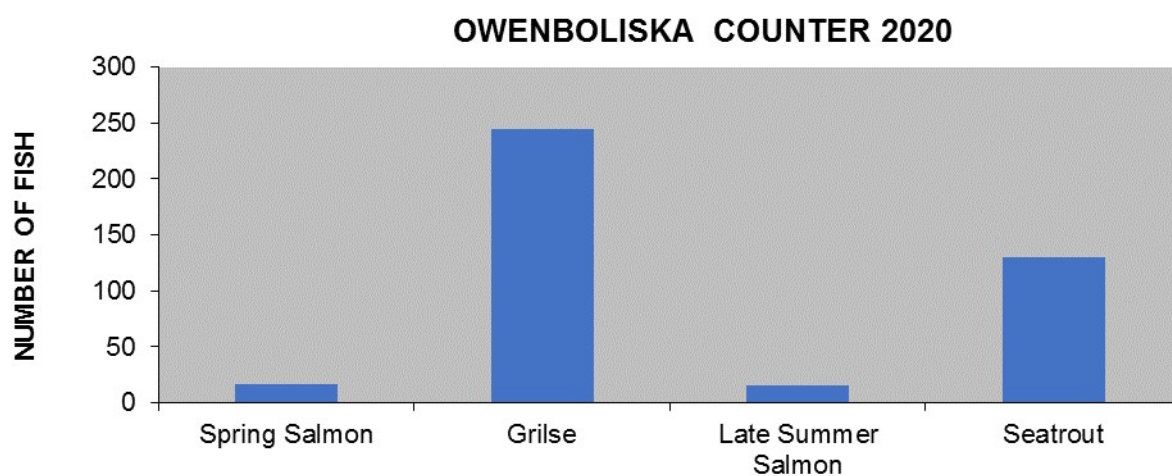
The counter has been operational for the entire season with no problems recorded. The counter is affected by the dumping of water from the impounding weir on the upstream lake by the local authority. Sea trout can run the counter during these events and will not be detected by the counter. The sea trout, counter data is more accurate in years where water levels are low and limited dumping of water from the impounding weir occurs. The site is maintained by Galway district staff and several visits were carried out to reconfigure the counter and ensure it was counting accurately.



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

Fish Species	Number
Spring salmon	17
Grilse	245
Late Summer Salmon	15
Sea Trout	130

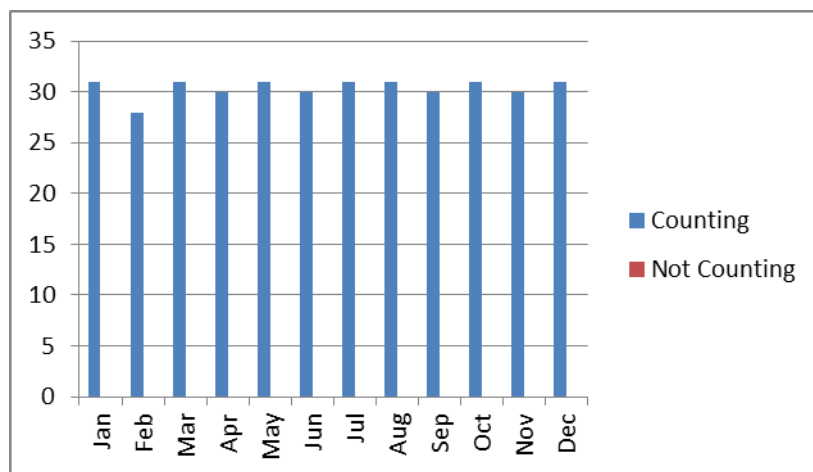
**Graph 29: Owenboliska Counter 2020**



**Table 30: Counter Operations**

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

**Graph 30: Counter Operational & Non-Operational (Days)**



## 17 Casla River



Type : Logie

Operating: Jan – Dec 2020

Performance: V.Good

Verified: Yes

### 17.1 River site and description

The Casla River is privately owned and is the main river of the Costello and Fermoy 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.

### 17.2 Operation

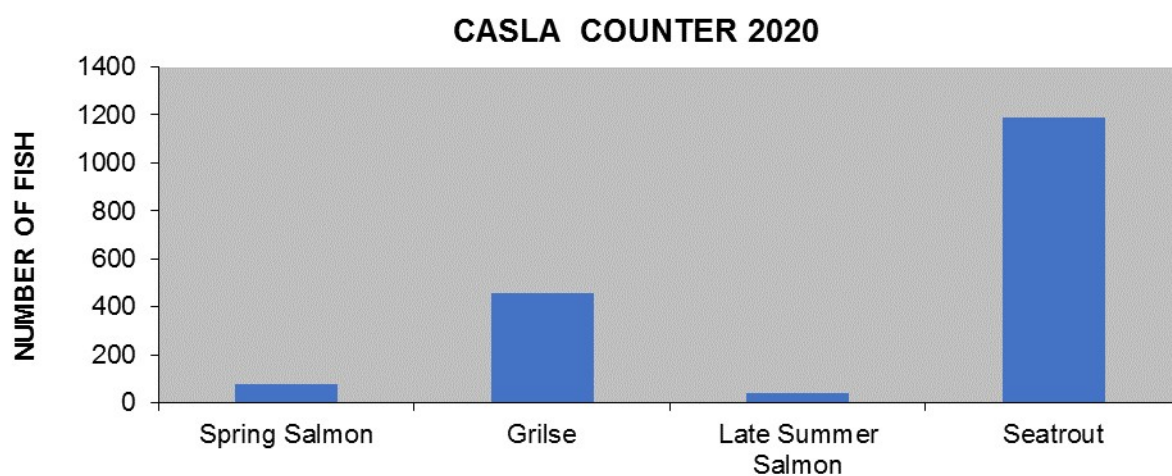
The counter operated very well throughout 2020. The counter hut has been upgraded with the removal of the old pumping equipment and the installation of a new steel door. The counter functioned well during the year. The computer was changed out prior to the upgrades to the hut. The counter has provided accurate counts with no loss of data for the year. Additional upgrades to the weir and hut are planned for 2021.



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

Fish Species	Number
Spring salmon	79
Grilse	459
Late Summer Salmon	41
Sea Trout	1,189

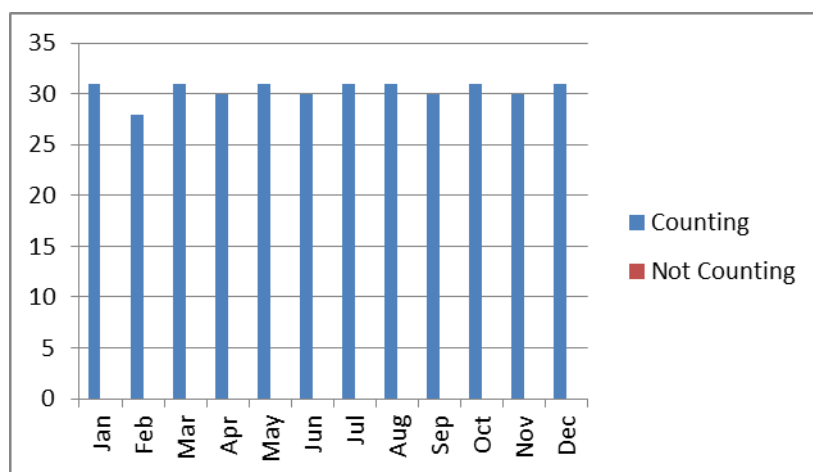
**Graph 31: Casla Counter 2020**



**Table 32: Counter Operations**

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

**Graph 32: Counter Operational & Non-Operational (Days)**



## 18 Invermore River



Type : Logie

Operating: Jan - Dec 2020

Performance: Good

Verified: Yes

### 18.1 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 web site.

### 18.2 Operation

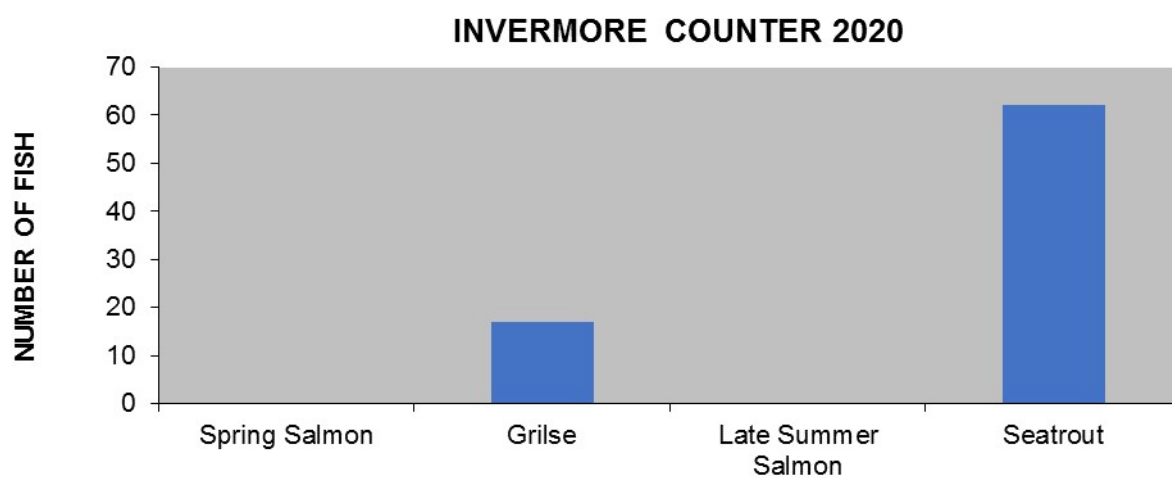
This counter was installed to replace an old trapping system and has worked well. However, the counter was removed to protect the equipment due to excessive dampness in the counter hut. A planned upgrade to the hut is required to ensure we are counting early in 2021.



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

Fish Species	Number
Spring salmon	0
Grilse	17
Late Summer Salmon	0
Sea Trout	62

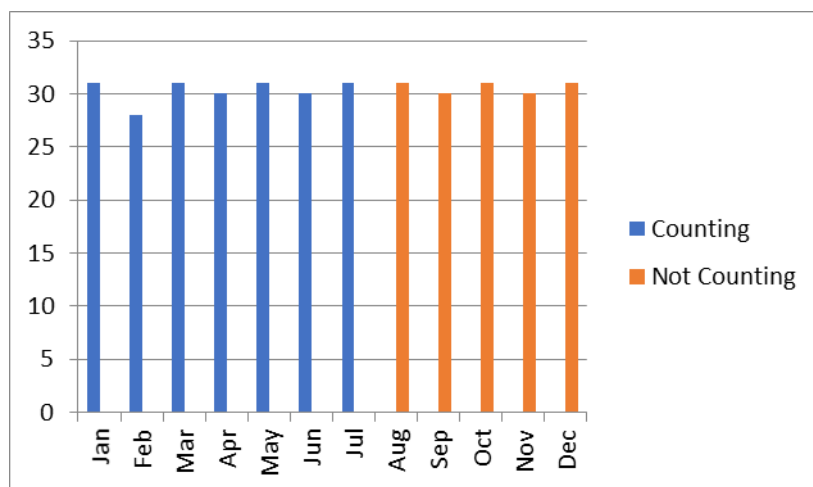
**Graph 33: Invermore Counter 2020**



**Table 34: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
212	153

**Graph 34: Counter Operational & Non-Operational (Days)**





## 19 Owengowla River



Type : Logie

Operating: Jan - Dec 2020

Performance: Good

Verified: Yes

### 19.1 River site and description

The Gowla counter is located at the old trapping facility 100m above the intertidal zone. This is a relatively 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.

### 19.2 Operation

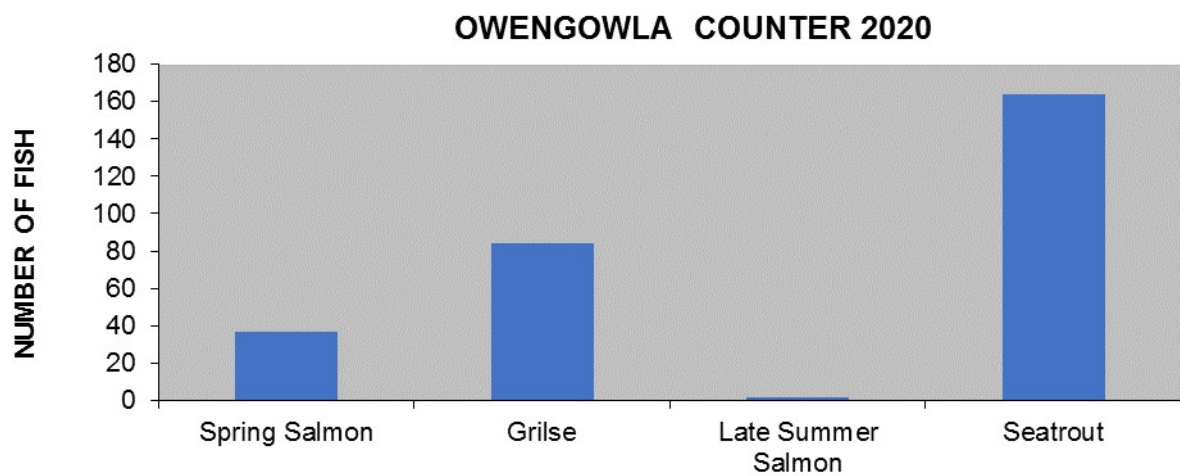
The counter on this site operates on a two-channel weir. The site provides a total count for salmon and sea trout for the river. The site has provided accurate counts for 2020 with no breakdowns or loss of data. Camera data for the river suggest a small run of very large salmon run this system every year. The run of sea trout recorded is lower than expected.



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

Fish Species	Number
Spring salmon	37
Grilse	84
Late Summer Salmon	02
Sea Trout	164

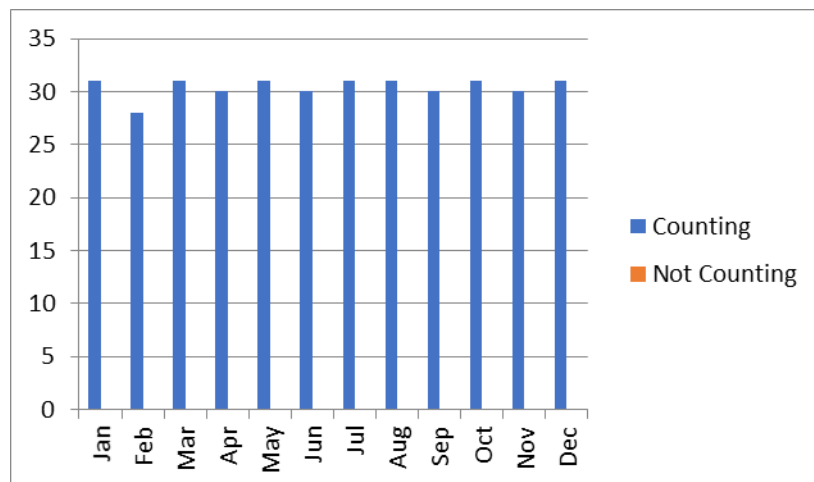
**Graph 35: Owengowla Counter 2020**



**Table 36: Counter Operations**

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

**Graph 36: Counter Operational & Non-Operational (Days)**



## 20 Inagh River



Type : Logie

Operating: Jan – Dec 2020

Performance: V.Good

Verified: Yes

### 20.1 River site and description

The Inagh counter is located on the Inagh River 40m above Derryclare Lake. It is the location of one of the the first 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.

### 20.2 Operation

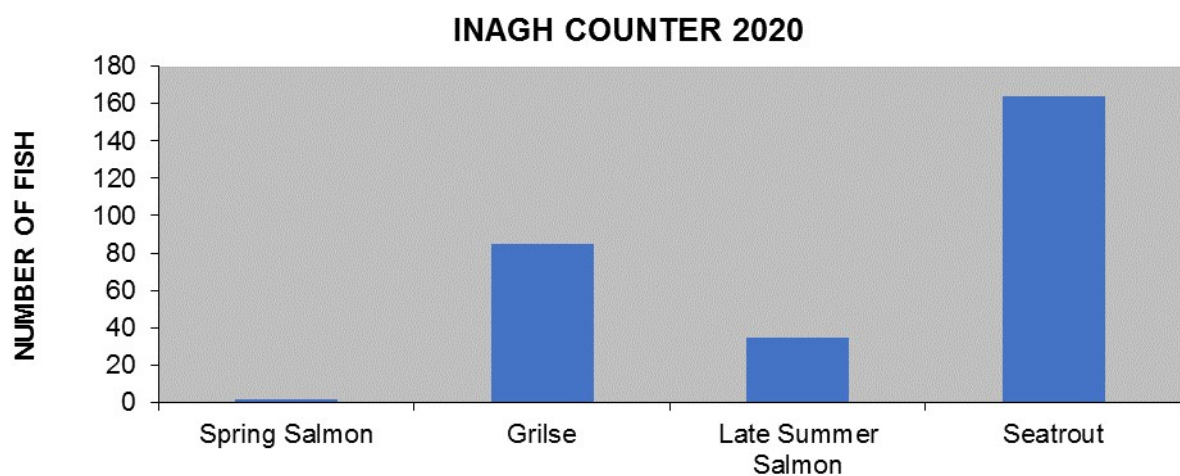
The counter worked well throughout 2020. The low water all summer allowed for accurate verification of the counts for salmon. The counter counts salmon accurately but sea trout can use an alternative channel which is not counted. The computer operating the counters was repaired and reconfigured on several occasions to ensure verification was possible on the full data set.



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

Fish Species	Number
Spring salmon	02
Grilse	85
Late Summer Salmon	35
Sea Trout	205

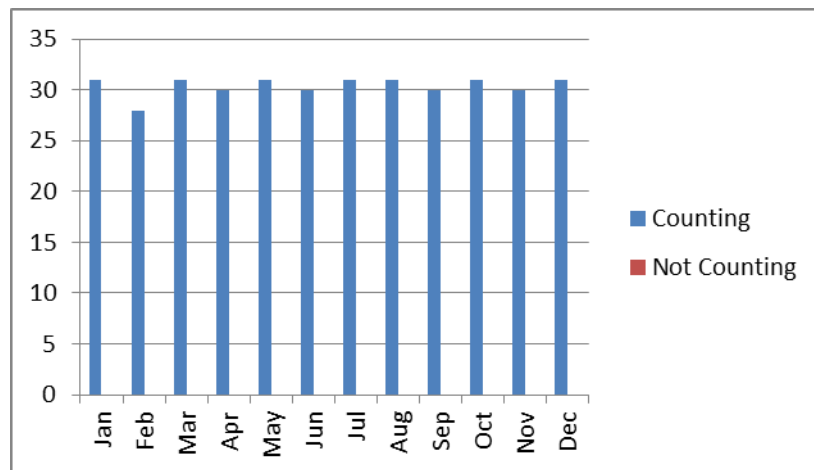
**Graph 37: Inagh Counter 2020**



**Table 38: Counter Operations**

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

**Graph 38: Counter Operational & Non-Operational (Days)**





## 21 Owenglin (Clifden River) River



Counter type: Vaki

Operating: Jan – Dec 2020

Performance: V. Good

Verified: Yes

### 21.1 River site and description

The site of the counter in the Owenglin River is in the existing fish pass 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 infrared silhouette images of the fish. The fishing rights to the Owenglin River are privately owned by the Clifden Angling Club. The catchment includes numerous small lakes.

### 21.2 Operation

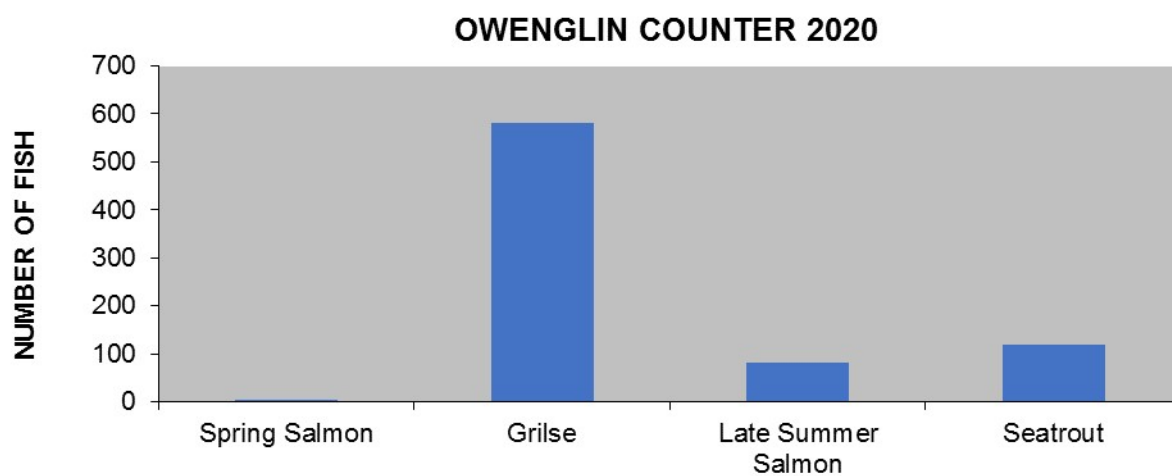
The counter has operated well over the course of the period when fish were running the system. Despite a significant flood event in the early winter which covered the counter hut the counter continued to operate having sustained no damage. However, significant damage has been caused to the baffles in the fish pass which will require repair as it houses the fish counter and allows the fish to traverse the falls. The river this year is open with a small surplus.



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

Fish Species	Number
Spring salmon	02
Grilse	580
Late Summer Salmon	82
Sea Trout	120

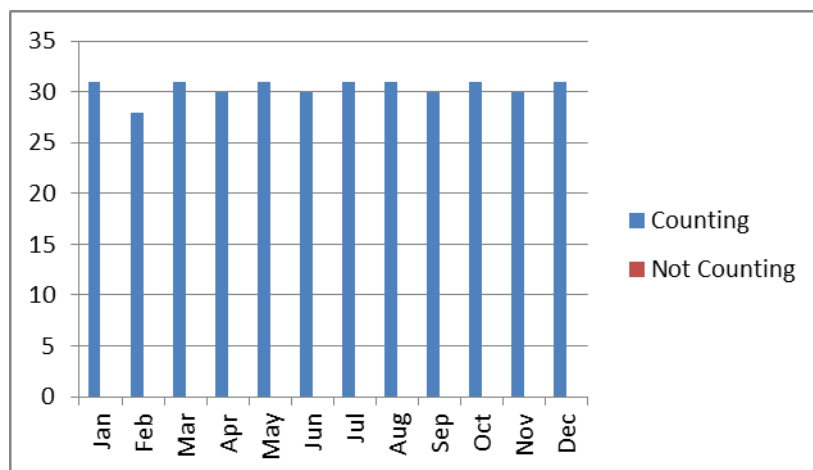
**Graph 39: Owenglin Counter 2020**



**Table 40: Counter Operations**

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

**Graph 40: Counter Operational & Non-Operational (Days)**



## 22 Dawros (Kylemore) River



Counter type: Logie

Operating: Jan – Dec 2020

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 and recorded most of the fish runs for the year. However, despite new recording equipment having been installed the ownership of the counter hut changed hands and the power was disconnected. IFI have engaged with the new owner and the site will be re-energised in early 2021. The counter has recorded a very significant increase in the run of salmon into the river which is above the national average in 2020.

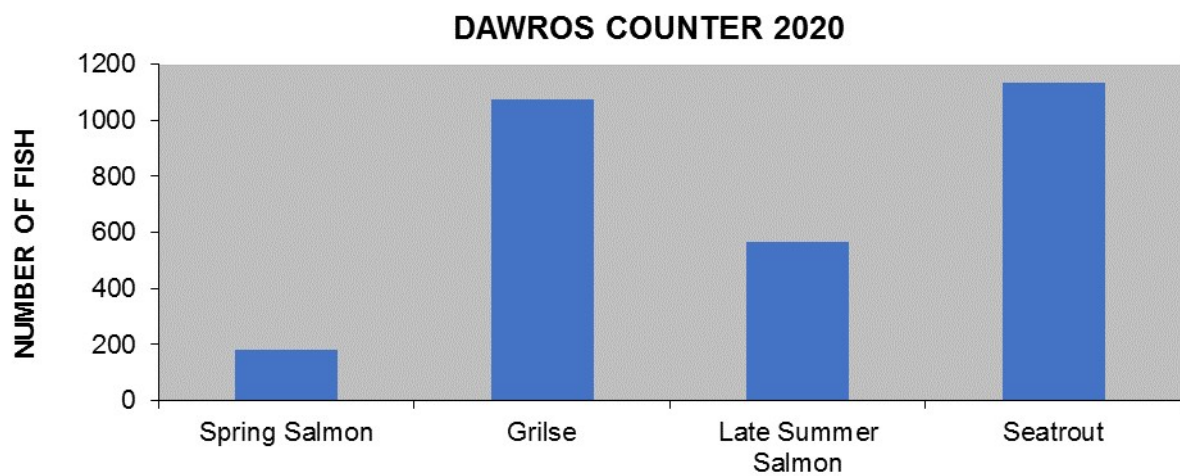




**Table 41: Counter data for the Dawros River**

Fish Species	Number
Spring salmon	182
Grilse	1,075
Late Summer Salmon	566
Sea Trout	1,132

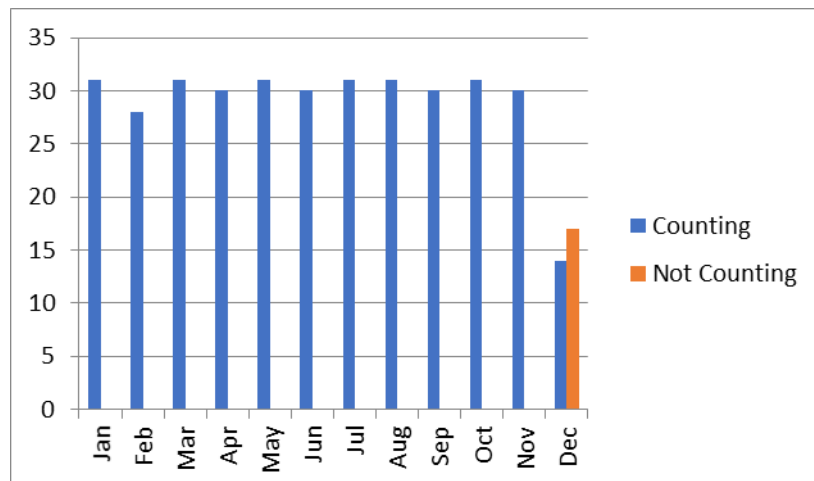
**Graph 41: Dawros Counter 2020**



**Table 42: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
348	17

**Graph 42: Counter Operational & Non-Operational (Days)**



## 23 Culfin River



Counter Type: Logie

Operating: Jan – Dec 2020

Performance: V. Good

Verified: Yes

### 23.1 River site and description

The Culfin counter is 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 and Kylemore Abbey.

### 23.2 Operation

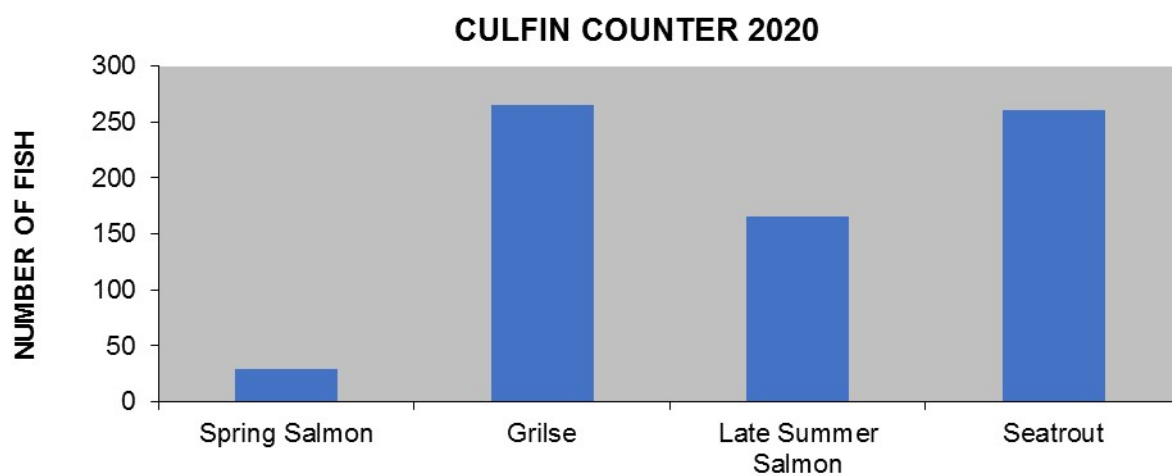
The counter has not had any problems and worked consistently throughout the year. The counter has been carefully maintained and has produced accurate verifiable figures. The numbers of fish remains relatively constant each year. IFI hope to be able to upgrade the hardware on this site in 2021.



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

Fish Species	Number
Spring salmon	29
Grilse	265
Late Summer Salmon	166
Sea Trout	260

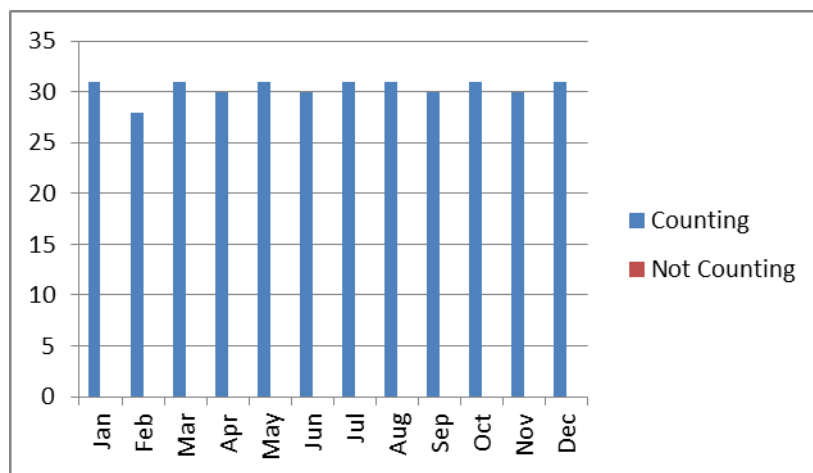
**Graph 43: Culfin Counter 2020**



**Table 44: Counter Operations**

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

**Graph 44: Counter Operational & Non-Operational (Days)**



## 24 Erriff River



Counter type: Vaki

Operating: Jan- Dec 2020

Performance: V. Good

Verified: Yes

### 24.1 River site and description

The Erriff River is The National Salmonid Index Catchment River for IFI. The River has been one of the principal 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.

### 24.2 Operation

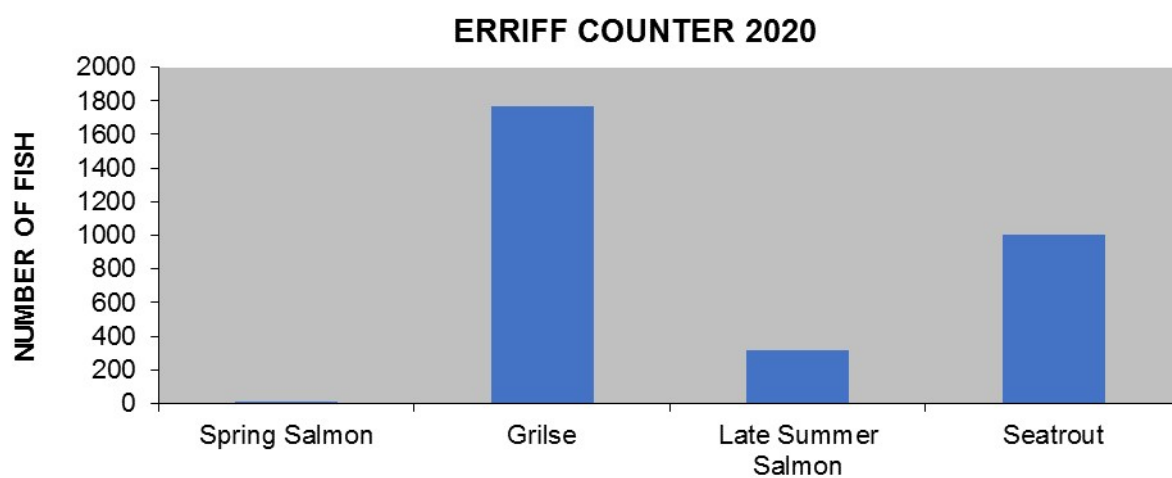
The counter operated consistently throughout the year. The counter is operated in conjunction with several other recording devices which allows us to establish the accuracy of this type of counter and also to check the down time of the counter. The counter is very accurate. The run of salmon in 2020 was unfortunately below average run for the river. This reflects the low number of brood stock in the river in 2016. The data is a net figure for wild fish into the system as tagged ranched salmon are removed from the system at 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	08
Grilse	1,766
Late Summer Salmon	317
Sea Trout	1,006

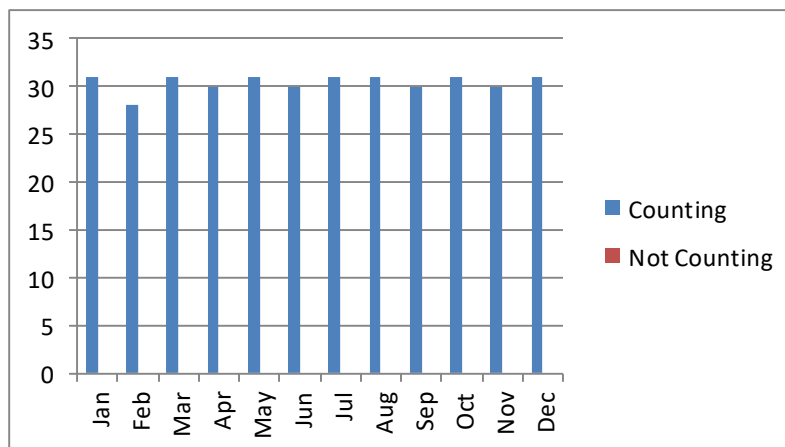
**Graph 45: Erriff Counter 2020**



**Table 46: Counter Operations**

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

**Graph 46: Counter Operational & Non-Operational (Days)**



## 25 Bunowen River



Counter type: Logie

Operating: Jan-Dec 2020

Performance: V. Good

Verified: Yes

### 25.1 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.

### 25.2 Operation

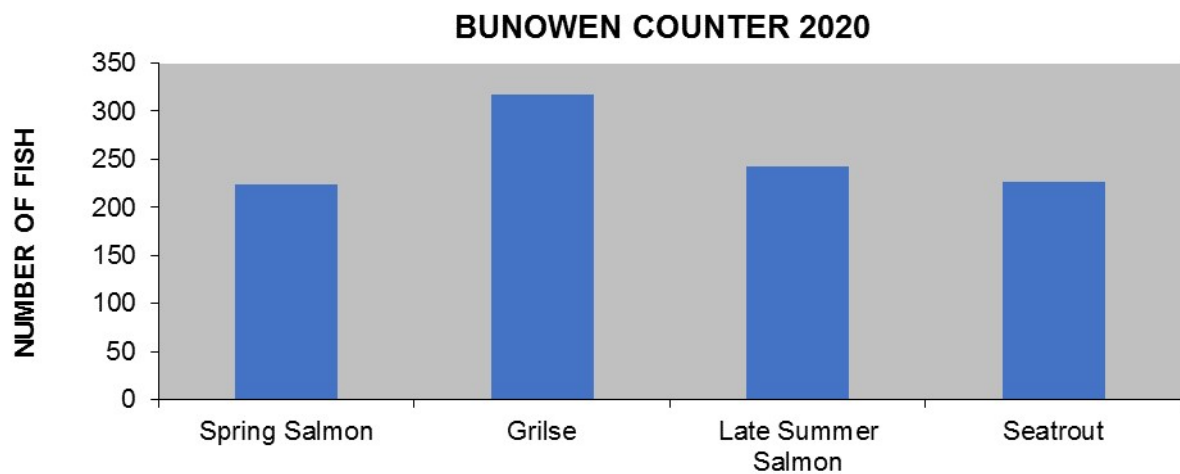
The counter has performed well over the year and continues to provide an accurate total count for the river. The location of the counter is well upstream of the confluence with the sea. The counter usually records a late run of fish – this is not due to fish entering the river late in the season but 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. It also gives the impression of an early run of spring salmon which is not the case.



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

Fish Species	Number
Spring salmon	224
Grilse	317
Late Summer Salmon	242
Sea Trout	227

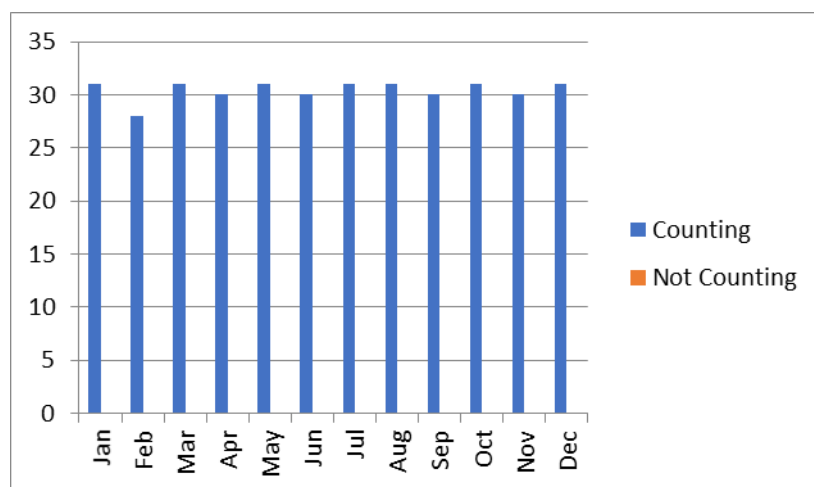
**Graph 47: Bunowen Counter 2020**



**Table 48: Counter Operations**

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

**Graph 48: Counter Operational & Non-Operational (Days)**





## 26 River Moy Counters



Counter type: Logie/Vaki

Operating: Jan- Dec 2020

Performance: V Good

Verified: Yes

### 26.1 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.

### 26.2 Operation

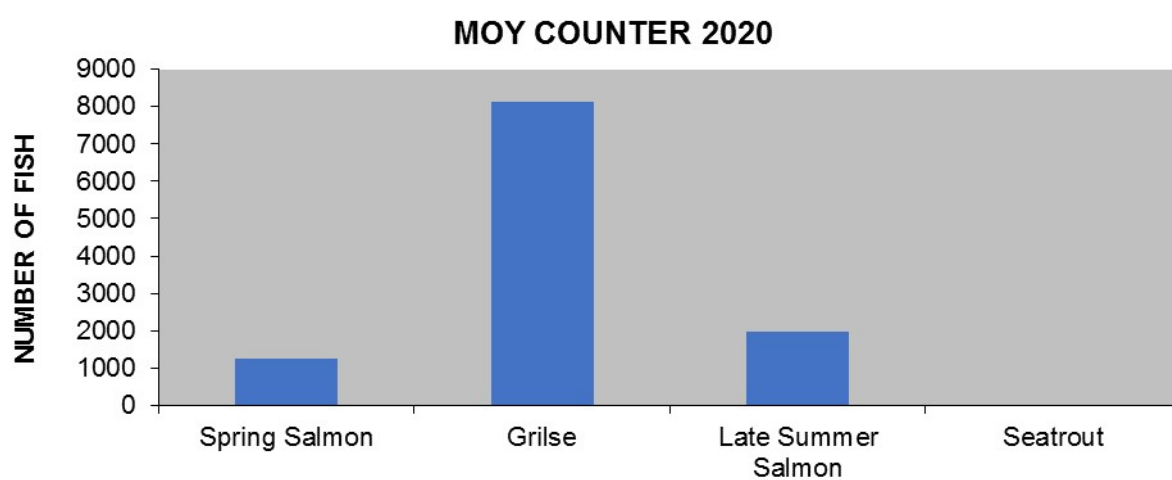
The counting section of the Moy is two Logie crumps and two Vaki channels. The most significant numbers of fish travelling upstream do so through the queen's gap without being counted and where the locating of a counter would not be permitted. The counts from year to year depend on water level and can vary significantly; the facility only provides a partial count. Counting in the winter months is limited due to the risk of leaving the gates closed and the resulting flood risk to the town.



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

Fish Species	Number
Spring salmon	1,238
Grilse	8,151
Late Summer Salmon	1,962
Sea Trout	0

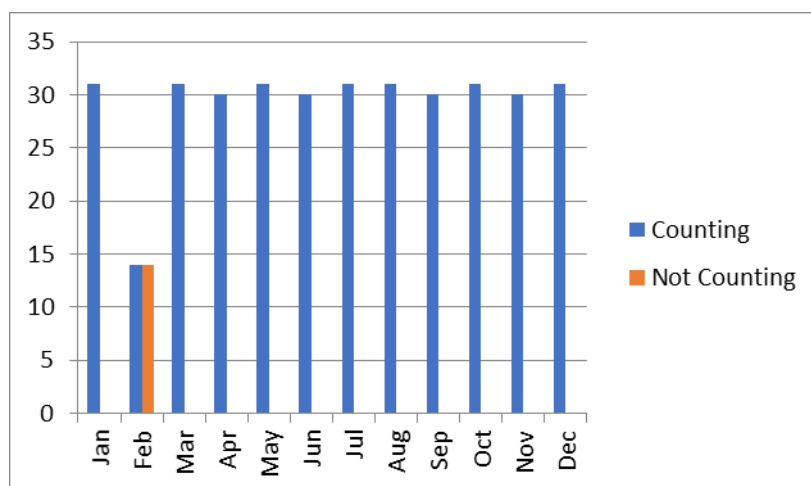
**Graph 49: Moy Counter 2020**



**Table 50: Counter Operations**

Counter Operational (Days)	Counter not operational (Days)
351	14

**Graph 50: Counter Operational & Non-Operational (Days)**



## 27 Eske River



Counter type: Logie

Operating: Jan- Dec 2020

Performance: V 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

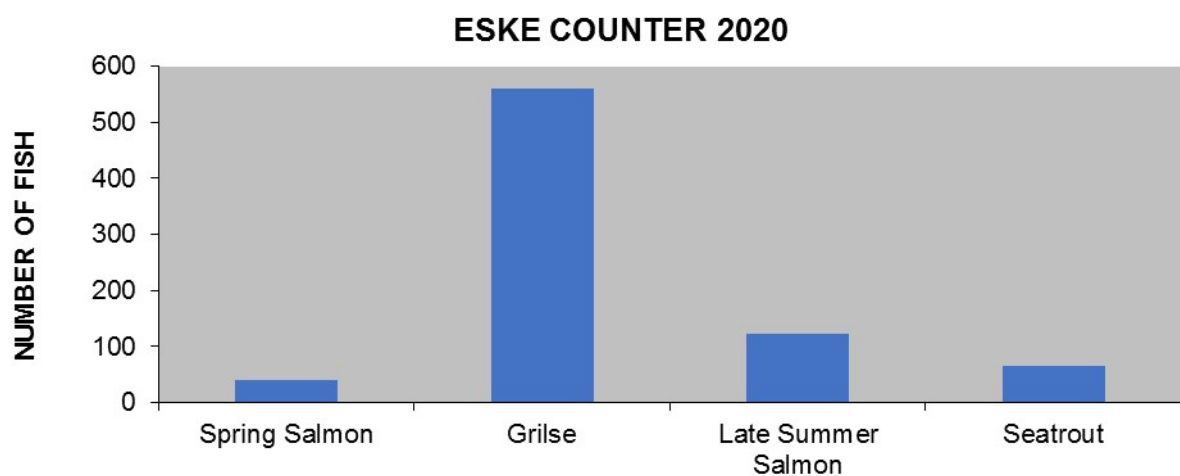
The counter worked well all year and a full count for the year on all 3 channels was obtained. The counter was downloaded, and all data was verified on a weekly basis giving accurate counts for the river. New camera mounts were installed this year. The site recorded an increase in the number of fish running the counter for 2020.



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

Fish Species	Number
Spring salmon	40
Grilse	560
Late Summer Salmon	122
Sea Trout	65

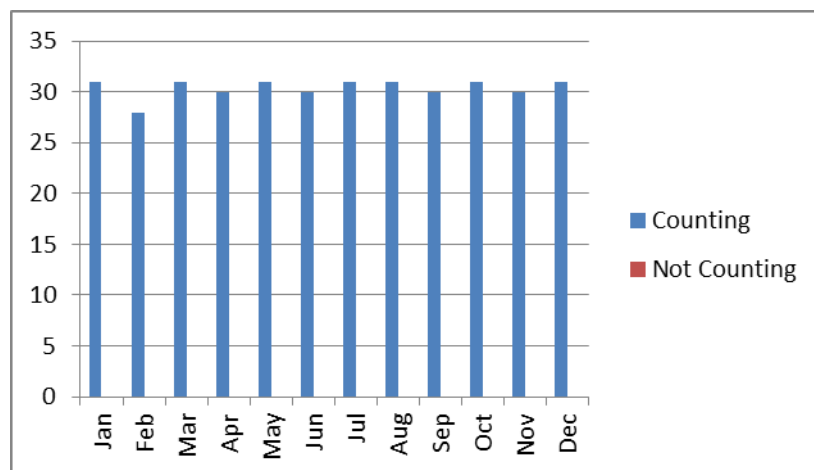
**Graph 51: Eske Counter 2020**



**Table 52: Counter Operations**

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

**Graph 52: Counter Operational & Non-Operational (Days)**



## 28 Eany River



Counter type: Logie

Operating: Jan- Dec 2020

Performance: V 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 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

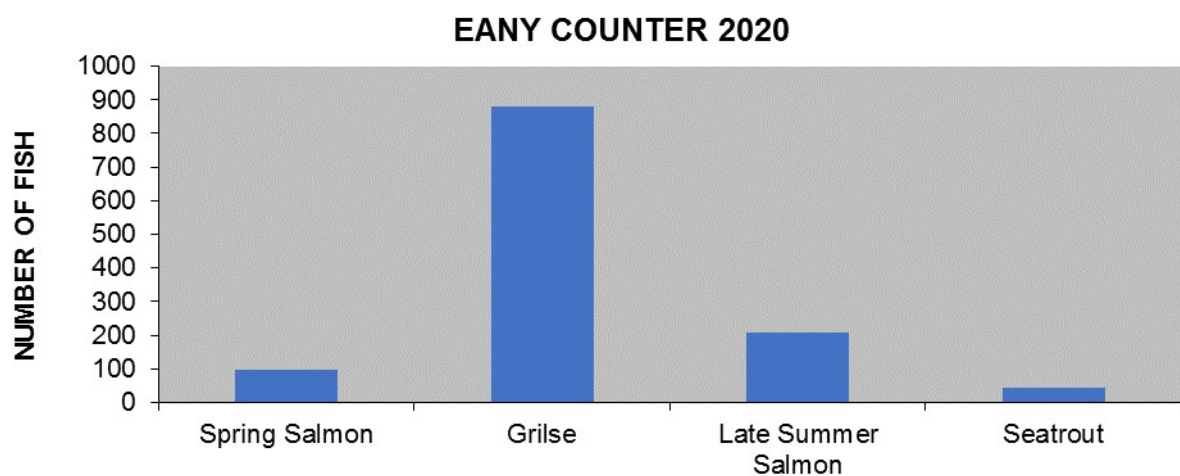
The Logie counter worked well resulting in a comprehensive count for the year for the river. A small number of maintenance issues were sorted out promptly and this ensured a continuous accurate count. All the data collected by the counter has been verified by CCTV cameras. New cameras and cables have been installed on the site in conjunction with new recording hardware. Its hoped to upgrade this site next year to HD-cameras.



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

Fish Species	Number
Spring salmon	97
Grilse	881
Late Summer Salmon	209
Sea Trout	44

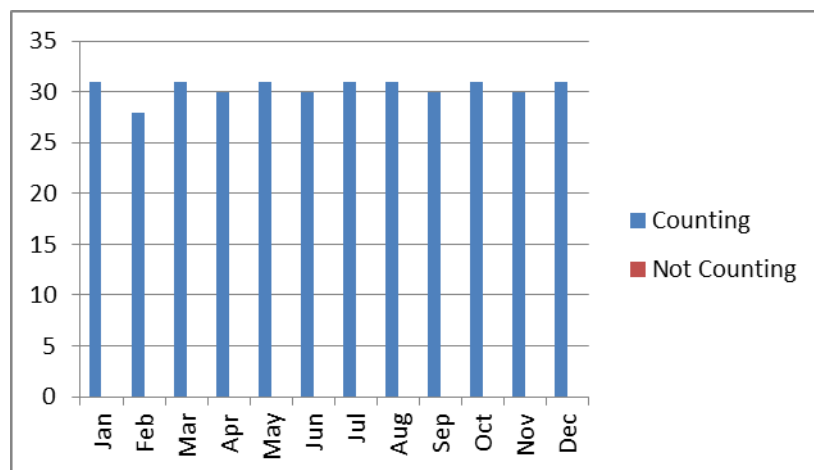
**Graph 53: Eany Counter 2020**



**Table 54: Counter Operations**

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

**Graph 54: Counter Operational & Non-Operational (Days)**



## 29 Lackagh River



Counter type: Logie

Operating: Jan–Dec 2020

Performance: Excellent

Verified: Yes

### 29.1 River site and description

The Lackagh fishery is situated partially within Glenveagh National Park and within an S.A.C. This fishery is one of the few recognised multi-winter sea winter salmon fisheries in the North West. This fishery is currently below its conservation limit. The new counter has been built and was commissioned early in 2017. The counter is a three-channel resistivity counter with verification cameras on all three crumps. The counter has been engineered with a walkway to allow for easy access for maintenance and repairs.

### 29.2 Operation

The counter was funded by the “Salmon Conservation Fund” and is operated by IFI staff. The counter is visited regularly, and the data verified. All fish movements were verified on site. This counter has provided accurate data for the river for 2020. Data recorded would suggest a poor run of fish for the river in 2020.

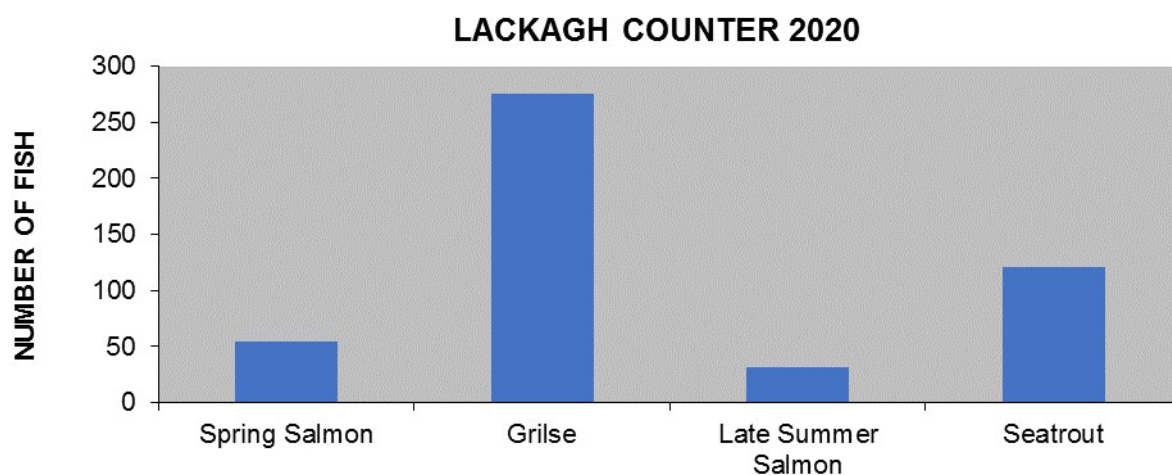




**Table 55: Counter data for the Lackagh River**

Fish Species	Number
Spring salmon	54
Grilse	275
Late Summer Salmon	31
Sea Trout	121

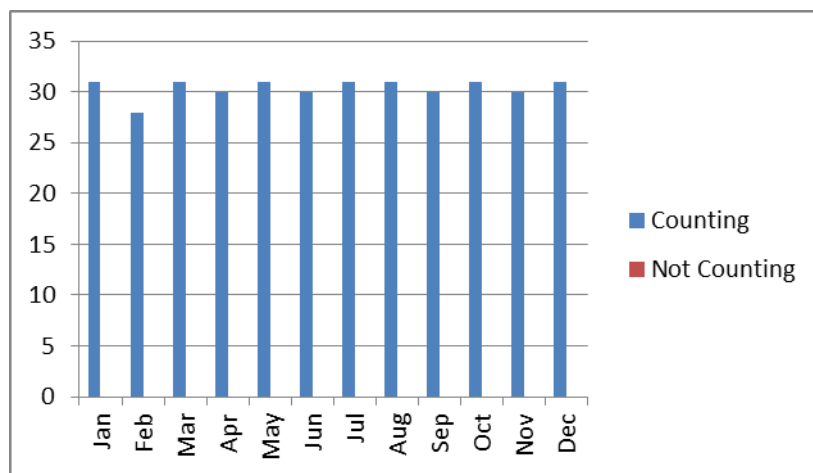
**Graph 55: Lackagh Counter 2020**



**Table 56: Counter Operations**

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

**Graph 56: Counter Operational & Non-Operational (Days)**





## Conclusion

The fish counter programme has operated successfully with almost all the counters sites providing accurate verified data for the year. Significant work has taken place to upgrade recording equipment and cameras on sites around the country. Over one third of all sites have already been completed. Additional research to provide remote access is ongoing, this will increase our download capability and frequency. These are currently being tested in Waterville and the Feale and have proved very successful to date. It will not be possible to have all sites due online due to the remote nature of the fish counters and lack of broadband facilities.

The Global pandemic has not had an adverse on the fish counter programme. As the counters record automatically, they continue to record during the lockdowns. New hardware to support high-definition cameras which are compatible with the Logie counter had been identified in 2019 and we were able to upgrade a significant number of sites during the year.

Plans for 2021 include the continued upgrade of hardware on the outstanding sites and further research into broadband and remote access which will contribute to the reduction of the carbon footprint of the organisation.

## 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. We are also indebted to the team of staff who put in the time working on the counters and verifying the results and to Padraic O'Malley who heads up the entire project.