

# Inland Fisheries Ireland

## Coalition Clean Baltic Salmon

Seminar Älvkarleby, Sweden

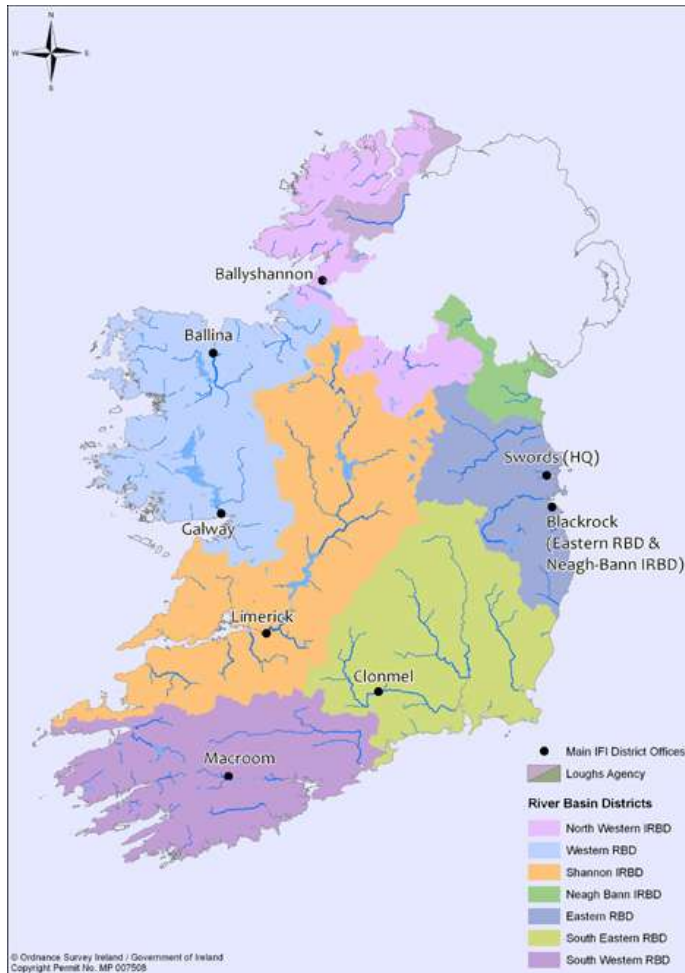
8-9<sup>th</sup> December 2011

Dr. Cathal Gallagher

IFI, Head of Research and Development



# Inland Fisheries Ireland



- Who are IFI?
- What do we do?

*“the conservation, protection, management, development and improvement of inland fisheries, including sea angling”*

# The Natural Resource

**“Ireland has over 74,000 km of rivers and streams, over 128,000 hectares of lakes and over 7000 km of coastline”**

The Fish:

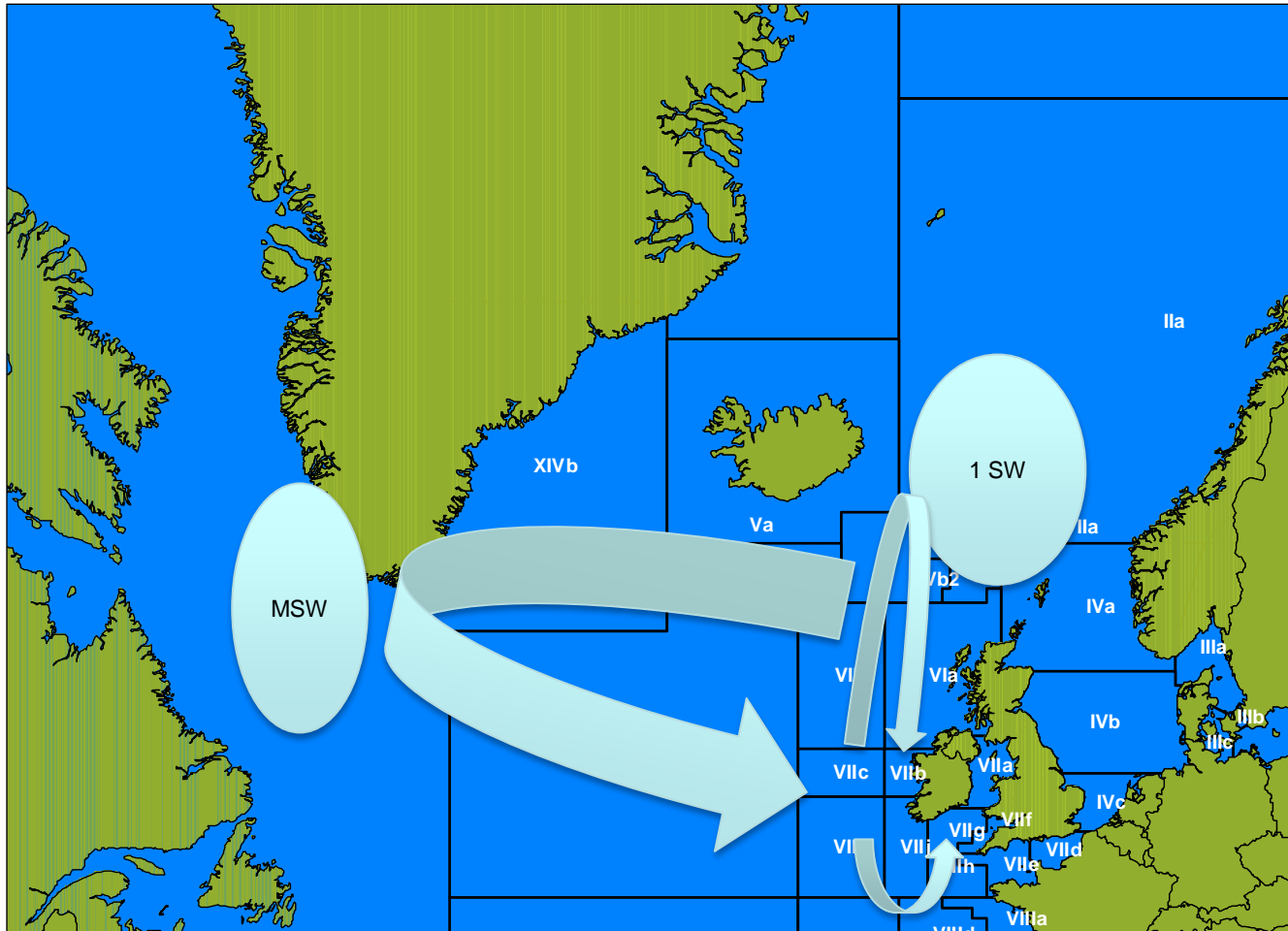
- Fresh water: 11 Native species (27 total)
- Sea angling approx 80 species

IFI Staffing Levels 350:

- Regionally focused
- Business Development, Operations and Research

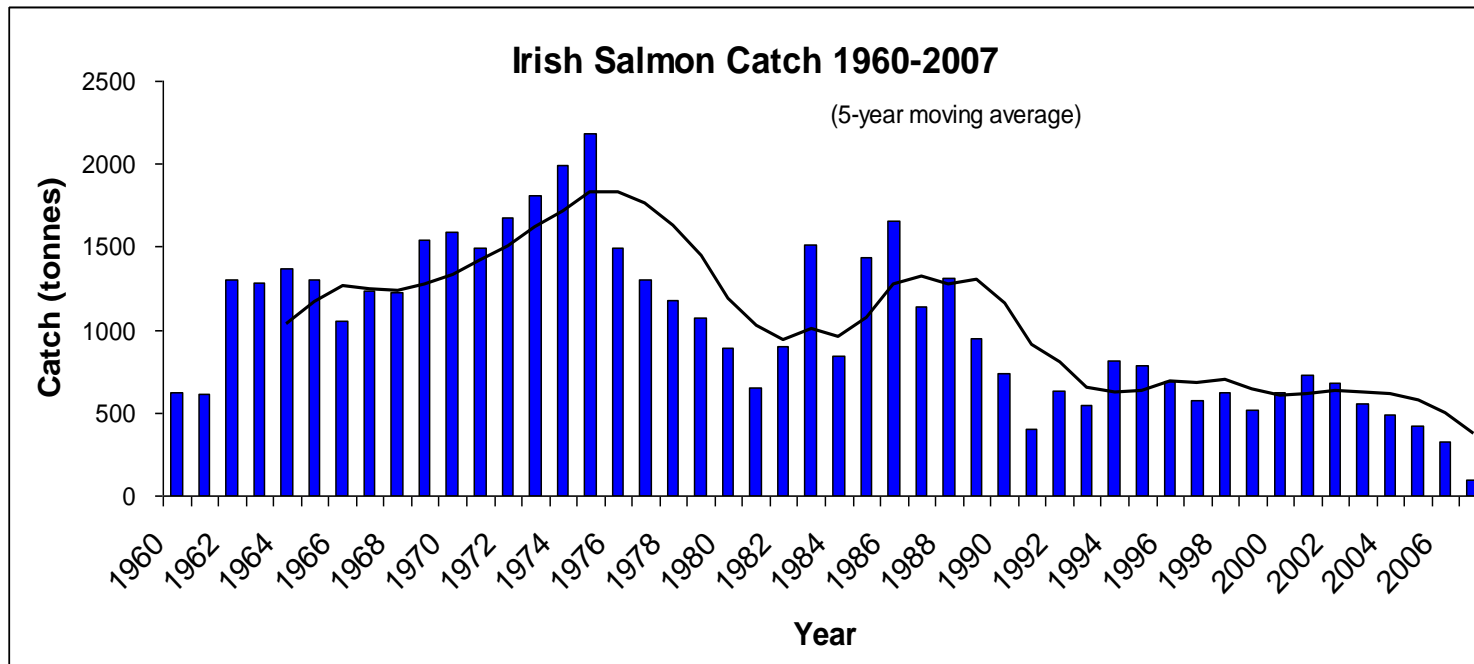


# Ireland's Salmon Stocks



# Salmon Management History

- High seas salmon fishery at Greenland or Faroes
  - NASCO agreements
- Pre 2006 mixed stock drift netting off the Irish coast
  - National and international stocks



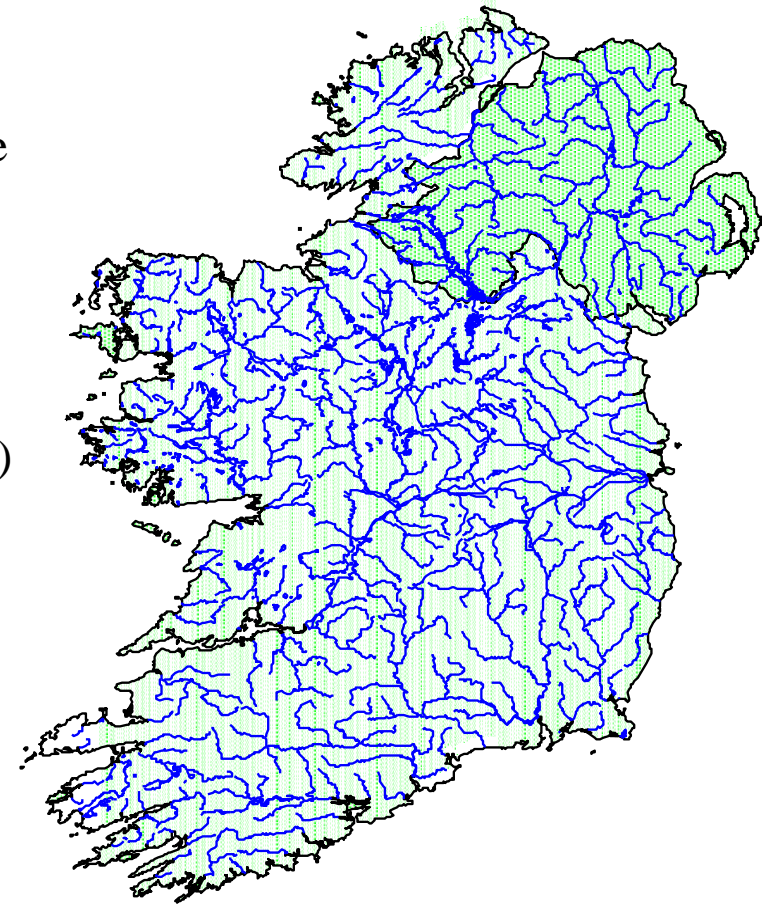
# Salmon Management History

## Pressure to change Ireland's salmon management regime !

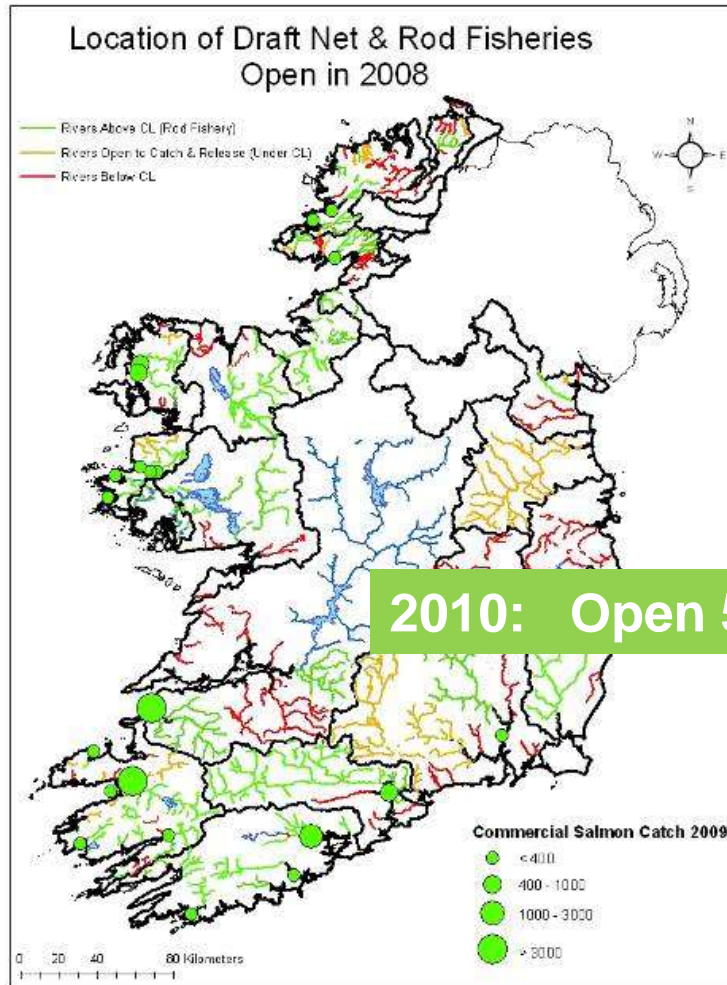
- **1997** - Restrictions on the fishing
- **2000** - National Salmon Commission and SSC formed
- **2001** - Carcass tag & log book scheme
- **2002** - Total Allowable Catch (TAC) and angling restrictions
  
- **Scientific Support**
  - **The Wetted Area Report 2003**
  - **Genetic Salmon identification 2006**
  - **The Catchment Conservation Limits**
    - Transport Conservation limits for European index rivers using river size and latitude

# Salmon Management History

- **2005** - SSC guidelines move to a 75% probability of meeting the CL based on average returns over the most recent 5 year period
- **2006** – TOR Changed include international obligations
- **2007** - Single Stock Fisheries, Hardship (€30m) scheme, Conservation Stamp Fund. Catchment surplus established
- Historical data very important, rod catch, counters, reported commercial catch, redd counts etc..



# Salmon Management 2008



- 53 rivers open with surplus for exploitation
- 13 rivers with MSW surplus.
- 25 Closed.
- 20 C&R
- 70 small rivers where the average rod catch has been less than 10 salmon annually since 2001. No harvest.

2010: Open 56, C&R 13 & 86 Closed

# Salmon Management

Independent  
Scientific Advice

## The Standing Scientific Committee principles:

- Harvest of salmon should only be allowed in rivers where there is a surplus above the Conservation Limit identified and that no more than this surplus should be harvested.
- Where a surplus is available for all rivers in an embayment, an estuarine fishery can proceed but the surplus must be based on the 75% probability that all of the rivers contributing will meet and exceed their Conservation Limit simultaneously
- Harvest fisheries should not take place in rivers without an identifiable surplus above the Conservation Limit and further efforts are made to rebuild these stocks.
- No harvest fisheries should take place in those rivers where the average rod catch has been less than 10 salmon annually until such time as additional information becomes available to assess the status of these stocks relative to their Conservation Limits.

**Precautionary Principle**

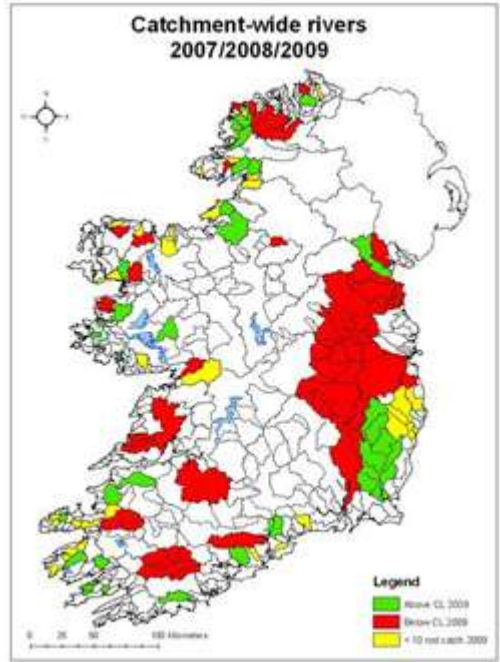
# Scientific Science Advice

- Rod Catch
- Counter Data
- Juvenile Index



5 Year Historic Data

Details of	River name	Survey	Estimation	Year	Survey	Est. Count	Dev. Coefficient
<b>Number of counts by year</b>							
2001	2002	0	12	56	41	92	119
2004	2005	0	49	136	43	46	54
2006	2007	0	18	12	36	30	41
2008	2009	0	10	14	20	37	47
2007	2008	0	9	108	32	23	29
<b>Totals</b>							
2001	2008	0	0	0	0	0	0
2002	2009	0	0	0	0	0	0
2003	2010	0	0	0	0	0	0
2004	2011	0	1	11	1	0	0
2005	2012	0	49	49	0	0	0
<b>Indices calculated for individual fish</b>							
2001	2002	0	12	56	41	92	119
2004	2005	0	49	136	43	46	54
2006	2007	0	18	12	36	30	41
2008	2009	0	10	14	20	37	47
2007	2008	0	9	108	32	23	29
<b>Population index in the rod stations (Crystal Ball assumptions)</b>							
Triangular	Linear	0.05	0.36	0.91	0.15	0.20	
Quadratic	Minimum	0.04	0.22	0.52	0.02	0.26	
Maximum		0.12	0.30	0.91	0.06	0.44	
<b>Crystal Ball 2010 based on assumptions above</b>							
2001	2002	0.000	0.144	0.720	0.100	0.207	
2004	2005	0.064	0.367	0.220	0.140	0.094	
2006	2007	0.007	0.149	0.111	0.046	0.217	
2008	2009	0.070	0.281	0.148	0.148	0.262	
2007	2008	0.048	0.211	0.228	0.007	0.000	
<b>Estimated species</b>							
2001	2002	91	71	122	120	229	110
2004	2005	41	118	367	380	401	36
2006	2007	41	69	372	392	348	161
2008	2009	41	69	164	160	161	111
2007	2008	41	97	356	107	119	209
<b>Conversion factor</b>							
Total 10	128	142	140	1412	1444	1400	
10M CL	114	100	302	300	229	229	
20M CL	0	18	47	140	144	140	
10M CL	0.000	0.076	0.900	0.000	0.000	0.000	0.000
<b>Depth 1 count values (by river)</b>							
10M CL	0.0000	0.0000	0.1100	0.0000	0.1000	0.1000	
20M CL	0	0	0	0	0	0	
2001	2002	0	0	0	0	0	
2004	2005	0	0	188	140	72	0
2006	2007	0	0	468	112	70	640
2008	2009	0	0	216	220	100	74
2007	2008	0	0	18	112	14	48
2007	2008	0	0	0	0	0	0
<b>Estimated values using 10M specific assumptions of individual catch based on CRIT analysis in 10M rivers (estimated)</b>							
2001	2002	10.000	0.000	0.004	0.000	0.000	0.000
2004	2005	11	37	148	140	49	48
2006	2007	11	37	148	136	49	46
2008	2009	11	37	148	136	49	46
2007	2008	11	37	148	136	49	46
2007	2008	11	37	0	148	49	0



# Salmon Management

October

Independent  
Scientific Advice

- MSW and 1 SW surplus per catchment
- Juvenile index
- Recommendations on status Open/Closed/CR

IFI Salmon Mgt

- Open River surplus per catchment
- C&R River surplus per catchment
- Licence



Draft PNR

- Draft PNR
- Start 30 p...

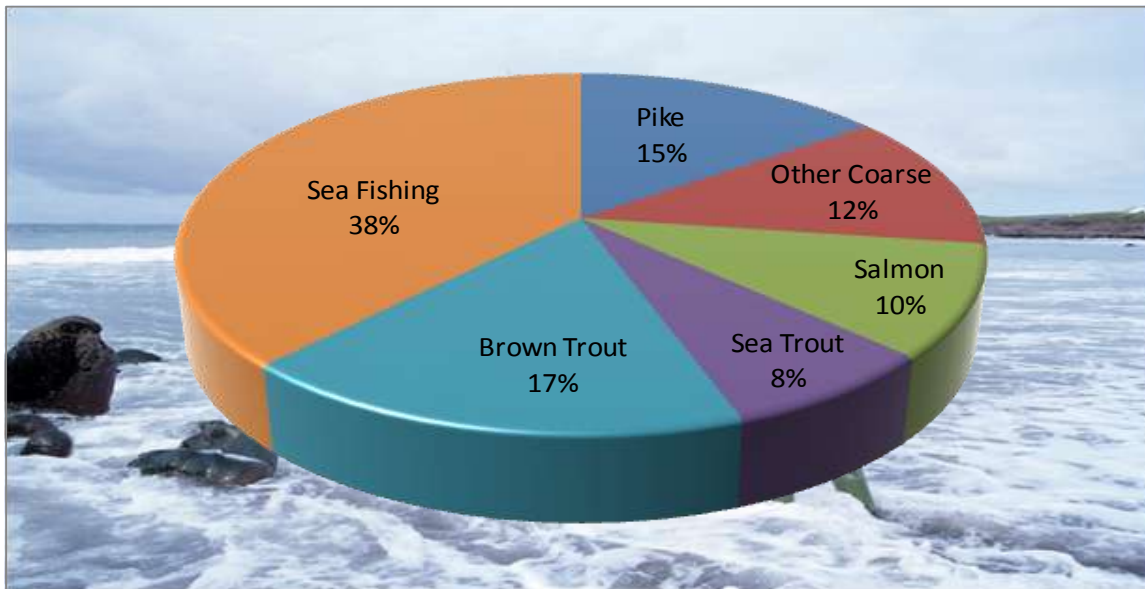
IFI Licences  
Available

- On-line & Paper licences, tags available
- Season and River information available

1<sup>st</sup> January

# Recreational Angling

- Salmon (total catch 2010 - 36.5k salmon)
  - 18,000 approx. Salmon anglers (revenue approx €1.15 million)
  - Commercial Fisheries (178 licences)



- 123,000 Overseas Visitors participating in Angling (Fáilte Ireland Survey 2010)
  - International Angling spend was estimated at €88million in 2010
- Internal angling tourism spend (largely rural based activity)

# Salmon & Sea Trout Licence

- Season (Jan to Sept)
  - Variations
- Total 10 tags per angler
  - 11<sup>th</sup> May (only 3 fish)
  - 12<sup>th</sup> May – 31<sup>st</sup> Aug Max (3 per day)
  - September (max 1 per day)
  - Brown Tags
- Compulsory catch reporting
- Protection (Irish history)



## **Salmon Licence Fees (2012)**

*All Districts (i.e. all Regions) Annual: €100*

*Juvenile (under the age of 18 years) All Districts Annual: €10*

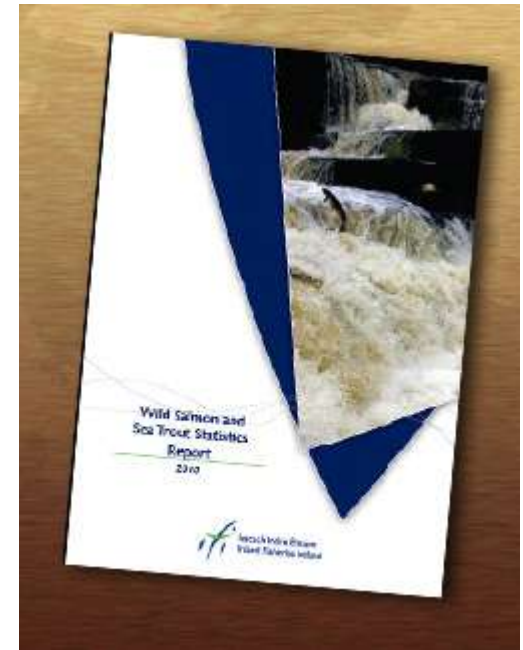
*One District, Annual: €56*

*All districts, 21 Days: €40*

*All districts, 1 Day: €20*

*Foyle Area Extension: €80*

*Special local licence: €24*

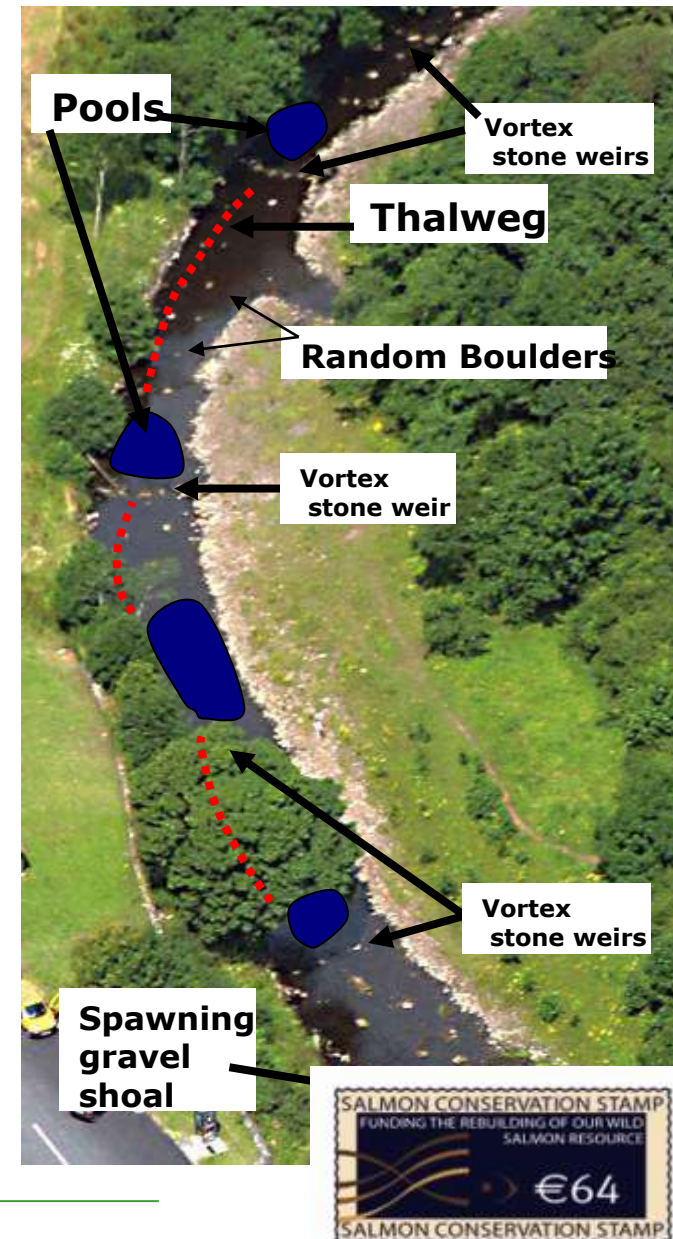


# Conservation Stamp Fund

- €700k approx each year
- Criteria for project selection include:
  - Water quality (Q value)
  - CL Status
  - Projected Benefit to Salmon

## Sample Projects

- *Counters*
- *Juvenile Electro Fishing programme*
- *Fish passage improvement.*
- *Spawning enhancement*
- *Instream structures*
- *River Bank protection*
- *Fencing*
- *Riparian zone improvement*
- *Removal & control of exotic invasives*



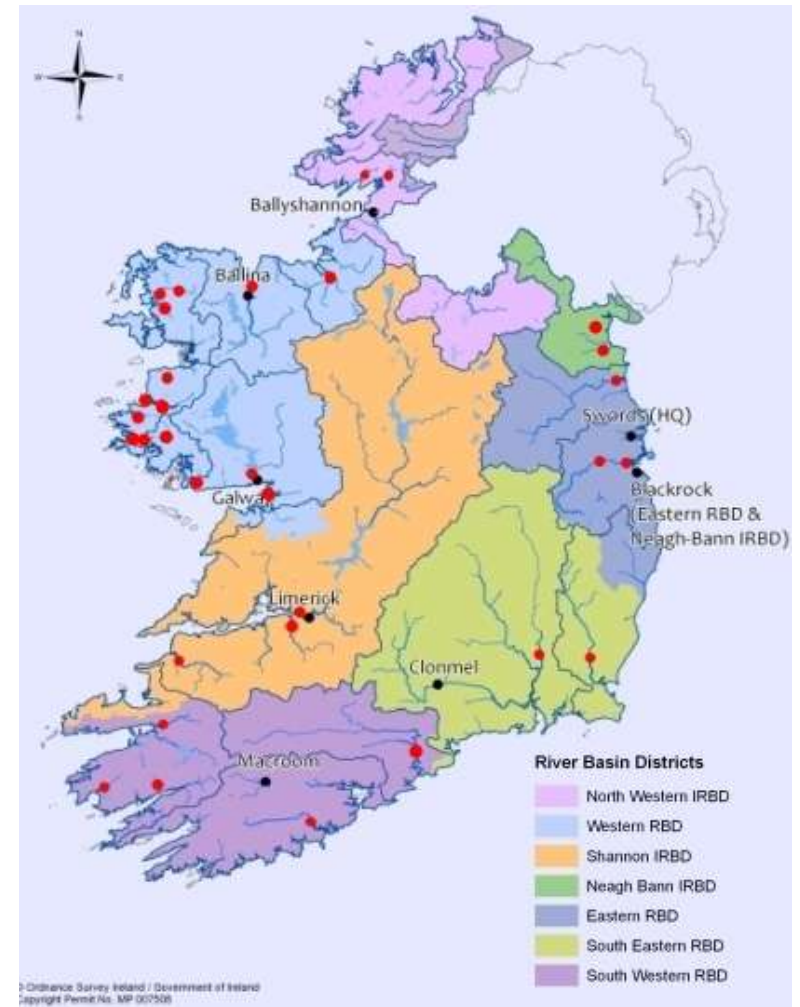
# EREP Programme



A combination of structures were used to effect desirable morphological changes which in turn would accommodate increased ecological diversity. A total of 2,000 tonnes of gravel, placed in 40 discrete locations, over 1km. length of the river Maine, allowed 100 pairs of salmon to spawn in a zone where no spawning had taken place since this river was drained 30 years ago. Currently 25km. of drained salmonid channel are being enhanced annually in Irish catchments.

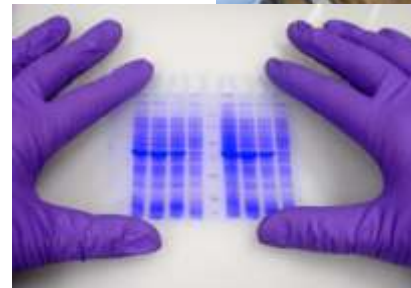
# IFI Counters Programme

- Logie & Vaki Counters (30)
- Video Verification
- Large rivers
  - Partial counts
- Data Management
- Real time Management?

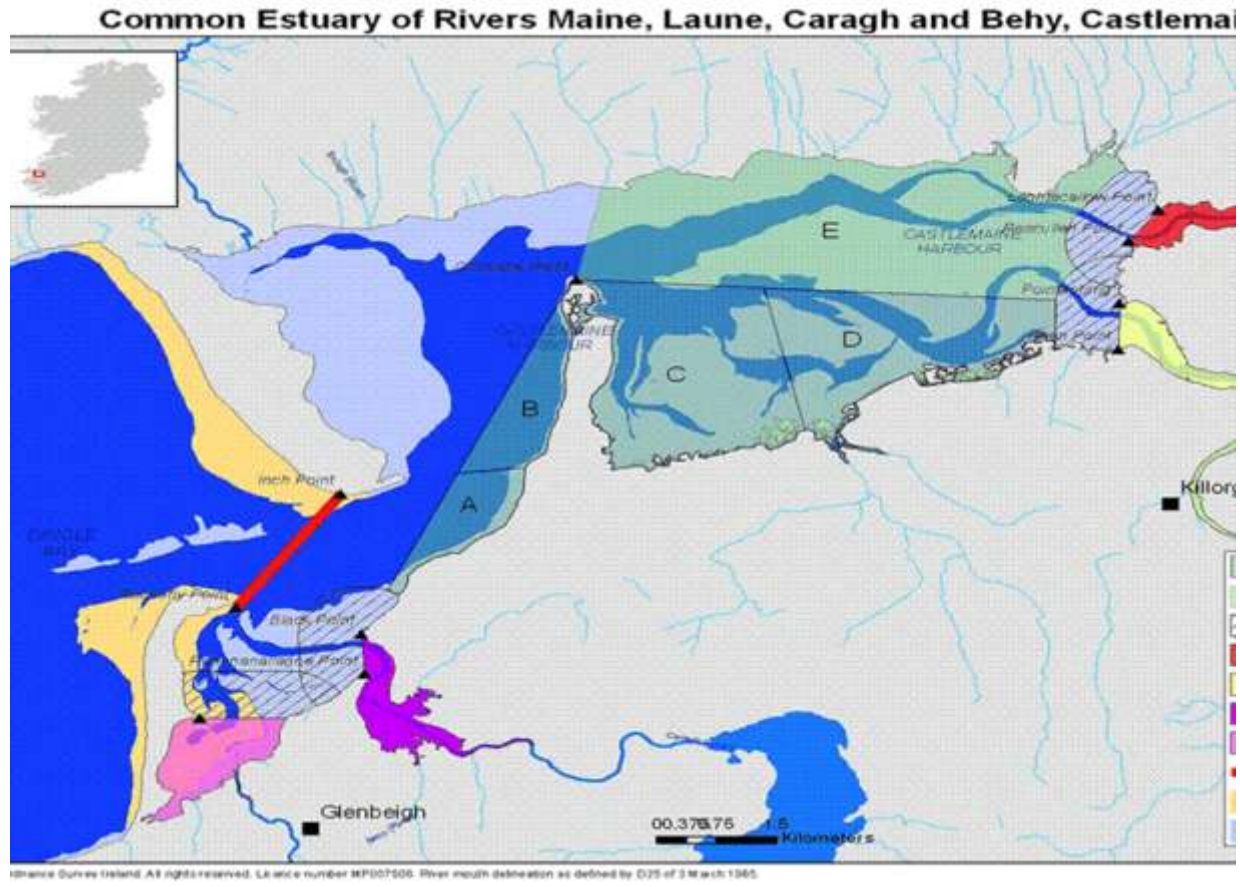


# Salmon Management Issues

- Habitats Restoration preferable to stocking
- Stocking Policy
- Ranching
- Habitats Directive
  - Annex II Species
  - Appropriate assessments
  - Monitoring
- Water Framework Directive
- Red Book Data endangered



# Practical Management Issues



# Experience gained

- Separate Science advice from management
- Good Science and data required
  - NASCO, EIFAAC, ICES, National and local
- Share conservation efforts across all stakeholders
- Stakeholder engagement and engagement between stakeholders





Iascach Intíre Éireann  
Inland Fisheries Ireland