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**THE NATIONAL (IRELAND) ATLANTIC SALMON GENETIC
STOCK IDENTIFICATION PROJECT**

ST-05-002

Final Report

This report has been prepared by

University College Cork
Central & Regional Fisheries Boards
Marine Institute

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Executive summary

The aim of this RTDI project was to provide fisheries managers with information regarding the contributions of Atlantic salmon producing rivers to Ireland's commercial salmon fisheries in 2005 and 2006 using genetic stock identification (GSI). The specific objectives were:

- To identify, map and prioritize discrete spawning areas within known salmon rivers, and to sample juveniles accordingly, for the purpose of establishing a genetic baseline;
- To collect samples of adults from offshore and inshore commercial fisheries operating off the Irish coast;
- To undertake genetic analysis of the juvenile and adult samples and provide stock composition estimates for the different fisheries.

The Irish genetic baseline represents a new and valuable resource for the management of Irish salmon stocks. This was constructed on the basis of an extensive national survey of Atlantic salmon spawning habitats in 145 rivers. This sampling program and genetic screening has resulted in the most comprehensive and high resolution genetic baseline achieved to date for any country producing wild Atlantic salmon. This resource can be used to investigate a number of important issues for fishery management (e.g. mixed stock fishery analysis, forensics and traceability, effective/census population size determination etc.). This program represents an important contribution to fulfilling Ireland's commitments to international conservation imperatives (e.g. The EU habitats directive).

A total of 145 salmon producing rivers were sampled in this project, 84 of which were genetically characterised. These 84 rivers represent populations that are estimated to provide 98% of the total salmon production in Ireland (CFB, 2006). The genetic baseline is composed of multilocus genotypes from 8430 individuals and includes samples from Northern Ireland provided by the Agri-Food and Biosciences Institute (AFBI) and The Loughs Agency. The baseline was also calibrated with an eight locus genetic baseline provided by the Atlantic Salmon Arc Project (ASAP), which was used to identify fish originating from outside the island of Ireland. The geographical origin of wild salmon caught in the commercial fisheries has previously been determined indirectly (by using hatchery fish marked with coded wire tags as a surrogate). Genetic Stock Identification can now be used to determine directly the geographical origin of wild fish.

A high degree of differentiation and regional structure was observed among the vast majority of population samples in the baseline. However, some rivers from the Waterford and Lismore districts show low (though significant) levels of genetic differentiation. These populations need further investigation with additional markers to allow the assessment of individual stock proportions in this area. The mixed stock analysis techniques used in this project were rigorously tested using samples of known origin and were shown to be highly accurate for correctly estimating stock proportions. These known samples included a blind-tested composite of individuals taken from a number of rivers throughout Ireland and also samples obtained from two in-river angling fisheries (Corrib and Moy).

The offshore driftnets sampled (total n = 3615 fish genetically characterised) include fisheries which account for an estimated 87% of landings. Results from MSA demonstrate that all of these are mixed-fisheries exploiting numerous stocks originating in multiple rivers, administrative districts, regions and jurisdictions. An estimated 10.3% of salmon from offshore driftnets originated in rivers outside of the jurisdiction of the Republic of Ireland. The proportional

distribution of these salmon varied among the different fisheries and regions. The results show a geographical bias in both the occurrence and proportion of contributing Irish stocks to the fisheries across the different administrative districts. Results also show that there is a tendency for offshore driftnet fisheries in the northwest area to exploit a greater number of individual stocks from a wider geographical range. Moving down the west coast and around to the southeast, the number of contributing stocks from different geographical origins tends to reduce.

The inshore fisheries targeted for investigation by the Regional Fisheries Boards included drift nets, draft nets and bag net engines (total $n = 2821$ fish genetically characterised). These were variably located with respect to river mouths. The fisheries were prosecuted in enclosed estuaries and bays (such as Tullaghan Bay and Castlemaine Harbour) and in more open areas (such as Galway Bay and the Maharees). Fish originating from other countries (approximately 2%) were observed in most of the inshore fisheries examined. Draft net fisheries contained no fish from outside the Irish jurisdiction. Generally, open area fisheries tended to exploit a greater number of stocks from a wider geographical spread than those prosecuted within enclosed embayments or estuaries. As with the offshore driftnets, the open area inshore fisheries tended to have a wider distribution of contributing stocks. A similar geographical bias in the occurrence and proportion of contributing stocks (as shown for the offshore drift nets) was apparent in the more open area inshore fisheries. Estuarine and enclosed bay fisheries tended to exploit predominantly local stocks.

The stock proportion estimates provided in this report should not be considered as absolute values as all mixed stock analyses are subject to some bias. However because the analysis of samples of known origin has provided excellent estimates which are very close to true values, we are confident that the correct stock proportions lie within the standard deviation associated with each of the estimates presented in the results.

The spawning habitat survey and the sampling programme involved approximately 70 person months of effort over the course of the project. The genetic aspects involved the screening of approximately 16,000 individual fish which provided 240,000 single-locus genotypes. This part of the study (genetic screening, data scoring and statistical analyses) represents a further effort of 70 person months.

Recommendations

- It is recommended that the baseline be monitored for short and long term temporal stability and periodically updated.
- It is recommended that a retrospective analysis of baseline temporal stability be undertaken using historical scale collections from in-river fisheries.
- It is recommended that archived scale collections taken from the different commercial fisheries prosecuted in the past be genetically screened to assess temporal variation in stock composition.
- Given the success of the calibration of the Irish baseline with the ASAP database and its utility for identifying fish from other countries, it is recommended that continuous calibration between this and other international baselines should be undertaken e.g. SALSEA-Merge.
- The low levels of genetic differentiation observed among rivers from the Lismore and Waterford districts result in poor discrimination. As a result, these were grouped and considered for apportionment as a single entity. It is recommended that further work be undertaken, using additional genetic markers, to improve discrimination among rivers in this area.
- Although from a fisheries perspective 98% of the salmon production is represented in the existing baseline, samples have also been obtained from an additional 60 rivers. From a conservation of biodiversity perspective, it is recommended that these remaining rivers also be genetically profiled.
- A number of individual samples examined in this study were of poor quality and could not be genetically characterised. It is recommended that these individuals be reprocessed using more sophisticated (and expensive) DNA extraction techniques. It may also be necessary to review scale sampling and storage protocols.
- It is recommended that the results of this study (based on wild individuals) be combined with the results of the National Coded Wire Tagging Programme (based on reared fish).
- It is recommended that the use of GSI methods to support stock size assessment in large rivers should be investigated.
- The use of additional genetic markers including single nucleotide polymorphic loci (SNPs) is recommended for future studies, especially in cases of low discrimination.
- It is recommended that intra-year temporality of stock proportions to be assessed by screening additional fishery samples.
- The present study provides results and information for fisheries management that represents the state-of-the-art with respect to mixed stock fisheries analysis. It is likely that analysis techniques will evolve in the future which will allow for improved definition and interpretation of findings. It is recommended therefore that these new techniques be applied to the data as they become available.

Acknowledgements

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The success of the juvenile salmon sampling programme would not have been achieved without information on salmon spawning area locations and the excellent support during the sampling operation provided by all of the Regional Fisheries Board staff involved over the past 4 years in this extensive programme. We would also like to thank Mr. Declan Cooke (NWRFB), Dr. Walter Crozier (AFBINI), Dr. Dennis Ensing (QUB), Dr. Paddy Boylan (LA), Ms. Louise Brennan & Dr. Deirdre Cotter (MI) for provision of additional samples. The international baseline was kindly provided by Dr. Dylan Bright (WCRT), Dr. Jamie Stevens (UE), Dr. Andrew Griffiths (UE), Dr. Eva Garcia Vasquez (UO) & Dr. Gonzalo Machado (UO).

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Background

Approximately half a million Atlantic salmon (*Salmo salar* L.) return to the Irish coast each year after spending one or two winters feeding at sea (ICES, 2007). Until recently, on their return these salmon were exploited both by commercial fisheries (approx. 85%) and by angling (approx. 15%). Exploitation by both methods accounted for 50 – 70 % of all returning fish. Of the commercial salmon catch, the majority (85%) were taken in offshore drift net fisheries. Due to the nature of these fisheries (operating up to six miles off the coast), it has been presumed that they were intercepting salmon, returning to a wide geographical range of rivers, often long distances from their natal river. As a conservation measure, these offshore fisheries and some other inshore fisheries were closed in 2007.

Genetic Stock Identification (GSI) has become a widely used tool in fisheries management (e.g. Galvin *et al.*, 1995; Ruzzante *et al.*, 2000; Beacham *et al.*, 2004), and in its simplest terms involves three basic steps. Firstly, a baseline survey of all potentially contributing populations is undertaken. Secondly, validation of the GSI approach is carried out in order to examine how well differentiated population groupings are, and the degree of precision with which individuals of known origin can be assigned correctly to their source population. The propensity for Atlantic salmon to form genetically distinct populations is well documented (e.g. King *et al.*, 2001) and means that GSI methodologies are particularly suitable in this species. Finally, once a high degree of confidence in the methodology is achieved, analysis of real mixture samples can be undertaken.

Currently microsatellites provide a proven and reliable tool for undertaking this type of research. Beacham *et al.* (2004), for example, have demonstrated how microsatellite genotyping of sockeye salmon (*Oncorhynchus nerka*) on the Fraser river has facilitated effective management of that fishery. Dillane *et al.* (submitted) have shown the capacity of microsatellites to delineate individual populations within river systems. These data from the Moy system, the most productive salmon river in Ireland, show definitive separation of at least four distinct population groupings (using 12 microsatellite loci) which are being used as baseline samples for assignment of salmon from in-river mixed fishery samples. Using 15 microsatellite markers as was proposed here, should provide sufficient statistical power for GSI, which in the case of the Irish commercial drift net fishery will

provide a reliable indication of current trends in Atlantic salmon production from various areas throughout the country.

Two statistical approaches are commonly applied when addressing issues relating to GSI. Firstly, there is individual assignment (IA), where each mixture individual is assigned to the baseline stock in which the frequency of its genotype is the greatest. The second is mixed stock analysis (MSA), where posterior distribution combines the information on baseline stocks with that on the stock-mixture sample to estimate both the stock composition of the mixture sample and the genotypic composition of the baseline stocks. Both approaches were employed in this investigation.

A major technological question that needed to be addressed was how to establish a comprehensive baseline of the contributing stocks. Each river contains, theoretically, at least one discrete genetically and biologically significant salmon population and many of the larger rivers will have a number of distinct populations (e.g. Dillane *et al.* submitted, Primmer *et al.* 2006). The number of populations is likely to depend on the geographical proximity of spawning opportunities. These opportunities in turn depend on the availability of suitable spawning substrates. An important objective therefore, of this project is to identify and map these discrete salmon spawning areas. This can be best achieved by the utilization of a strategic hierarchical sampling plan designed on the basis of identifying salmon bearing rivers and prioritizing these rivers in terms of realized and potential salmon producing capacity and in addition, within these rivers, by utilizing our knowledge of salmon spawning biology and habitat requirements.

The aim of this RTDI project was to provide fisheries managers with information regarding the contribution of Atlantic salmon producing rivers to the commercial salmon fisheries operating off the Irish coast in 2005 and 2006 using genetic stock identification. This involved three tasks. The first task was to identify, map and prioritize discrete spawning areas within known salmon rivers, and to sample juveniles accordingly for the purpose of establishing a genetic baseline of populations. Secondly, samples of adults were collected from commercial fisheries operating off the Irish coast. The third was the genetic analysis of the juvenile and adult samples and the subsequent analysis and interpretation of the genetic data obtained.

Materials & Methods

Inventory of contemporary and historical spawning area distribution data available from the seven Regional Fisheries Boards

Training for spawning habitat identification using a standardised data collection methodology was provided to Fisheries Inspectors in each district in January and February 2006. Subsequently fifty five (55) 1: 50,000 scale Discovery Series Ordnance Survey maps were returned from the seven Regional Fisheries Boards outlining the distribution of discrete spawning habitats, according to the methodology suggested in Appendix 1, for all known salmon rivers (n=173) in each of the regions (McGinnity *et al.* 2003). The data on the paper maps were digitised into the Central Fisheries Board Geographical Information System (GIS) between March and June 2006. There were approximately 750 distinct spawning areas identified in this survey. These range in size from approximately 0.5 Km to 7 Km in length.

Additional spawning habitats were identified by interrogation of the full national geo-rectified 1m resolution aerial photography database held by the Department of Communications, Marine, and Natural Resources. Within this database spawning habitat information (based on substrate and river bed form) was interpreted by eye directly from the photography within a GIS platform and amalgamated digitally with river network data. This exercise identified 465 potential spawning areas nationally. The approach shows close association with known spawning areas identified previously by Fisheries Board staff and has proved to be a rapid and effective source of additional and supporting spawning habitat information. Problems with the quality of the photography and, in some instances, the colour and depth of the water make habitat identification difficult in some areas.

Identification, prioritisation and sampling of discrete spawning habitats

The two spawning habitat databases described above were combined to provide a comprehensive view of the distribution of spawning habitats throughout the country (see Figure 1). Sites were prioritised according to the following criteria i.e., national coverage, productivity potential based on total estimated habitat area (McGinnity *et al.* 2003) and productivity based on reported rod catches.

Sites were selected within rivers according to population structure promoting landscape features such as lakes and the distribution of spawning areas (Dillane *et al.* submitted). In total 322 sites were sampled covering 145 river systems (Figure 2) according to the protocol outlined in Appendix 2. These include samples in 2004 and 2005 under the auspices of the ASAP Project (See - <http://www.atlanticsalmon.org.uk/>) and samples collected in the Moy catchment (PRTL13 – HEA), together with samples that were available for other projects.

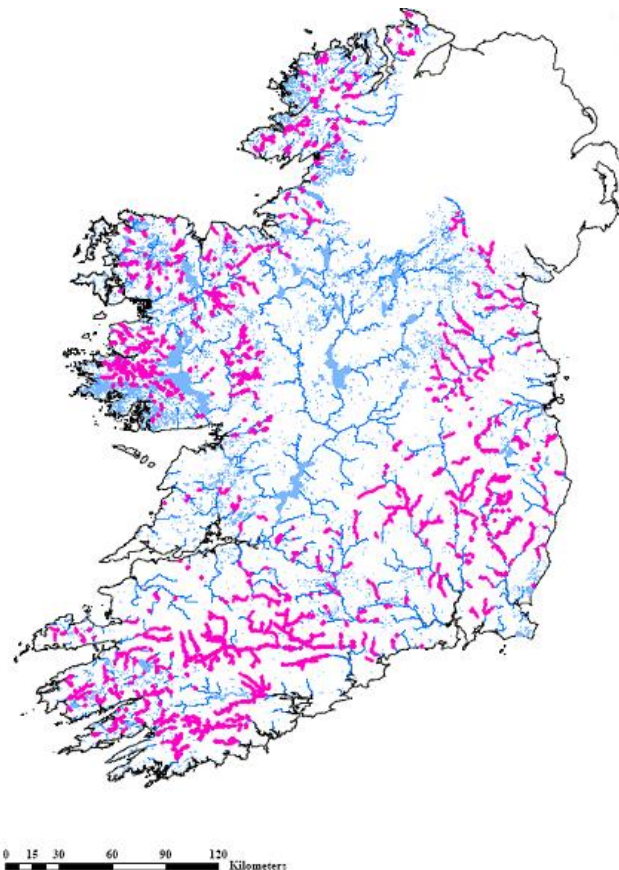


Figure 1. Map showing Atlantic salmon spawning areas (pink) within Irish freshwater habitat.

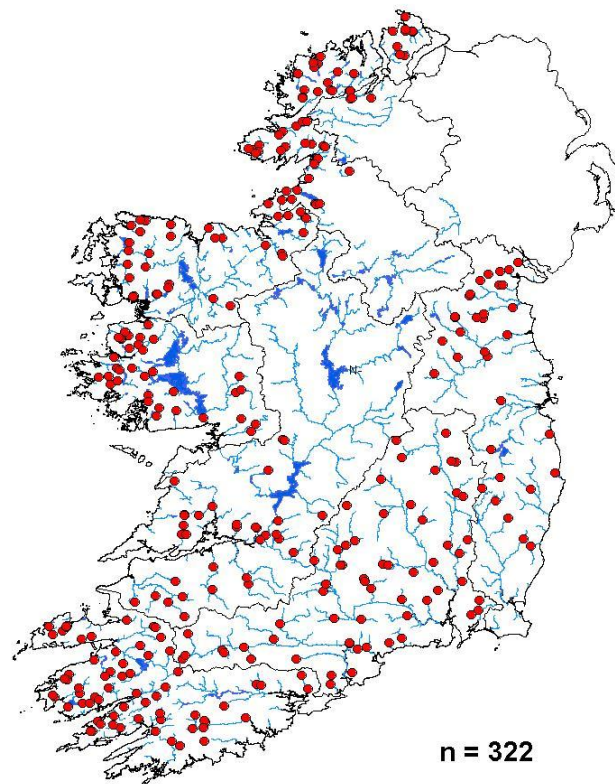


Figure 2. Map showing where juvenile Atlantic salmon were sampled for the freshwater baseline.

Collection of genetic material from the offshore and inshore fisheries

Fisheries samples (n=8,318) were collected on a directed and opportunistic basis. Scales were collected from 3,736 individual fish in a number of offshore commercial fisheries in 2005 and 2006 as part of the Marine Institute's national coded wire tag recovery programme (see Appendix 3 for collection protocol). Details of carcass tags were collected with scale samples. In addition to scales, tissues samples (n=1,705) were obtained opportunistically from heads (with accompanying carcass tags) collected in 2004, 2005 and 2006. These had been stored in freezers at a number of locations. Scale samples (n=2,877) were collected by Regional Fisheries Board personnel from targeted inshore and experimental fisheries (draft nets, drift nets and fix bag nets) (Figure 3) in 2006 following the same protocol as for offshore scale samples.

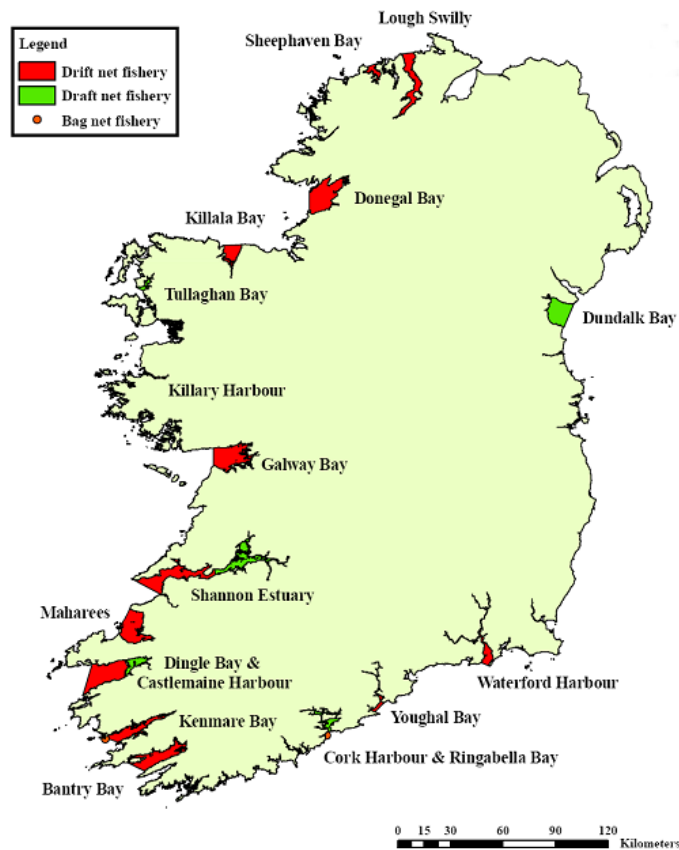


Figure 3. Map showing where inshore and experimental Atlantic salmon fisheries were sampled.

Laboratory analysis

Detailed descriptions of all laboratory protocols are provided in Appendix 4. A summary of these processes is presented here. DNA was released from ethanol preserved samples by taking a small piece of muscle tissue (approximately 2mm^3) and boiling at 99°C for one hour in $100\mu\text{l}$ of a 10% chelexTM resin solution. Dried scales were subjected to a more rigorous extraction involving an additional proteinase K digestion step prior to boiling at 99°C . Individuals were screened for variation at 13 presumed neutral microsatellite loci, and two microsatellites linked with genes of the major histocompatibility complex. Presumed neutral loci were obtained from a number of sources; *Ssa197*, *Ssa171*, *Ssa202* (O'Reilly *et al.* 1996), *Ssa170* (EMBL accession number: AF525205), *Sssp2201*, *Sssp2216*, *Sssp2210*, *Sssp1605*, *Sssp3016* (Paterson *et al.* 2004), *SSOSL85* (Slettan *et al.* 1995), *Ssa157*, *SsaD71* & *SsaD48* (King *et al.* 2005). MHC I and MHC II were from Grimholt *et al.* (2002) and Stet *et al.* (2002) respectively. PCRs were carried out in $10\mu\text{l}$ volumes, including $1\mu\text{l}$ of chelex extracted DNA, 0.25mM dNTPs, 0.5U *Taq* DNA Polymerase (PromegaTM), $2\mu\text{l}$ of 5x buffer

(Promega™) supplemented with 0.5mM MgCl₂ and 0.2-2μM each of forward and reverse primers (see Appendix 4, Table IIa-j for exact amounts), one of which was 3'-end-labelled with IRD800 or IRD700 (MWG BIOTECH™). Amplifications were carried out on a Hybaid™ thermocycler and consisted of an initial denaturation step of 3 min at 95°C, followed by 30 cycles of denaturation at 95°C for 30s, annealing at 56°C for 30s and extension at 72°C for 30s. Alleles were resolved on 6% denaturing polyacrylamide gels using a LiCOR4300™ automated DNA sequencer. Allele sizes were determined using a combination of a molecular weight marker (LiCOR™) and allele cocktail standards to ensure consistent scoring of genotypes.

Genotyping & establishment of the Irish baseline

Alleles were scored manually, by comparison with standard size markers made for each locus (see Appendix 4). All data were entered into Microsoft Excel spreadsheets in a two column format (one allele per column) for statistical analysis. The total number of fish analysed in the laboratory for the baseline was 8436. Raw genotypic data were checked for errors using the Excel microsatellite toolkit (Park 2001). Each sample was then checked for compliance with Hardy-Weinberg expectations. Subsequently, 512 fish, from 10 sampling locations were removed because they deviated from Hardy-Weinberg expectations. Therefore the final baseline consists of 7924 fish. These fish were from 145 sampling sites, representing 84 rivers in the Republic of Ireland, two rivers in Northern Ireland, and two farmed strains. Each of the 145 samples generally consisted of 48-96 individuals. In some areas, two year classes were examined in order to assess temporal stability of genotypes. In most cases there was no significant differentiation between year classes in terms of allele frequencies and year classes were pooled to make a single sample. However there were some exceptions, generally associated with smaller rivers (the Trimblestown tributary of the Boyne, and the GlenInagh tributary of the Owenmore Ballynahinch), and these were considered as separate samples in the baseline. Appendix 5 provides a summary of all the samples used in the baseline. Additional samples provided by the Central Fisheries Board, but not analysed in the laboratory are also included in table.

Patterns of differentiation among populations in the Irish baseline

All samples showed high levels of variability in terms of heterozygosity and numbers of alleles (see Table 1). Overall F_{ST} among the 145 populations in the baseline was 0.041. Pairwise F_{ST} s ranged widely, from 0.002 to 0.212. The most notable pattern however, was in the south east of Ireland, where F_{ST} values between (and within) rivers were generally very low when compared with other areas. The farmed strain samples (Aquagen and Fanad) were characterised by the highest intra sample F_{ST} values. A neighbour joining cladogram from Nei's D_A (1983) shows the relationships among all samples (Figure 4). A strong regional signal was evident among populations, although there were also some outliers. These were generally small populations which would be more prone to the effects of genetic drift, or populations which may be influenced by incursions from farmed fish.

Table 1. Sample sizes and levels of variability observed in baseline samples

Sample number	Population	Sample size	Expected Heterozygosity (H _E)	Observed Heterozygosity (H _O)	Mean number of alleles (N _A)	
1	DK1a	Castletown	48	0.860	0.867	14.9
2	DK4a	Fane	48	0.868	0.880	15.3
3	DK5b	Glyde	48	0.861	0.875	15.3
4	DK6a	Dee	48	0.875	0.880	15.9
5	DR8a	Boyne	48	0.865	0.862	15.7
6	DR8b	Boyne	48	0.843	0.875	13.6
7	DR8c	Boyne	84	0.875	0.863	17.6
8	DR8d	Boyne	90	0.864	0.862	17.1
9	DB15a	Liffey	48	0.811	0.808	12.5
10	DB18a	Dargle	48	0.888	0.911	16.4
11	DB21a	Vartry	48	0.883	0.883	16.6
12	WX26a	Avoca	48	0.887	0.881	17.5
13	WX31a	Slaney	48	0.890	0.886	18.6
14	WX31b	Slaney	48	0.850	0.885	12.7
15	WX31c	Slaney	43	0.872	0.870	15.7
16	WD37a	Barrow	40	0.894	0.882	17.4
17	WD37b	Barrow	82	0.894	0.894	20.6
18	WD37c	Barrow	44	0.894	0.901	17.0
19	WD37d	Barrow	21	0.891	0.886	13.3
20	WD38a	Nore	48	0.892	0.889	18.1
21	WD38b	Nore	48	0.895	0.909	18.9
22	WD38c	Nore	48	0.855	0.874	14.3
23	WD38d	Nore	48	0.873	0.871	16.2
24	WD38e	Nore	48	0.876	0.891	14.5
25	WD42a	Suir	48	0.889	0.891	17.0
26	WD42c	Suir	96	0.894	0.881	20.9
27	WD42d	Suir	96	0.885	0.878	19.6
28	WD42e	Suir	96	0.893	0.870	19.5

29	WD42f	Suir	96	0.892	0.893	20.7
30	WD42g	Suir	96	0.884	0.881	20.4
31	LS59a	Blackwater	96	0.884	0.892	20.8
32	LS59b	Blackwater	48	0.891	0.885	17.9
33	LS59c	Blackwater	48	0.899	0.882	18.3
34	LS59d	Blackwater	96	0.880	0.871	20.0
35	LS59e	Blackwater	95	0.890	0.882	20.7
36	LS60a	Bride	48	0.884	0.875	17.5
37	CK66a	Lee	48	0.864	0.868	16.1
38	CK66b	Lee	48	0.863	0.857	17.1
39	CK69a	Bandon	48	0.866	0.868	17.3
40	CK69b	Bandon	48	0.869	0.849	16.9
41	CK72a	Ilen	48	0.877	0.871	17.0
42	CK78a	Owvane	96	0.859	0.850	17.1
43	CK80a	Glengariff	96	0.824	0.809	16.7
44	CK81a	Adrigole	48	0.861	0.866	14.1
45	KY84a	Croanshagh	48	0.816	0.835	13.1
46	KY85a	Owenshagh	48	0.838	0.879	12.5
47	KY86a	Cloonee	48	0.835	0.860	12.3
48	KY87a	Sheen	48	0.849	0.865	15.4
49	KY88a	Roughty	48	0.831	0.825	13.1
50	KY88b	Roughty	48	0.857	0.879	14.5
51	KY89a	Finnihy	28	0.782	0.834	8.8
52	KY90a	Kerry B'water	48	0.840	0.841	12.9
53	KY92a	Sneem	48	0.842	0.863	14.3
54	KY93a	Owreagh	48	0.804	0.832	11.3
55	KY97a	Currane	48	0.831	0.848	13.2
56	KY97b	Currane	45	0.827	0.833	13.9
57	KY98a	Inny	48	0.871	0.887	16.3
58	KY102a	Ferta	48	0.870	0.884	16.2
59	KY103a	Behy	48	0.648	0.687	8.0
60	KY104a	Caragh	48	0.844	0.837	13.8
61	KY104b	Caragh	48	0.866	0.875	16.4
62	KY106a	Laune	48	0.870	0.855	16.8
63	KY106b	Laune	48	0.834	0.843	13.8
64	KY106c	Laune	48	0.838	0.834	13.5
65	KY106d	Laune	48	0.869	0.858	16.6
66	Ky106e	Laune	33	0.869	0.820	13.9
67	KY106f	Laune	48	0.865	0.851	15.5
68	KY106g	Laune	48	0.844	0.826	14.7
69	KY106h	Laune	24	0.771	0.766	8.5
70	KY107a	Maine	48	0.871	0.845	16.8
71	KY107b	Maine	45	0.857	0.884	17.0
72	KY108a	Emlagh	34	0.849	0.869	11.7
73	KY109a	Owenascaul	48	0.862	0.882	15.5
74	KY111a	Milltown	42	0.868	0.872	15.0
75	KY112a	Feoghanagh	48	0.868	0.876	16.1
76	KY117a	Tralee Lee	48	0.847	0.864	14.9
77	LK119a	Feale	48	0.828	0.824	13.9
78	LK119b	Feale	48	0.859	0.827	14.9
79	LK120a	Galey	48	0.844	0.848	14.6
80	LK126a	Maigue	48	0.845	0.865	12.5

81	LK128a	Mulcair	48	0.875	0.887	16.2
82	LK128b	Mulcair	48	0.875	0.840	16.9
83	GY145a	Kilcolgan	48	0.821	0.848	11.3
84	GY147a	Corrib	48	0.849	0.873	15.8
85	GY147b	Corrib	48	0.853	0.865	15.7
86	GY147c	Corrib	48	0.853	0.830	14.4
87	GY147d	Corrib	48	0.860	0.861	14.5
88	GY147e	Corrib	52	0.869	0.874	16.1
89	GY147f	Corrib	96	0.869	0.878	18.1
90	GY149a	Owenboliska	48	0.834	0.800	11.9
91	CN152a	Cashla	48	0.864	0.845	14.8
92	CN155a	Screebe	48	0.852	0.850	13.3
93	CN161a	Owenmore	48	0.862	0.862	15.6
94	CN161b	Owenmore	48	0.823	0.820	13.1
95	CN161c	Owenmore	48	0.836	0.823	13.4
96	CN166a	Dawros	48	0.854	0.836	14.1
97	CN167a	Culfin	48	0.849	0.845	13.2
98	BK168a	Errif	48	0.860	0.860	15.5
99	BK168b	Errif	48	0.874	0.851	16.9
100	BK169a	Bundorragha	48	0.861	0.871	15.6
101	BK172a	Bunowen	48	0.867	0.871	16.1
102	BG178a	Newport	48	0.842	0.864	11.5
103	BG179a	Srahmore	48	0.837	0.813	12.9
104	BG185a	Owenduff	48	0.857	0.859	14.7
105	BG185b	Owenduff	48	0.864	0.819	14.5
106	BG186a	Owenmore	48	0.887	0.859	17.3
107	BG186b	Owenmore	29	0.809	0.820	10.6
108	BG186c	Owenmore	48	0.878	0.867	16.9
109	BA194a	Cloonaghmore	89	0.858	0.860	16.9
110	BA195a	Moy	96	0.855	0.856	15.5
111	BA195b	Moy	96	0.851	0.847	16.9
112	BA195c	Moy	96	0.862	0.860	16.1
113	BA195d	Moy	95	0.890	0.895	19.5
114	BA195e	Moy	95	0.885	0.900	20.2
115	BA195f	Moy	96	0.869	0.876	18.1
116	BA196a	Brusna	96	0.891	0.881	19.5
117	BA200a	Easkey	96	0.877	0.878	18.1
118	SO202a	Ballysadare	94	0.846	0.857	14.9
119	SO202b	Ballysadare	48	0.850	0.867	13.2
120	SO203a	Garvogue	48	0.831	0.780	13.3
121	BS208a	Duff	48	0.824	0.810	13.9
122	BS208b	Duff	48	0.829	0.843	12.5
123	BS209a	Drowes	48	0.848	0.861	14.3
124	BS210a	Erne	48	0.867	0.869	15.7
125	BS211a	Abbey	48	0.864	0.857	14.3
126	BS213a	Laghy	48	0.854	0.882	13.6
127	BS214a	Eske	48	0.825	0.789	12.4
128	BS215a	Eany	48	0.865	0.842	16.1
129	BS219a	Glen	48	0.853	0.866	15.7
130	BS220a	Owenwee	48	0.853	0.896	14.3
131	LY223a	Owenea	48	0.887	0.886	17.5
132	LY225a	Gweebarra	48	0.841	0.821	12.9

133	LY228a	Gweedore	48	0.741	0.741	9.6
134	LY229a	Clady	48	0.862	0.869	14.3
135	LY240a	Lackagh	48	0.844	0.835	13.9
136	LY248b	Leannan	48	0.807	0.809	11.1
137	LY248c	Leannan	48	0.822	0.843	10.9
138	LY249a	Swilly	48	0.876	0.876	15.1
139	LY253a	Crana	48	0.857	0.840	14.7
140	Foylea	Foyle	48	0.871	0.861	15.7
141	Foyleb	Foyle	48	0.859	0.844	14.8
142	Foylec	Foyle	48	0.876	0.850	16.3
143	Bush	Bush	48	0.867	0.854	15.1
144	aquagen		48	0.750	0.813	7.6
145	fanad		48	0.829	0.828	11.6

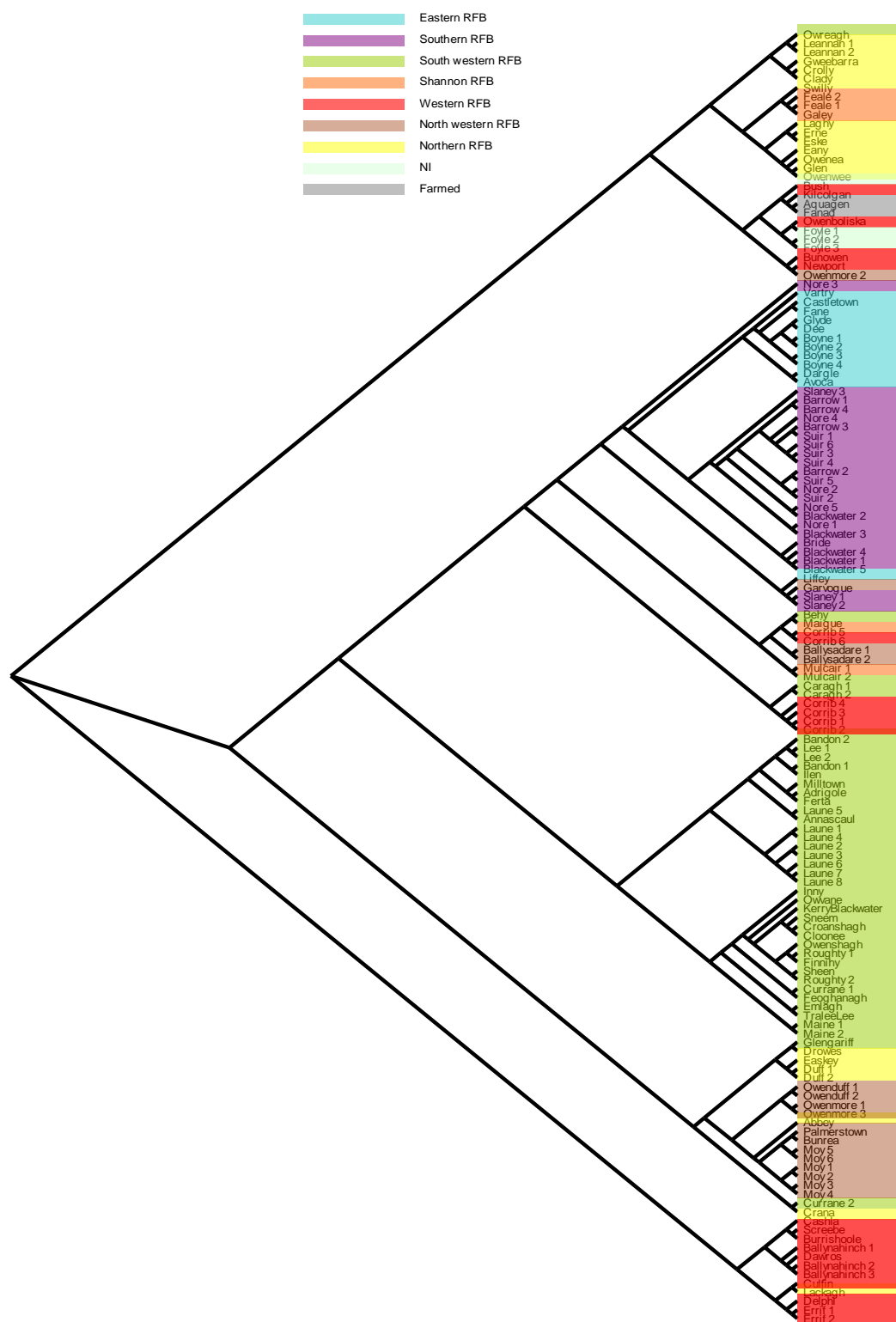


Figure 4a. Neighbour joining cladogram showing relationships among samples. Colours correspond to regions as shown on the map (opposite)

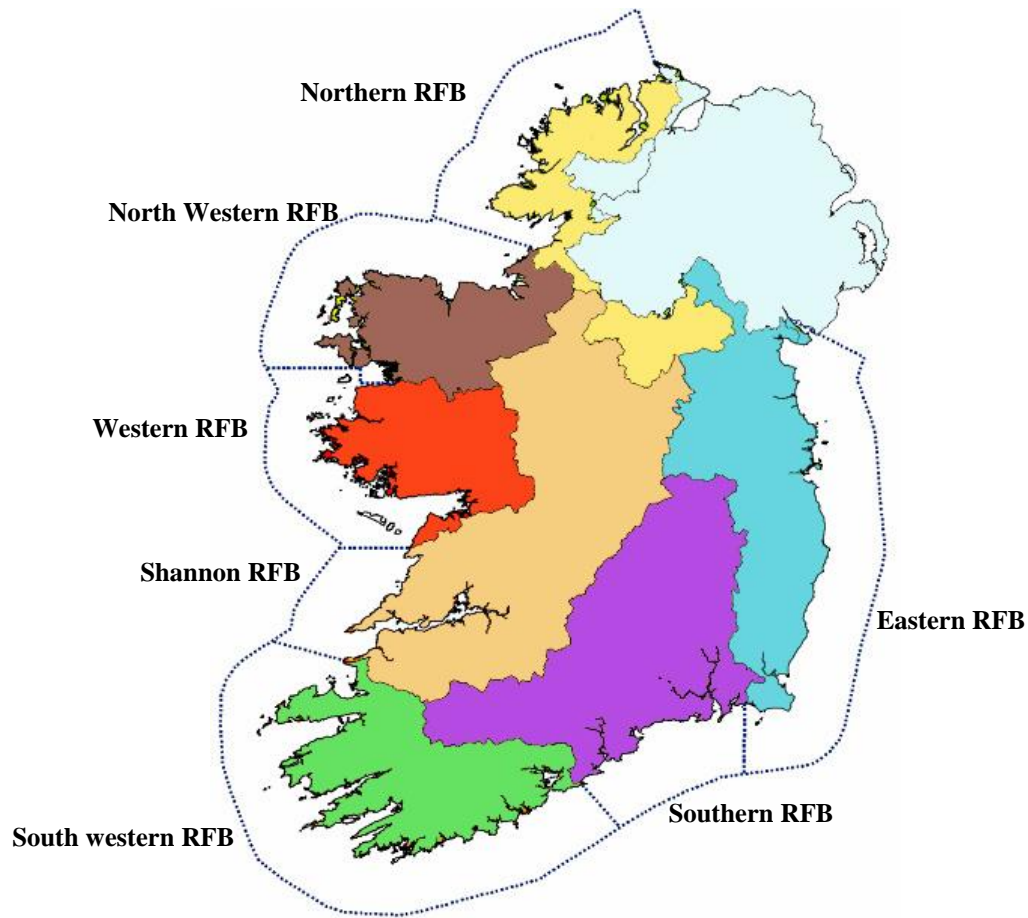


Figure 4b. Map of Ireland showing regional divisions of fisheries districts.

Integration of the baseline with the international ASAP database

The baseline created for the Republic of Ireland (including some tributaries of the Foyle and Bush in NI) is very extensive and includes all of the most productive salmon rivers. However, some fisheries operating off the Irish coast may intercept salmon originating in other countries. The Atlantic Salmon Arc Project (ASAP) has developed a genetic baseline for the UK, France and Spain using 12 microsatellites. These data were provided to the project by the University of Exeter and the University of Oveido. There were eight microsatellites in common between the Irish and European baselines. In order to inter-calibrate between the laboratories, a range of samples were exchanged and screened by both groups. Results were compared during a two day meeting, and a consensus was reached as to scoring of allele sizes making it possible to include data from 97 sampling sites (representing 16 Scottish, 15 English rivers, 5 Welsh, 9 French and 4 Spanish rivers). Therefore two baselines were available against which to compare fisheries samples; the first a pan-

European baseline of eight loci with 242 populations, the second an Irish baseline of 15 loci with 145 populations.

Validation of the baseline for Mixed Stock Analysis (MSA) and Individual Assignment (IA)

In order to ensure that the Irish baseline was suitable for MSA and IA, it was necessary to test samples of known origin against it. In addition to assessing the efficacy of the baseline, this also allowed an examination of two different software packages (SPAM and cBAYES) which are widely used for MSA so that the most appropriate one could be selected for final analysis of the mixed samples. Both of these programs have been widely used, and while it is now generally accepted that cBAYES provides the most reliable and accurate option for MSA, it was considered prudent to examine both methods. cBAYES4.0 (Neaves *et al.* 2005), allows both MSA and IA to be carried out and results of each can be compared. SPAM3.7 (Debevec *et al.* 2000) only allows for MSA. However, it does have the capability to apportion samples to unknown populations.

A number of options were available to do this. Firstly, 735 samples taken in the rod fishery on the Moy in Ballina, during 2003 and 2004 were made available from another project. These samples were assumed to belong mainly to the Moy and Brusna rivers. The Brusna is a smaller river which drains into the same estuary as the Moy. Secondly, 150 salmon caught on the Corrib rod fishery (expected to be a high proportion of Corrib fish) along with five kelts taken from the Maine were made available through this project. Finally, a 'blind' composite test sample was collected by field personnel and assembled by the Marine Institute scientific coordinator. This consisted of 236 individuals from a number of catchments throughout the Republic of Ireland, details of which were not disclosed until after all laboratory and statistical analysis had been completed.

The Moy samples were screened for just 10 of the same loci as the baseline (because they had been screened during the course of a previous study), while the Corrib, Maine and composite samples were analysed in the course of the present study for all 15 loci. Each sample was statistically analysed using SPAM and cBAYES softwares. Results from the Moy case study are given in Table 2. Given that the fish in this sample would be expected to originate in the Moy/Brusna catchments, cBAYES appears to give a more realistic output for both the mixed stock analysis and individual assignment applications.

Table 2. Results for the Moy example. n=711.

	cBAYES		SPAM
	MSA	IA	MSA
Moy	93.2%	667	70.6%
Brusna	6.5%	36	10.8%
Other	0.3%	8	18.6%

The case of the Corrib is shown in Table 3. Again, cBAYES provided more realistic results than SPAM, with both MSA and IA. In the case of the five Maine kelts, all assigned to the Maine river catchment using IA and MSA in cBAYES.

Table 3. Results for the Corrib example. n=139.

	cBAYES		SPAM
	MSA	IA	MSA
Corrib	94.6%	131	68.5%
Screebe	5.4%	8	4.0%
Other	0%	0	27.5%

The composite sample was a more stringent test of the baseline, as it was composed of a number of different populations of known origin in varying proportions. Table 4a shows the proportions, along with the actual known compositions.

Table 4a. Results for the composite sample. n=236.

	Actual		cBAYES		SPAM
	Prop	n	MSA	IA	MSA
Boyne	13.1%	31	12.8%	31	7.6%
Slaney	2.1%	5	2.0%	4	2.2%
Barrow	12.3%	29	2.8%	7	6.5%
Lee	15.3%	36	15.8%	36	8.2%
Corrib	6.8%	16	6.2%	15	7.1%
Erriff	8.5%	20	7.6%	18	5.3%
Burrishoole	15.3%	36	15.5%	36	13.9%
Moy	26.6%	63	24.7%	63	19.3%
<i>other</i>	-	-	12.6%	26	29.9%

There was clearly one area where population differentiation was less clear and results were more ambiguous. This was the south eastern part of Ireland (which was characterised by low F_{ST} s as discussed above). In the composite samples, the only population to which samples fail to assign is the Barrow. Further investigation indicated that the incorrectly assigned and apportioned samples went to neighbouring catchments in the the Waterford and Lismore districts (the Nore, Suir, Blackwater and Bride). This situation is very unusual in the context of Irish salmon populations. Various other assignment and MSA simulations revealed that salmon could be clearly designated to their river of origin, with the exception of fish from this area, which would assign to Waterford and Lismore, but not accurately to specific river of origin. For this reason, the results of assignments and proportions were combined for these rivers, into a group called SEPC (south eastern population complex). Thus, while samples could be confidently assigned to this region, it was more difficult to assign them to a particular river within the area.

Table 4b. Results for the composite sample. $n=236$. Results for the Barrow have been pooled with samples considered to form part of the South eastern population complex

	Actual		cBAYES		SPAM
	Prop	n	MSA	IA	MSA
Boyne	13.1%	31	12.8%	31	7.6%
Slaney	2.1%	5	2.0%	4	2.2%
-SEPC	12.3%	29	13.2%	28	22.8%
Lee	15.3%	36	15.8%	37	8.2%
Corrib	6.8%	16	6.2%	15	7.1%
Erriff	8.5%	20	7.6%	18	5.3%
Burrishoole	15.3%	36	15.5%	36	13.9%
Moy	26.6%	63	24.7%	64	20.2%
other	-	-	2.2%	3	12.7%

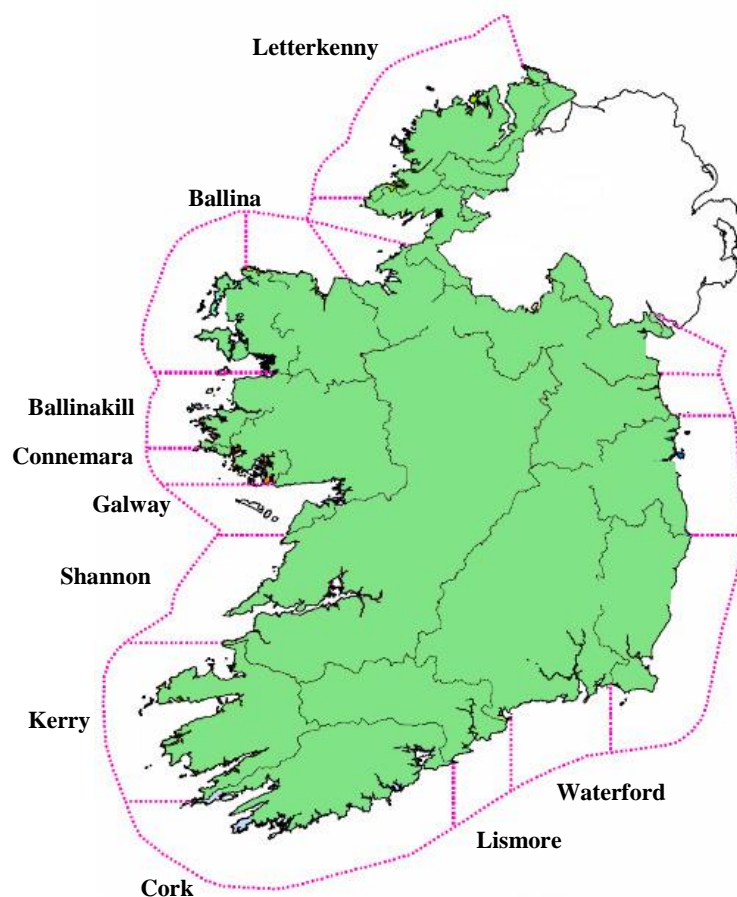
Given the importance of this region in salmon production, steps need to be taken to resolve this situation. To this end, some samples from that area are being screened for an additional 12 microsatellite loci, several of which are embedded in functional genes, as part of an undergraduate research project. Genotypes from these additional loci, particularly those associated with functional genes since they may be susceptible to the differentiating effects of natural selection, may provide enough resolution to identify samples to river of origin. However these results will not be available until early 2008.

Mixed Stock Analysis and Individual Assignment of actual fisheries data

Genotypes for fisheries samples were amassed and collated in a similar manner to those of the baseline samples. Fisheries were of a number of categories (inshore/offshore, drift nets/draft nets), from different areas and different years and so were divided up accordingly. Given the results from validating the baseline, it was clearly more appropriate to use cBAYES as the statistical package with which to analyse mixtures (as has been found with Pacific salmon species (Beacham *et al.*, 2004)), and a more detailed protocol of how to actually approach each fishery was devised as follows:

1. The samples from each fishery were tested against the 8 locus pan-European baseline.
2. Individual assignment output was examined to identify foreign fish.
3. The number of foreign fish was noted before removing them from further analysis.
4. The remaining fish in the mixture were then tested against the 15 locus Irish baseline.
5. MSA was used to estimate proportions of each population group in the Irish baseline. Tributaries from the same river were treated as a single population group, as were tributaries and rivers from the south eastern population complex. Northern Ireland samples were treated as one population group.
6. MSA was also used to estimate proportions derived from each fisheries district, and also farmed strains and the Northern Ireland population group. In this case, samples taken from each district were treated as a population group.
7. MSA proportions resulting from 5 & 6 were adjusted to account for the actual proportion of foreign fish that were previously removed from each fishery sample.
8. The results presented for both river and district MSA in each fishery sample include adjusted proportion for each population group, with associated standard deviations. Those population groups considered to be principal contributors to each fishery are given in bold.
9. MSA proportions were also given as numbers of actual fish by multiplying the proportion by the total number of fish in the sample
10. Also presented are histograms and maps showing MSA proportions by fisheries district and country, and numbers of actual fish per district/country, respectively.

Offshore Fisheries



Numbers of offshore fishery samples screened

Location	Year	No. screened
Letterkenny	2005	326
Letterkenny	2006	407
Ballina	2005	32
Ballina	2006	494
Ballinakill	2005	99
Ballinakill	2006	98
Connemara	2005	100
Connemara	2006	77
Galway	2005	42
Shannon	2004	39
Shannon	2005	136
Shannon	2006	240
Kerry	2005	103
Kerry	2006	257
Cork	2005	504
Cork	2006	64
Lismore	2005	277
Waterford	2006	320

Letterkenny drift nets 2005

Number screened = 326

Number of fish identified as being from UK/France/Spain = 68

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 234

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 93.2% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.2 (0.5)	1	GY 145	Kilcogan	0.0 (0.0)	0
DK 4	Fane	0.0 (0.0)	0	GY 147	Corrib	5.0 (1.5)	15
DK 5	Glyde	0.0 (0.0)	0	GY 149	Owenboliska	0.0 (0.0)	0
DK 6	Dee	0.0 (0.2)	0	CN 152	Cashla	1.4 (1.0)	4
DR 8	Boyne	0.0 (0.2)	0	CN 155	Screebe	0.0 (0.0)	0
DB 15	Liffey	0.2 (0.3)	0	CN 161	Owenmore	0.1 (0.4)	0
DB 18	Dargle	0.1 (0.4)	0	BK 166	Dawros	0.2 (0.4)	1
DB 21	Vartry	0.5 (0.8)	1	BK 167	Culfin	0.1 (0.3)	0
WX 26	Avoca	0.5 (1.0)	1	BK 168	Erriff	0.7 (0.9)	2
WX 31	Slaney	0.1 (0.2)	0	BK 169	Bundorragha	0.0 (0.1)	0
WD/LS*	SEPC	11.4 (2.7)	34	BK 172	Bunowen	0.0 (0.1)	0
CK 66	Lee	0.0 (0.1)	0	BG 178	Newport	0.0 (0.0)	0
CK 69	Bandon	0.4 (0.6)	1	BG 179	Srahmore	2.9 (1.1)	9
CK 72	Ilen	0.3 (0.8)	1	BG 185	Owenduff	0.6 (0.8)	2
CK 78	Owvane	0.0 (0.0)	0	BG 186	Owenmore	11.3 (2.9)	34
CK 80	Glengariff	0.0 (0.0)	0	BA 194	Cloonaghmore	0.0 (0.1)	0
CK 81	Adrigole	0.0 (0.1)	0	BA 195	Moy	22.9 (3.1)	68
KY 84	Croanshagh	0.0 (0.0)	0	BA 196	Brusna	0.0 (0.1)	0
KY 85	Owenshagh	0.0 (0.0)	0	BA 200	Easkey	0.3 (0.4)	1
KY 86	Cloonee	0.0 (0.0)	0	SO 202	Ballysadare	3.2 (1.1)	9
KY 87	Sheen	0.0 (0.1)	0	SO 203	Garvogue	0.7 (0.5)	2
KY 88	Roughty	0.0 (0.0)	0	BS 208	Duff	0.1 (0.2)	0
KY 89	Finnihiy	0.0 (0.0)	0	BS 209	Drowes	2.1 (1.4)	6
KY 90	KerryBlackwater	0.0 (0.0)	0	BS 210	Erne	0.1 (0.4)	0
KY 92	Sneem	0.0 (0.0)	0	BS 211	Abbey	0.0 (0.1)	0
KY 93	Owreagh	0.3 (0.4)	1	BS 213	Laghy	0.0 (0.1)	0
KY 97	Currane	0.0 (0.1)	0	BS 214	Eske	0.0 (0.1)	0
KY 98	Inny	0.0 (0.0)	0	BS 215	Eany	0.1 (0.3)	0
KY 102	Ferta	0.0 (0.0)	0	BS 219	Glen	0.0 (0.0)	0
KY 103	Behy	0.0 (0.0)	0	BS 220	Owenwee	0.0 (0.0)	0
KY 104	Caragh	0.0 (0.1)	0	LY 223	Owenea	5.7 (2.1)	17
KY 106	Laune	0.1 (0.2)	0	LY 225	Gweebarra	0.7 (0.9)	2
KY 107	Maine	0.0 (0.2)	0	LY 228	Gweedore	0.0 (0.0)	0
KY 108	Emlagh	0.0 (0.0)	0	LY 229	Clady	1.2 (0.7)	4
KY 109	Owenascaul	0.0 (0.0)	0	LY 240	Lackagh	0.0 (0.0)	0
KY 111	Milltown	0.0 (0.1)	0	LY 248	Leannan	0.0 (0.2)	0
KY 112	Feoghanagh	0.0 (0.1)	0	LY 249	Swilly	0.0 (0.1)	0
KY 117	TraleeLee	0.0 (0.0)	0	LY 253	Crana	0.0 (0.0)	0
LK 119	Feale	0.4 (1.1)	1	-	Northern Ireland	0.4 (0.9)	1
LK 120	Galey	1.8 (0.9)	5	-	Aqaugen	0.0 (0.0)	0
LK 126	Maigue	0.0 (0.1)	0	-	Fanad	0.0 (0.0)	0
LK 128	Mulcair	2.7 (1.2)	8	-	UK/France/Spain	-	68

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

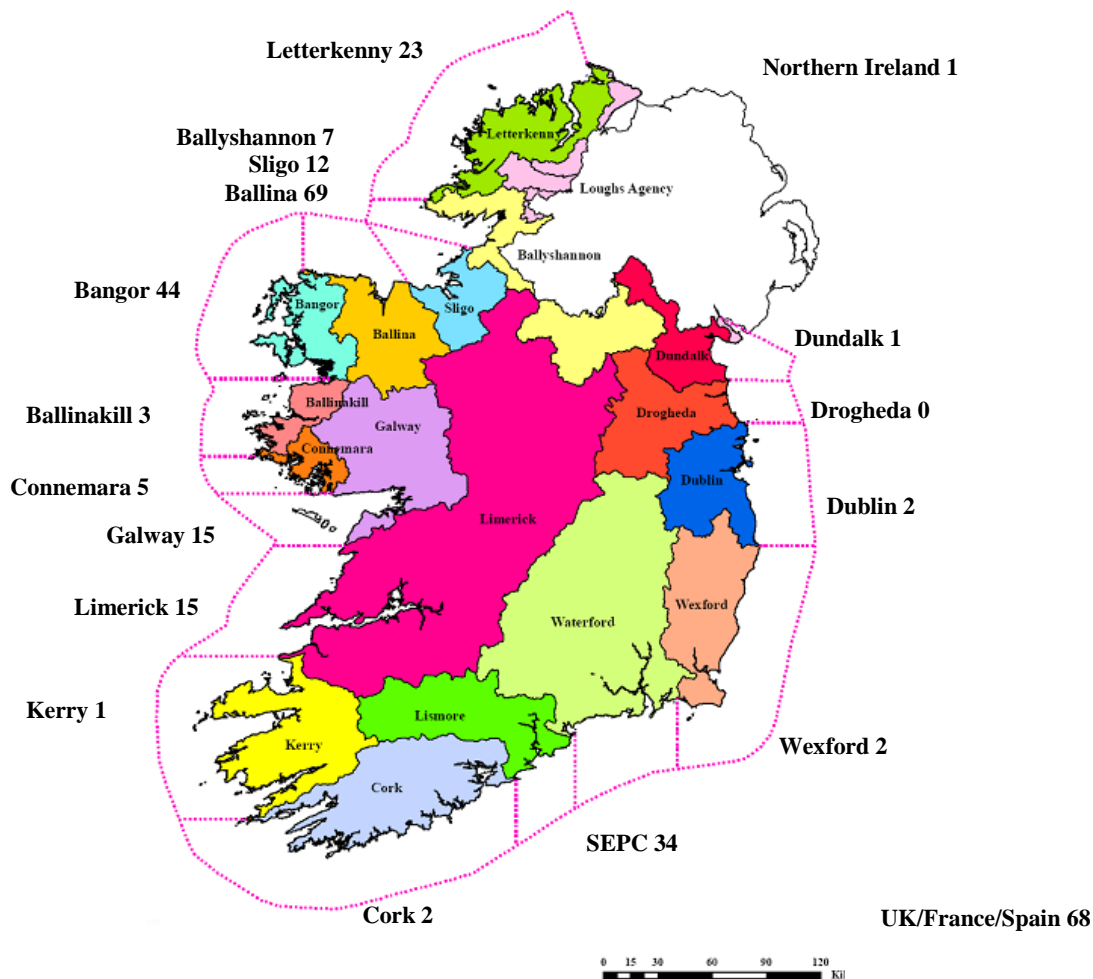
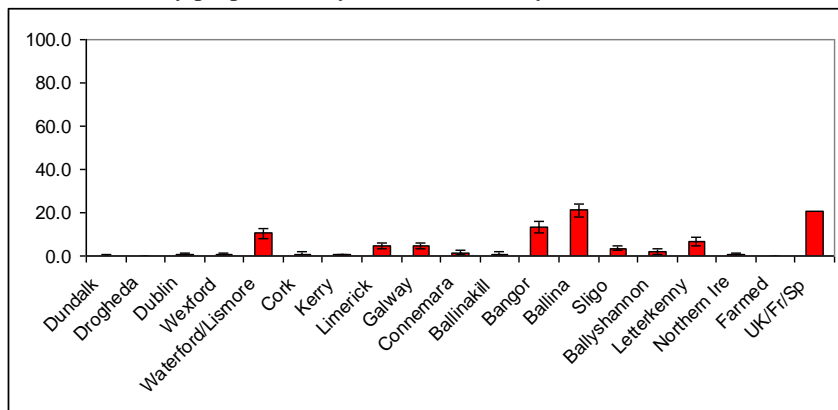
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.2 (0.5)	1
Drogheda	0.0 (0.2)	0
Dublin	0.7 (0.8)	2
Wexford	0.5 (0.9)	2
Waterford/Lismore	10.3 (2.5)	34
Cork	0.7 (1.0)	2
Kerry	0.4 (0.5)	1
Limerick	4.5 (1.5)	15
Galway	4.5 (1.4)	15
Connemara	1.4 (0.9)	5
Ballinakill	0.9 (1.0)	3
Bangor	13.5 (2.7)	44
Ballina	21.1 (2.8)	69
Sligo	3.6 (1.1)	12
Ballyshannon	2.2 (1.4)	7
Letterkenny	6.9 (2.0)	23
Northern Ireland	0.4 (0.8)	1
Farmed Strains	0.0 (0.0)	0
UK/France/Spain		68

Letterkenny drift nets 2005 (n = 302)

Estimated fishery proportions by district or country



Letterkenny drift nets 2006

Number screened = 407

Number of fish identified as being from UK/France/Spain = 33

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 286

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 90.2% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.0)	0	GY 145	Kilcogan	0.0 (0.0)	0
DK 4	Fane	0.0 (0.1)	0	GY 147	Corrib	7.5 (1.8)	23
DK 5	Glyde	0.0 (0.1)	0	GY 149	Owenboliska	0.0 (0.1)	0
DK 6	Dee	0.0 (0.1)	0	CN 152	Cashla	0.2 (0.5)	1
DR 8	Boyne	0.3 (0.6)	1	CN 155	Screebe	0.6 (0.6)	2
DB 15	Liffey	0.0 (0.0)	0	CN 161	Owenmore	0.3 (0.5)	1
DB 18	Dargle	1.5 (1.3)	5	BK 166	Dawros	0.8 (1.1)	3
DB 21	Vartry	1.8 (1.2)	6	BK 167	Culfin	0.3 (0.4)	1
WX 26	Avoca	0.0 (0.1)	0	BK 168	Erriff	4.5 (1.8)	14
WX 31	Slaney	0.7 (0.8)	2	BK 169	Bundorragha	0.2 (0.5)	0
WD/LS*	SEPC	2.9 (2.4)	9	BK 172	Bunowen	1.0 (1.5)	3
CK 66	Lee	0.2 (0.4)	0	BG 178	Newport	0.9 (0.8)	3
CK 69	Bandon	2.1 (1.2)	6	BG 179	Srahmore	0.0 (0.0)	0
CK 72	Ilen	3.6 (1.7)	11	BG 185	Owenduff	0.6 (0.7)	2
CK 78	Owvane	0.2 (0.6)	1	BG 186	Owenmore	9.4 (2.5)	29
CK 80	Glengariff	0.9 (0.6)	3	BA 194	Cloonaghmore	0.0 (0.0)	0
CK 81	Adrigole	0.0 (0.0)	0	BA 195	Moy	30.2 (3.6)	94
KY 84	Croanshagh	0.0 (0.0)	0	BA 196	Brusna	1.3 (2.0)	4
KY 85	Owenshagh	0.0 (0.0)	0	BA 200	Easkey	0.0 (0.1)	0
KY 86	Cloonee	0.0 (0.0)	0	SO 202	Ballysadare	5.7 (1.4)	18
KY 87	Sheen	0.4 (0.7)	1	SO 203	Garvogue	1.1 (0.6)	3
KY 88	Roughty	0.0 (0.1)	0	BS 208	Duff	0.0 (0.1)	0
KY 89	Finnihey	0.0 (0.0)	0	BS 209	Drowes	1.5 (0.8)	5
KY 90	KerryBlackwater	0.0 (0.0)	0	BS 210	Erne	0.0 (0.1)	0
KY 92	Sneem	0.5 (0.5)	2	BS 211	Abbey	0.0 (0.0)	0
KY 93	Owreagh	0.0 (0.0)	0	BS 213	Laghy	0.1 (0.3)	0
KY 97	Currane	0.0 (0.2)	0	BS 214	Eske	0.0 (0.1)	0
KY 98	Inny	0.0 (0.1)	0	BS 215	Eany	0.0 (0.0)	0
KY 102	Ferta	0.0 (0.1)	0	BS 219	Glen	0.0 (0.0)	0
KY 103	Behy	0.0 (0.0)	0	BS 220	Owenwee	0.0 (0.1)	0
KY 104	Caragh	0.0 (0.1)	0	LY 223	Owenea	1.4 (1.9)	4
KY 106	Laune	2.8 (1.5)	9	LY 225	Gweebarra	0.1 (0.3)	0
KY 107	Maine	0.0 (0.2)	0	LY 228	Gweedore	0.0 (0.0)	0
KY 108	Emlagh	0.0 (0.2)	0	LY 229	Clady	0.0 (0.0)	0
KY 109	Owenascaul	0.0 (0.1)	0	LY 240	Lackagh	0.1 (0.4)	0
KY 111	Milltown	0.0 (0.0)	0	LY 248	Leannan	0.0 (0.1)	0
KY 112	Feoghanagh	0.0 (0.2)	0	LY 249	Swilly	0.0 (0.1)	0
KY 117	TraleeLee	0.0 (0.1)	0	LY 253	Crana	0.0 (0.0)	0
LK 119	Feale	0.0 (0.1)	0	-	Northern Ireland	3.9 (1.4)	12
LK 120	Galey	0.0 (0.0)	0	-	Aqaugen	0.0 (0.0)	0
LK 126	Maigue	0.0 (0.1)	0	-	Fanad	0.0 (0.1)	0
LK 128	Mulcair	1.8 (1.3)	6	-	UK/France/Spain		33

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

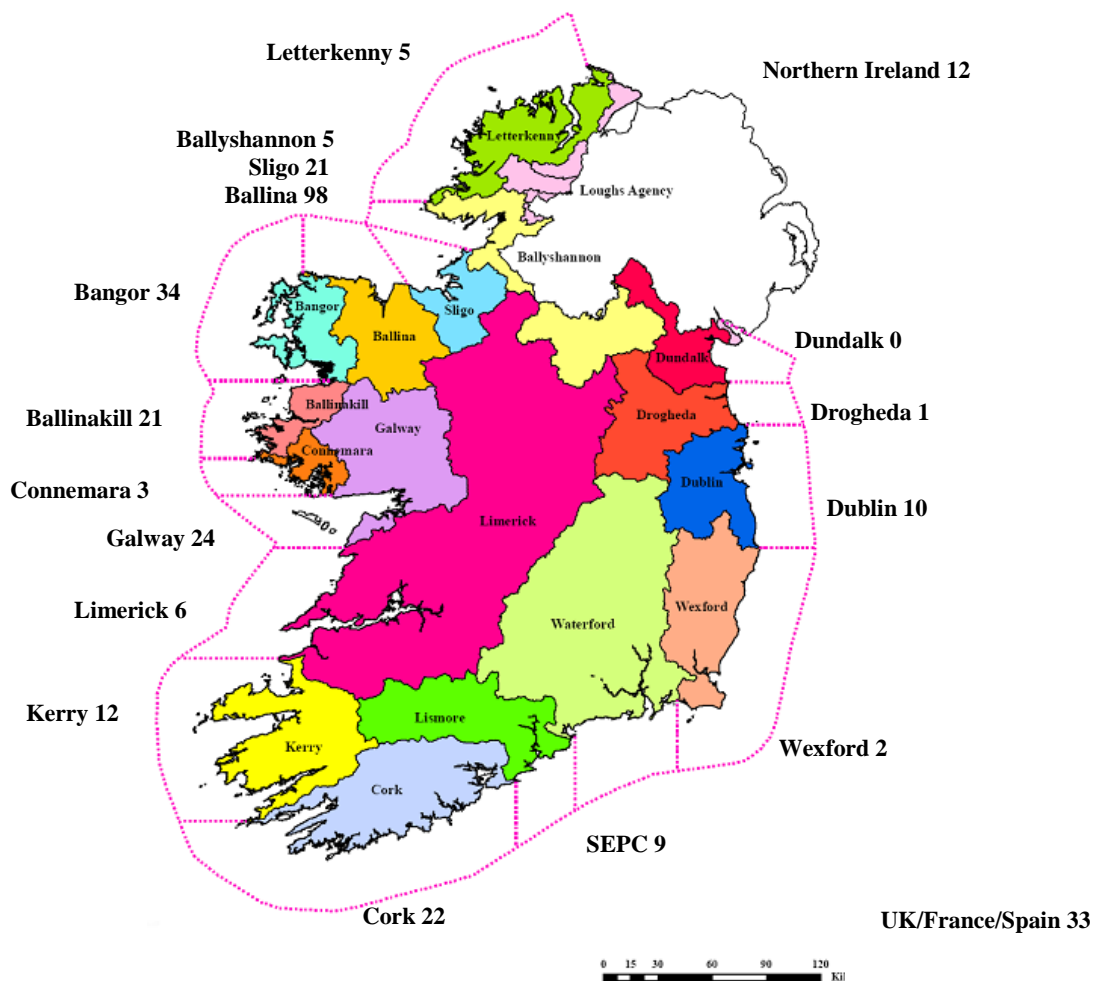
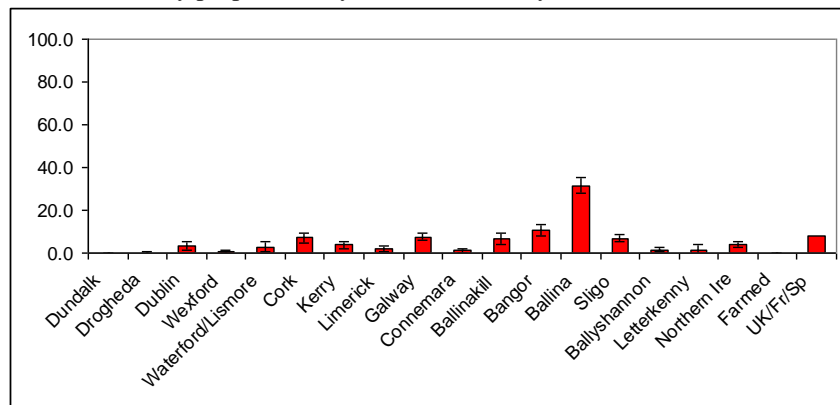
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.0 (0.1)	0
Drogheda	0.3 (0.6)	1
Dublin	3.4 (1.7)	10
Wexford	0.7 (0.8)	2
Waterford/Lismore	2.9 (2.4)	9
Cork	7.0 (2.2)	22
Kerry	3.9 (1.7)	12
Limerick	1.8 (1.3)	6
Galway	7.6 (1.8)	24
Connemara	1.1 (0.9)	3
Ballinakill	6.8 (2.5)	21
Bangor	10.9 (2.6)	34
Ballina	31.5 (3.6)	98
Sligo	6.8 (1.6)	21
Ballyshannon	1.6 (0.9)	5
Letterkenny	1.7 (2.0)	5
Northern Ireland	3.9 (1.4)	12
Farmed Strains	0.0 (0.1)	0
UK/France/Spain		33

Letterkenny drift nets 2006 (n = 319)

Estimated fishery proportions by district or country



Ballina drift nets 2005

Number screened = 32

Number of fish identified as being from UK/France/Spain = 2

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 29

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 90.2% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.2)	0	GY 145	Kilcogan	0.0 (0.2)	0
DK 4	Fane	0.0 (0.3)	0	GY 147	Corrib	4.3 (6.7)	1
DK 5	Glyde	0.1 (0.5)	0	GY 149	Owenboliska	0.0 (0.3)	0
DK 6	Dee	0.0 (0.3)	0	CN 152	Cashla	0.0 (0.4)	0
DR 8	Boyne	0.1 (0.5)	0	CN 155	Screebe	2.7 (3.5)	1
DB 15	Liffey	0.0 (0.3)	0	CN 161	Owenmore	0.2 (1.0)	0
DB 18	Dargle	0.1 (0.7)	0	BK 166	Dawros	0.0 (0.2)	0
DB 21	Vartry	0.1 (0.9)	0	BK 167	Culfin	0.0 (0.3)	0
WX 26	Avoca	0.0 (0.3)	0	BK 168	Erriff	7.4 (5.2)	2
WX 31	Slaney	0.2 (0.9)	0	BK 169	Bundorragha	6.8 (4.6)	2
WD/LS*	SEPC	42.7 (11.4)	13	BK 172	Bunowen	0.0 (0.3)	0
CK 66	Lee	0.4 (1.8)	0	BG 178	Newport	0.0 (0.3)	0
CK 69	Bandon	1.3 (3.4)	0	BG 179	Srahmore	6.5 (6.8)	2
CK 72	Ilen	0.0 (0.3)	0	BG 185	Owenduff	0.0 (0.3)	0
CK 78	Owvane	0.0 (0.3)	0	BG 186	Owenmore	0.1 (0.5)	0
CK 80	Glengariff	0.0 (0.2)	0	BA 194	Cloonaghmore	0.1 (0.6)	0
CK 81	Adrigole	0.0 (0.4)	0	BA 195	Moy	2.9 (3.3)	1
KY 84	Croanshagh	0.0 (0.2)	0	BA 196	Brusna	0.0 (0.4)	0
KY 85	Owenshagh	0.0 (0.2)	0	BA 200	Easkey	0.1 (0.8)	0
KY 86	Cloonee	0.0 (0.2)	0	SO 202	Ballysadare	0.0 (0.4)	0
KY 87	Sheen	0.0 (0.3)	0	SO 203	Garvogue	0.0 (0.5)	0
KY 88	Roughty	0.1 (0.8)	0	BS 208	Duff	0.0 (0.3)	0
KY 89	Finnihiy	0.0 (0.2)	0	BS 209	Drowes	0.0 (0.3)	0
KY 90	KerryBlackwater	0.0 (0.3)	0	BS 210	Erne	0.0 (0.4)	0
KY 92	Sneem	0.0 (0.4)	0	BS 211	Abbey	0.0 (0.3)	0
KY 93	Owreagh	0.0 (0.2)	0	BS 213	Laghy	0.0 (0.3)	0
KY 97	Currane	0.1 (0.4)	0	BS 214	Eske	0.0 (0.3)	0
KY 98	Inny	0.0 (0.2)	0	BS 215	Eany	0.0 (0.4)	0
KY 102	Ferta	0.0 (0.2)	0	BS 219	Glen	0.0 (0.4)	0
KY 103	Behy	0.0 (0.3)	0	BS 220	Owenwee	0.0 (0.3)	0
KY 104	Caragh	0.1 (0.4)	0	LY 223	Owenea	0.0 (0.4)	0
KY 106	Laune	0.2 (0.9)	0	LY 225	Gweebarra	0.0 (0.3)	0
KY 107	Maine	0.1 (0.6)	0	LY 228	Gweedore	0.0 (0.2)	0
KY 108	Emlagh	0.1 (0.5)	0	LY 229	Clady	0.0 (0.3)	0
KY 109	Owenascaul	0.0 (0.4)	0	LY 240	Lackagh	0.0 (0.2)	0
KY 111	Milltown	0.0 (0.3)	0	LY 248	Leannan	0.1 (0.4)	0
KY 112	Feoghanagh	0.0 (0.2)	0	LY 249	Swilly	0.0 (0.5)	0
KY 117	TraleeLee	0.1 (0.6)	0	LY 253	Crana	0.1 (1.1)	0
LK 119	Feale	0.0 (0.4)	0	-	Northern Ireland	0.1 (0.6)	0
LK 120	Galey	0.0 (0.3)	0	-	Aqaugen	0.0 (0.3)	0
LK 126	Maigue	0.0 (0.2)	0	-	Fanad	10.7 (5.7)	3
LK 128	Mulcair	4.5 (5.4)	1	-	UK/France/Spain		2

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

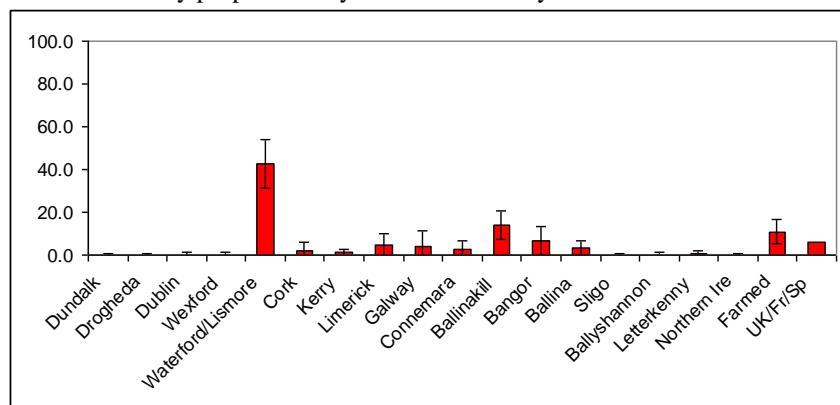
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

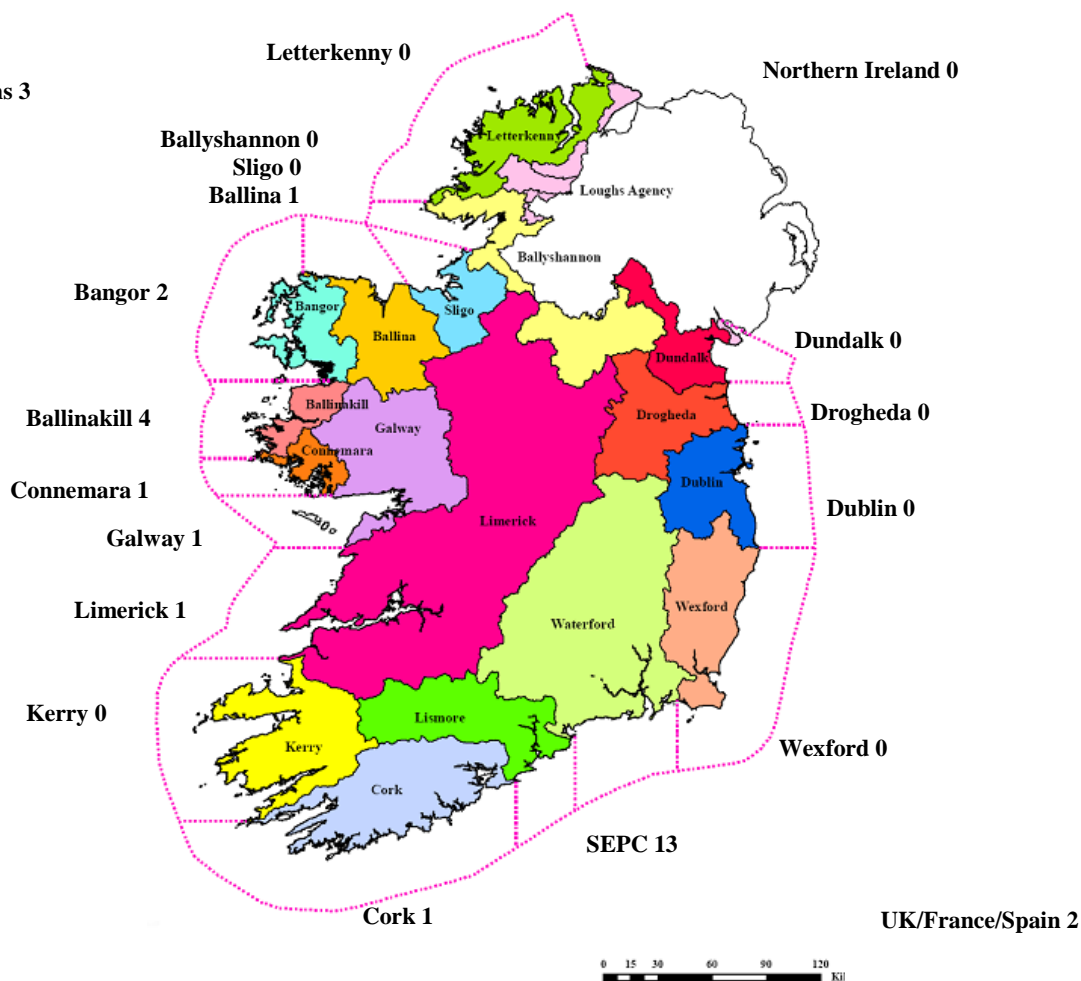
District	MSA (SD)	#
Dundalk	0.1 (0.7)	0
Drogheda	0.1 (0.5)	0
Dublin	0.2 (1.1)	0
Wexford	0.2 (1.0)	0
Waterford/Lismore	42.7 (11.4)	13
Cork	1.9 (4.4)	1
Kerry	1.0 (1.9)	0
Limerick	4.6 (5.5)	1
Galway	4.3 (6.7)	1
Connemara	2.9 (3.7)	1
Ballinakill	14.3 (6.7)	4
Bangor	6.7 (6.8)	2
Ballina	3.2 (3.4)	1
Sligo	0.1 (0.6)	0
Ballyshannon	0.3 (1.0)	0
Letterkenny	0.3 (1.4)	0
Northern Ireland	0.1 (0.6)	0
Farmed Strains	10.8 (5.7)	3
UK/France/Spain		2

Ballina drift nets 2005 (n = 31)

Estimated fishery proportions by district or country



Farmed strains 3



Ballina drift nets 2006

Number screened = 494

Number of fish identified as being from UK/France/Spain = 79

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 407

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 94.7% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.1)	0	GY 145	Kilcogan	0.0 (0.0)	0
DK 4	Fane	0.0 (0.0)	0	GY 147	Corrib	7.3 (1.5)	35
DK 5	Glyde	0.0 (0.0)	0	GY 149	Owenboliska	0.0 (0.0)	0
DK 6	Dee	0.0 (0.1)	0	CN 152	Cashla	0.3 (0.6)	2
DR 8	Boyne	0.3 (0.5)	2	CN 155	Screebe	2.1 (0.7)	10
DB 15	Liffey	0.0 (0.0)	0	CN 161	Owenmore	0.6 (0.7)	3
DB 18	Dargle	0.0 (0.0)	0	BK 166	Dawros	0.0 (0.0)	0
DB 21	Vartry	0.1 (0.4)	1	BK 167	Culfin	0.0 (0.1)	0
WX 26	Avoca	0.0 (0.2)	0	BK 168	Erriff	1.4 (1.0)	7
WX 31	Slaney	0.1 (0.2)	0	BK 169	Bundorragha	2.0 (0.9)	10
WD/LS*	SEPC	15.7 (2.4)	76	BK 172	Bunowen	0.0 (0.0)	0
CK 66	Lee	0.1 (0.2)	0	BG 178	Newport	1.4 (0.8)	7
CK 69	Bandon	0.0 (0.1)	0	BG 179	Srahmore	4.6 (1.0)	22
CK 72	Ilen	0.6 (0.7)	3	BG 185	Owenduff	0.9 (0.5)	4
CK 78	Owvane	0.0 (0.1)	0	BG 186	Owenmore	2.8 (1.0)	14
CK 80	Glengariff	0.0 (0.0)	0	BA 194	Cloonaghmore	0.0 (0.0)	0
CK 81	Adrigole	0.0 (0.0)	0	BA 195	Moy	12.6 (2.0)	61
KY 84	Croanshagh	0.0 (0.1)	0	BA 196	Brusna	1.3 (1.0)	6
KY 85	Owenshagh	0.0 (0.1)	0	BA 200	Easkey	0.0 (0.2)	0
KY 86	Cloonee	0.0 (0.0)	0	SO 202	Ballysadare	0.2 (0.2)	1
KY 87	Sheen	0.5 (0.5)	3	SO 203	Garvogue	0.0 (0.0)	0
KY 88	Roughty	0.1 (0.2)	0	BS 208	Duff	0.0 (0.0)	0
KY 89	Finnihiy	0.0 (0.0)	0	BS 209	Drowes	0.5 (0.3)	2
KY 90	KerryBlackwater	0.0 (0.0)	0	BS 210	Erne	0.0 (0.0)	0
KY 92	Sneem	0.0 (0.0)	0	BS 211	Abbey	0.0 (0.1)	0
KY 93	Owreagh	0.0 (0.0)	0	BS 213	Laghy	0.0 (0.0)	0
KY 97	Currane	0.0 (0.1)	0	BS 214	Eske	0.0 (0.0)	0
KY 98	Inny	1.3 (1.0)	6	BS 215	Eany	0.0 (0.0)	0
KY 102	Ferta	1.6 (1.0)	8	BS 219	Glen	0.1 (0.3)	0
KY 103	Behy	0.0 (0.0)	0	BS 220	Owenwee	0.0 (0.0)	0
KY 104	Caragh	0.5 (0.7)	2	LY 223	Owenea	0.9 (1.1)	5
KY 106	Laune	2.6 (1.0)	13	LY 225	Gweebarra	0.0 (0.1)	0
KY 107	Maine	0.4 (0.6)	2	LY 228	Gweedore	0.0 (0.0)	0
KY 108	Emlagh	0.0 (0.0)	0	LY 229	Clady	0.0 (0.0)	0
KY 109	Owenascaul	0.0 (0.0)	0	LY 240	Lackagh	0.0 (0.0)	0
KY 111	Milltown	0.0 (0.1)	0	LY 248	Leannan	0.0 (0.0)	0
KY 112	Feoghanagh	0.0 (0.1)	0	LY 249	Swilly	0.1 (0.3)	0
KY 117	TraleeLee	0.0 (0.0)	0	LY 253	Crana	0.0 (0.0)	0
LK 119	Feale	1.5 (0.7)	7	-	Northern Ireland	0.8 (0.7)	4
LK 120	Galey	0.0 (0.1)	0	-	Aqaugen	0.0 (0.0)	0
LK 126	Maigue	0.0 (0.0)	0	-	Fanad	0.0 (0.1)	0
LK 128	Mulcair	18.3 (2.3)	89	-	UK/France/Spain		79

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

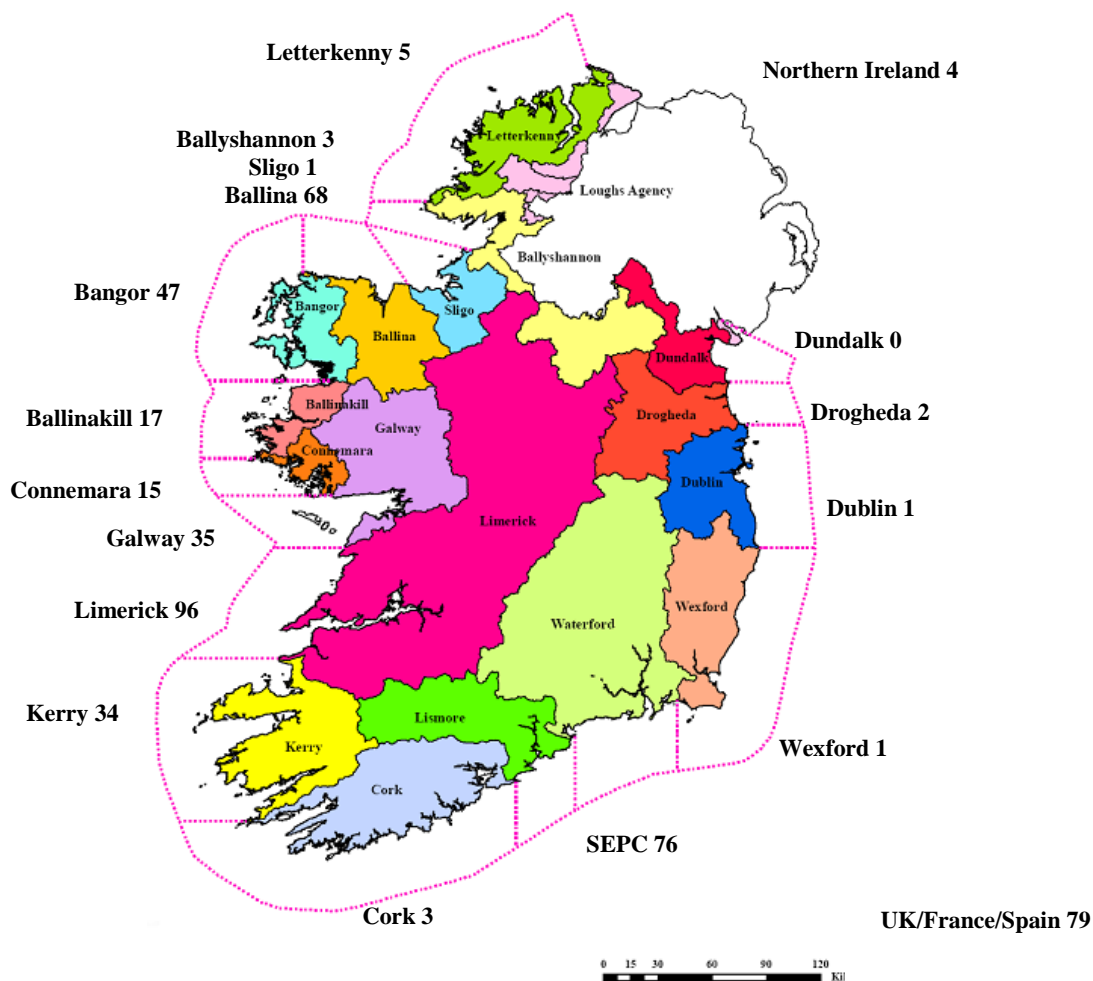
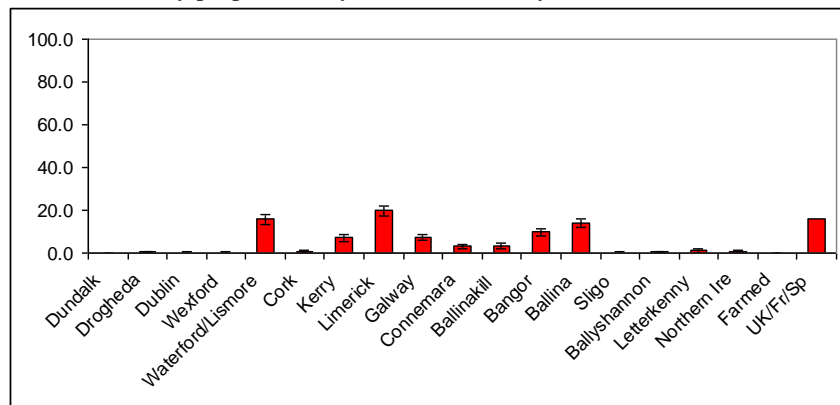
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.0 (0.1)	0
Drogheda	0.3 (0.5)	2
Dublin	0.1 (0.4)	1
Wexford	0.1 (0.3)	1
Waterford/Lismore	15.7 (2.4)	76
Cork	0.7 (0.7)	3
Kerry	7.1 (1.8)	34
Limerick	19.8 (2.4)	96
Galway	7.3 (1.5)	35
Connemara	3.0 (1.2)	15
Ballinakill	3.4 (1.2)	17
Bangor	9.7 (1.6)	47
Ballina	14.0 (2.1)	68
Sligo	0.2 (0.2)	1
Ballyshannon	0.5 (0.4)	3
Letterkenny	1.0 (1.2)	5
Northern Ireland	0.8 (0.7)	4
Farmed Strains	0.0 (0.1)	0
UK/France/Spain		79

Ballina drift nets 2006 (n = 486)

Estimated fishery proportions by district or country



Bangor drift nets 2006

Number screened = 20

Number of fish identified as being from UK/France/Spain = 3

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 17

Estimated MSA proportions and numbers in the fishery by population group (samples size too small to reliably indentify principal contributors)

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.3)	0	GY 145	Kilcogan	0.0 (0.4)	0
DK 4	Fane	0.0 (0.4)	0	GY 147	Corrib	3.4 (5.8)	1
DK 5	Glyde	0.0 (0.4)	0	GY 149	Owenboliska	0.1 (1.0)	0
DK 6	Dee	0.0 (0.4)	0	CN 152	Cashla	0.5 (2.6)	0
DR 8	Boyne	0.2 (1.2)	0	CN 155	Screebe	0.0 (0.5)	0
DB 15	Liffey	0.0 (0.3)	0	CN 161	Owenmore	0.3 (1.9)	0
DB 18	Dargle	0.0 (0.3)	0	BK 166	Dawros	0.0 (0.5)	0
DB 21	Vartry	0.0 (0.4)	0	BK 167	Culfin	0.1 (0.9)	0
WX 26	Avoca	0.1 (1.0)	0	BK 168	Erriff	4.0 (7.3)	1
WX 31	Slaney	0.1 (0.7)	0	BK 169	Bundorragha	5.4 (7.4)	1
WD/LS*	SEPC	7.4 (8.7)	1	BK 172	Bunowen	13.5 (10.7)	3
CK 66	Lee	0.1 (0.8)	0	BG 178	Newport	0.0 (0.4)	0
CK 69	Bandon	1.2 (3.7)	0	BG 179	Srahmore	1.2 (3.1)	0
CK 72	Ilen	0.1 (0.6)	0	BG 185	Owenduff	0.1 (0.5)	0
CK 78	Owvane	0.4 (2.2)	0	BG 186	Owenmore	0.5 (2.4)	0
CK 80	Glengariff	0.1 (1.1)	0	BA 194	Cloonaghmore	0.1 (0.8)	0
CK 81	Adrigole	0.1 (0.9)	0	BA 195	Moy	7.9 (10.5)	2
KY 84	Croanshagh	0.4 (2.4)	0	BA 196	Brusna	0.1 (0.6)	0
KY 85	Owenshagh	0.0 (0.4)	0	BA 200	Easkey	0.1 (0.6)	0
KY 86	Cloonee	0.0 (0.3)	0	SO 202	Ballysadare	6.0 (5.4)	1
KY 87	Sheen	0.3 (2.1)	0	SO 203	Garvogue	4.8 (5.3)	1
KY 88	Roughty	0.1 (0.9)	0	BS 208	Duff	0.1 (0.5)	0
KY 89	Finnihiy	0.1 (0.6)	0	BS 209	Drowes	0.0 (0.3)	0
KY 90	KerryBlackwater	0.0 (0.4)	0	BS 210	Erne	0.0 (0.3)	0
KY 92	Sneem	0.0 (0.3)	0	BS 211	Abbey	0.0 (0.4)	0
KY 93	Owreagh	0.0 (0.4)	0	BS 213	Laghy	0.0 (0.3)	0
KY 97	Currane	0.1 (0.9)	0	BS 214	Eske	0.0 (0.5)	0
KY 98	Inny	1.7 (4.9)	0	BS 215	Eany	0.1 (0.6)	0
KY 102	Ferta	0.1 (0.5)	0	BS 219	Glen	0.1 (1.1)	0
KY 103	Behy	0.0 (0.3)	0	BS 220	Owenwee	0.0 (0.4)	0
KY 104	Caragh	0.1 (0.9)	0	LY 223	Owenea	1.3 (3.6)	0
KY 106	Laune	8.2 (10.1)	2	LY 225	Gweebarra	0.1 (0.6)	0
KY 107	Maine	0.2 (1.0)	0	LY 228	Gweedore	0.0 (0.3)	0
KY 108	Emlagh	0.0 (0.3)	0	LY 229	Clady	0.0 (0.4)	0
KY 109	Owenascaul	0.1 (0.8)	0	LY 240	Lackagh	0.6 (2.8)	0
KY 111	Milltown	5.2 (8.1)	1	LY 248	Leannan	0.1 (0.5)	0
KY 112	Feoghanagh	0.0 (0.5)	0	LY 249	Swilly	0.1 (0.6)	0
KY 117	TraleeLee	0.2 (1.4)	0	LY 253	Crana	0.5 (2.4)	0
LK 119	Feale	0.1 (0.7)	0	-	Northern Ireland	0.7 (2.4)	0
LK 120	Galey	0.0 (0.3)	0	-	Aqaugen	0.0 (0.4)	0
LK 126	Maigue	0.0 (0.5)	0	-	Fanad	0.0 (0.4)	0
LK 128	Mulcair	5.5 (6.0)	1	-	UK/France/Spain		3

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

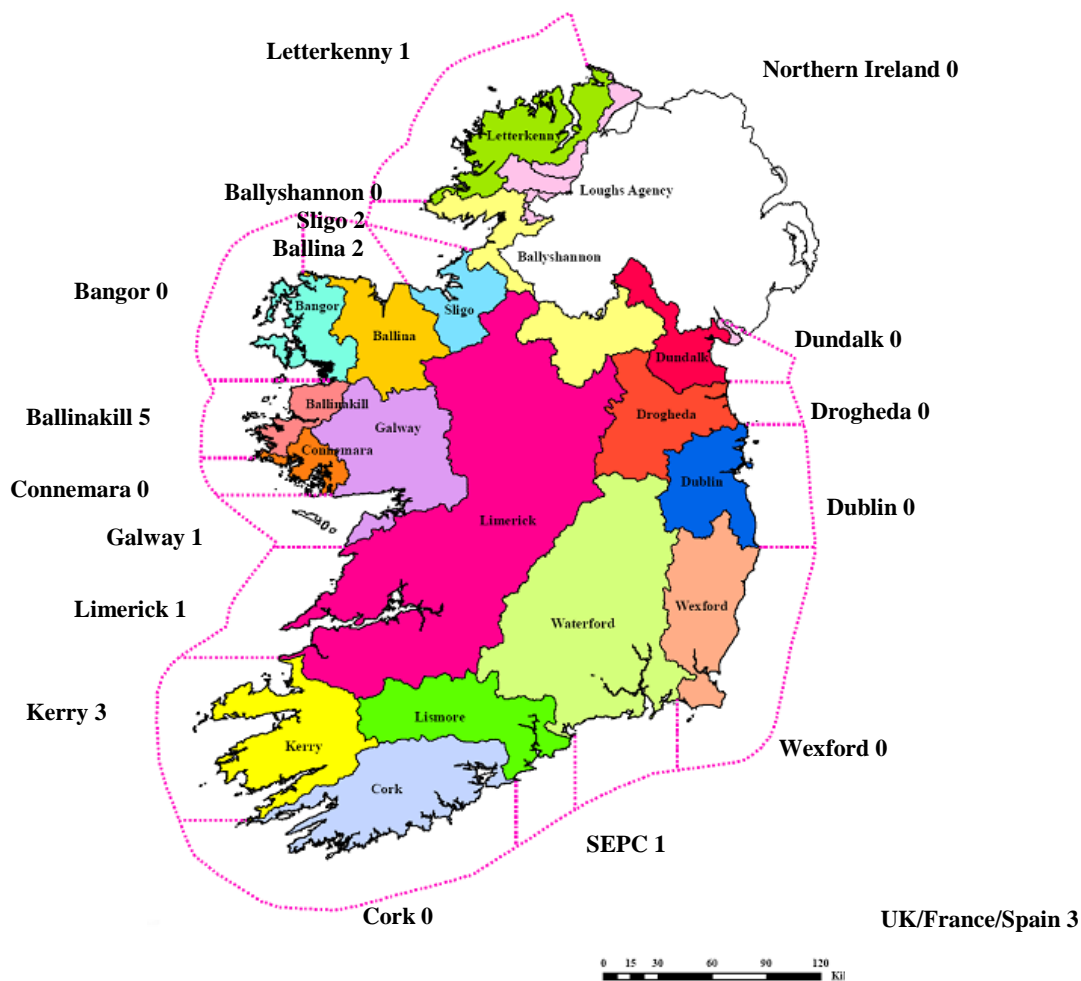
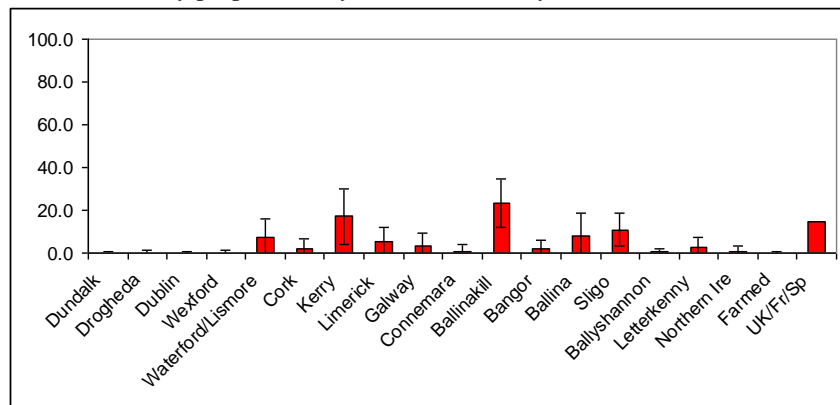
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.1 (0.7)	0
Drogheda	0.2 (1.2)	0
Dublin	0.1 (0.6)	0
Wexford	0.3 (1.2)	0
Waterford/Lismore	7.4 (8.7)	1
Cork	2.1 (4.7)	0
Kerry	17.1 (12.8)	3
Limerick	5.6 (6.1)	1
Galway	3.5 (5.8)	1
Connemara	0.9 (3.2)	0
Ballinakill	23.1 (11.4)	5
Bangor	1.8 (4.0)	0
Ballina	8.1 (10.6)	2
Sligo	10.8 (7.7)	2
Ballyshannon	0.5 (1.7)	0
Letterkenny	2.6 (5.0)	1
Northern Ireland	0.7 (2.4)	0
Farmed Strains	0.1 (0.5)	0
UK/France/Spain		3

Bangor drift nets 2006

Estimated fishery proportions by district or country



Ballinakill drift nets 2005

Number screened = 99

Number of fish identified as being from UK/France/Spain = 5

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 93

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 88.3% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.1)	0	GY 145	Kilcogan	0.0 (0.1)	0
DK 4	Fane	0.0 (0.2)	0	GY 147	Corrib	9.0 (3.2)	9
DK 5	Glyde	0.0 (0.1)	0	GY 149	Owenboliska	0.0 (0.1)	0
DK 6	Dee	0.0 (0.1)	0	CN 152	Cashla	0.0 (0.1)	0
DR 8	Boyne	0.1 (0.7)	0	CN 155	Screebe	0.2 (0.8)	0
DB 15	Liffey	0.0 (0.1)	0	CN 161	Owenmore	2.9 (2.2)	3
DB 18	Dargle	3.9 (3.3)	4	BK 166	Dawros	1.7 (1.8)	2
DB 21	Vartry	0.1 (0.6)	0	BK 167	Culfin	0.0 (0.1)	0
WX 26	Avoca	0.0 (0.2)	0	BK 168	Erriff	2.5 (3.4)	2
WX 31	Slaney	0.0 (0.2)	0	BK 169	Bundorragha	0.1 (0.4)	0
WD/LS*	SEPC	25.9 (6.6)	25	BK 172	Bunowen	0.5 (1.3)	1
CK 66	Lee	0.0 (0.2)	0	BG 178	Newport	0.1 (0.5)	0
CK 69	Bandon	0.1 (0.5)	0	BG 179	Srahmore	2.2 (1.8)	2
CK 72	Ilen	0.0 (0.3)	0	BG 185	Owenduff	0.0 (0.3)	0
CK 78	Owvane	0.0 (0.1)	0	BG 186	Owenmore	9.1 (3.7)	9
CK 80	Glengariff	0.1 (0.4)	0	BA 194	Cloonaghmore	0.0 (0.1)	0
CK 81	Adrigole	0.0 (0.1)	0	BA 195	Moy	0.1 (0.4)	0
KY 84	Croanshagh	0.0 (0.1)	0	BA 196	Brusna	0.3 (1.0)	0
KY 85	Owenshagh	0.0 (0.1)	0	BA 200	Easkey	0.0 (0.1)	0
KY 86	Cloonee	0.0 (0.1)	0	SO 202	Ballysadare	0.0 (0.1)	0
KY 87	Sheen	0.1 (0.6)	0	SO 203	Garvogue	0.0 (0.1)	0
KY 88	Roughty	0.4 (0.8)	0	BS 208	Duff	0.0 (0.1)	0
KY 89	Finnihiy	0.0 (0.1)	0	BS 209	Drowes	0.0 (0.1)	0
KY 90	KerryBlackwater	0.0 (0.3)	0	BS 210	Erne	0.0 (0.1)	0
KY 92	Sneem	0.0 (0.1)	0	BS 211	Abbey	0.0 (0.1)	0
KY 93	Owreagh	0.0 (0.1)	0	BS 213	Laghy	0.0 (0.1)	0
KY 97	Currane	0.1 (0.5)	0	BS 214	Eske	0.0 (0.1)	0
KY 98	Inny	0.0 (0.1)	0	BS 215	Eany	0.1 (0.4)	0
KY 102	Ferta	0.0 (0.1)	0	BS 219	Glen	0.0 (0.2)	0
KY 103	Behy	0.0 (0.1)	0	BS 220	Owenwee	0.0 (0.1)	0
KY 104	Caragh	0.0 (0.2)	0	LY 223	Owenea	6.7 (4.2)	7
KY 106	Laune	0.9 (1.5)	1	LY 225	Gweebarra	0.0 (0.1)	0
KY 107	Maine	0.0 (0.1)	0	LY 228	Gweedore	0.0 (0.1)	0
KY 108	Emlagh	0.0 (0.2)	0	LY 229	Clady	0.0 (0.1)	0
KY 109	Owenascaul	0.0 (0.2)	0	LY 240	Lackagh	0.0 (0.1)	0
KY 111	Milltown	0.7 (1.7)	1	LY 248	Leannan	0.0 (0.1)	0
KY 112	Feoghanagh	0.0 (0.1)	0	LY 249	Swilly	1.8 (2.6)	2
KY 117	TraleeLee	0.0 (0.2)	0	LY 253	Crana	0.0 (0.1)	0
LK 119	Feale	3.5 (3.1)	3	-	Northern Ireland	0.9 (1.9)	1
LK 120	Galey	6.5 (2.8)	6	-	Aqaugen	0.0 (0.1)	0
LK 126	Maigue	0.0 (0.1)	0	-	Fanad	0.0 (0.1)	0
LK 128	Mulcair	13.5 (4.1)	13	-	UK/France/Spain		5

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

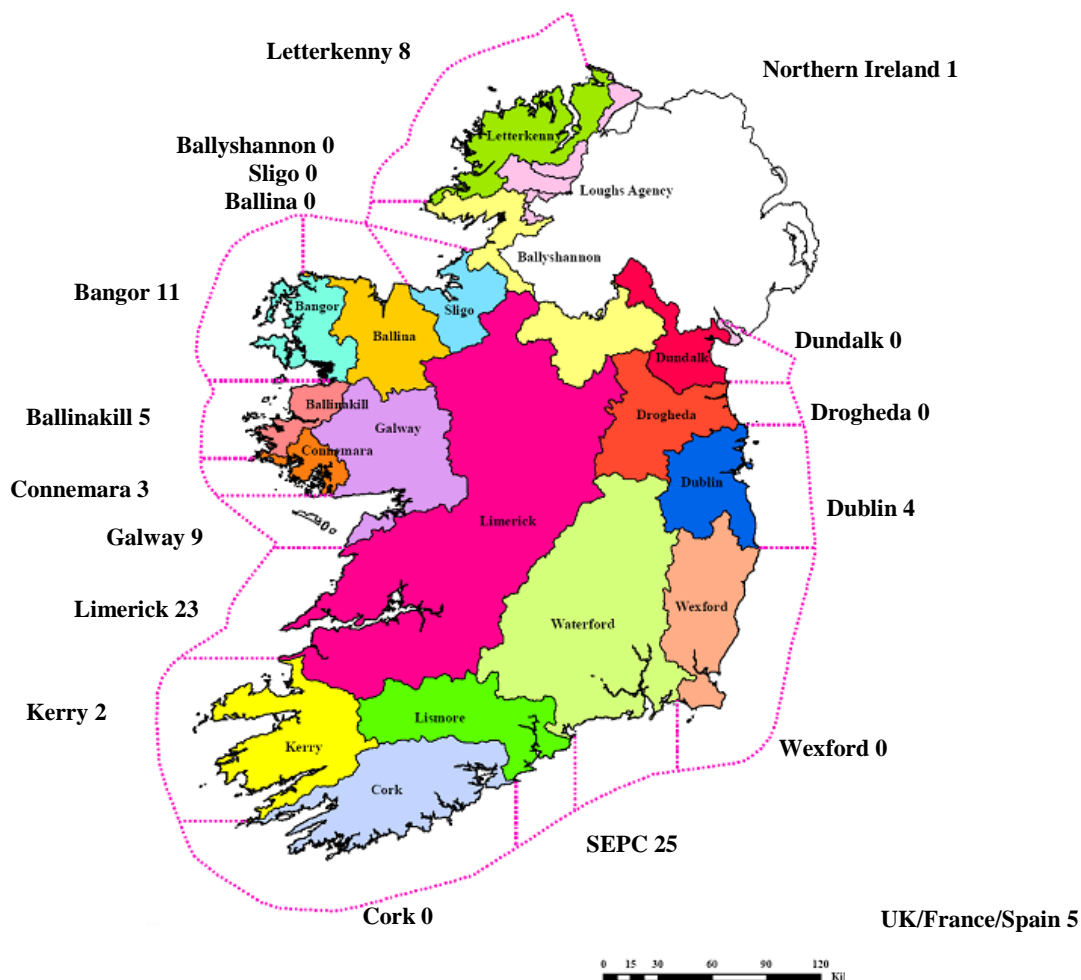
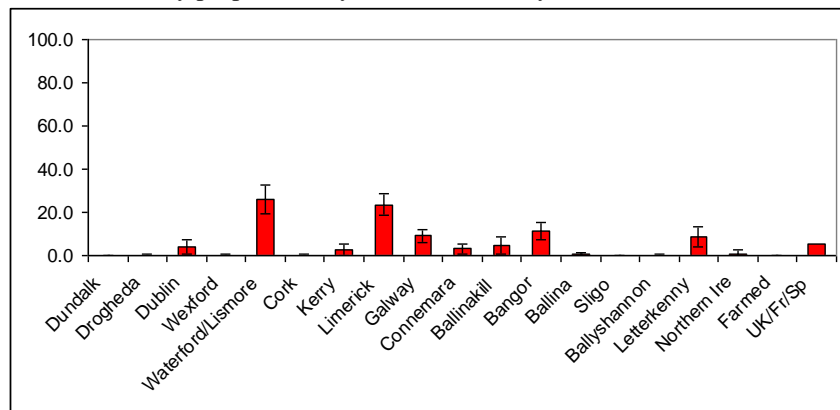
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.0 (0.2)	0
Drogheda	0.1 (0.7)	0
Dublin	4.0 (3.4)	4
Wexford	0.1 (0.3)	0
Waterford/Lismore	25.9 (6.6)	25
Cork	0.2 (0.7)	0
Kerry	2.4 (2.7)	2
Limerick	23.6 (5.1)	23
Galway	9.1 (3.2)	9
Connemara	3.2 (2.3)	3
Ballinakill	4.8 (4.2)	5
Bangor	11.5 (3.9)	11
Ballina	0.4 (1.1)	0
Sligo	0.0 (0.1)	0
Ballyshannon	0.2 (0.5)	0
Letterkenny	8.6 (4.7)	8
Northern Ireland	0.9 (1.9)	1
Farmed Strains	0.0 (0.1)	0
UK/France/Spain		5

Ballinakill drift nets 2005 (n = 98)

Estimated fishery proportions by district or country



Ballinakill drift nets 2006

Number screened = 98

Number of fish identified as being from UK/France/Spain = 2

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 94

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 90.2% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.1)	0	GY 145	Kilcogan	0.0 (0.1)	0
DK 4	Fane	0.0 (0.1)	0	GY 147	Corrib	21.7 (4.8)	21
DK 5	Glyde	0.0 (0.1)	0	GY 149	Owenboliska	0.7 (1.0)	1
DK 6	Dee	0.0 (0.3)	0	CN 152	Cashla	0.0 (0.1)	0
DR 8	Boyne	0.0 (0.2)	0	CN 155	Screebe	5.7 (2.7)	5
DB 15	Liffey	1.0 (1.0)	1	CN 161	Owenmore	3.7 (3.0)	4
DB 18	Dargle	0.6 (1.7)	1	BK 166	Dawros	5.6 (2.8)	5
DB 21	Vartry	0.0 (0.3)	0	BK 167	Culfin	0.0 (0.1)	0
WX 26	Avoca	0.0 (0.1)	0	BK 168	Erriff	0.0 (0.4)	0
WX 31	Slaney	0.0 (0.2)	0	BK 169	Bundorragha	11.2 (3.8)	11
WD/LS*	SEPC	8.0 (5.2)	8	BK 172	Bunowen	9.0 (3.5)	9
CK 66	Lee	0.1 (0.6)	0	BG 178	Newport	0.5 (1.4)	1
CK 69	Bandon	0.1 (0.3)	0	BG 179	Srahmore	6.4 (2.6)	6
CK 72	Ilen	0.1 (0.6)	0	BG 185	Owenduff	0.0 (0.1)	0
CK 78	Owvane	0.0 (0.2)	0	BG 186	Owenmore	0.1 (0.4)	0
CK 80	Glengariff	0.0 (0.1)	0	BA 194	Cloonaghmore	0.0 (0.1)	0
CK 81	Adrigole	0.0 (0.1)	0	BA 195	Moy	4.8 (3.8)	5
KY 84	Croanshagh	0.0 (0.1)	0	BA 196	Brusna	0.1 (0.5)	0
KY 85	Owenshagh	0.0 (0.1)	0	BA 200	Easkey	0.0 (0.1)	0
KY 86	Cloonee	1.2 (1.2)	1	SO 202	Ballysadare	0.0 (0.1)	0
KY 87	Sheen	0.0 (0.1)	0	SO 203	Garvogue	0.0 (0.1)	0
KY 88	Roughty	0.0 (0.1)	0	BS 208	Duff	0.0 (0.2)	0
KY 89	Finnihy	0.0 (0.1)	0	BS 209	Drowes	0.0 (0.1)	0
KY 90	KerryBlackwater	0.0 (0.1)	0	BS 210	Erne	0.0 (0.4)	0
KY 92	Sneem	0.0 (0.1)	0	BS 211	Abbey	0.1 (0.4)	0
KY 93	Owreagh	0.0 (0.1)	0	BS 213	Laghy	0.2 (0.9)	0
KY 97	Currane	0.0 (0.2)	0	BS 214	Eske	0.0 (0.1)	0
KY 98	Inny	0.2 (0.7)	0	BS 215	Eany	0.0 (0.1)	0
KY 102	Ferta	0.0 (0.2)	0	BS 219	Glen	0.0 (0.1)	0
KY 103	Behy	0.0 (0.1)	0	BS 220	Owenwee	0.0 (0.1)	0
KY 104	Caragh	0.1 (0.3)	0	LY 223	Owenea	0.2 (0.9)	0
KY 106	Laune	1.0 (2.1)	1	LY 225	Gweebarra	0.0 (0.1)	0
KY 107	Maine	0.0 (0.3)	0	LY 228	Gweedore	0.0 (0.1)	0
KY 108	Emlagh	0.0 (0.1)	0	LY 229	Clady	0.0 (0.1)	0
KY 109	Owenascaul	0.0 (0.1)	0	LY 240	Lackagh	0.1 (0.7)	0
KY 111	Milltown	0.0 (0.1)	0	LY 248	Leannan	0.0 (0.2)	0
KY 112	Feoghanagh	0.0 (0.1)	0	LY 249	Swilly	0.0 (0.1)	0
KY 117	TraleeLee	0.0 (0.1)	0	LY 253	Crana	0.0 (0.3)	0
LK 119	Feale	1.8 (2.9)	2	-	Northern Ireland	4.2 (2.8)	4
LK 120	Galey	0.7 (1.4)	1	-	Aqaugen	0.0 (0.1)	0
LK 126	Maigue	0.0 (0.1)	0	-	Fanad	0.0 (0.1)	0
LK 128	Mulcair	7.9 (4.0)	8	-	UK/France/Spain		2

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

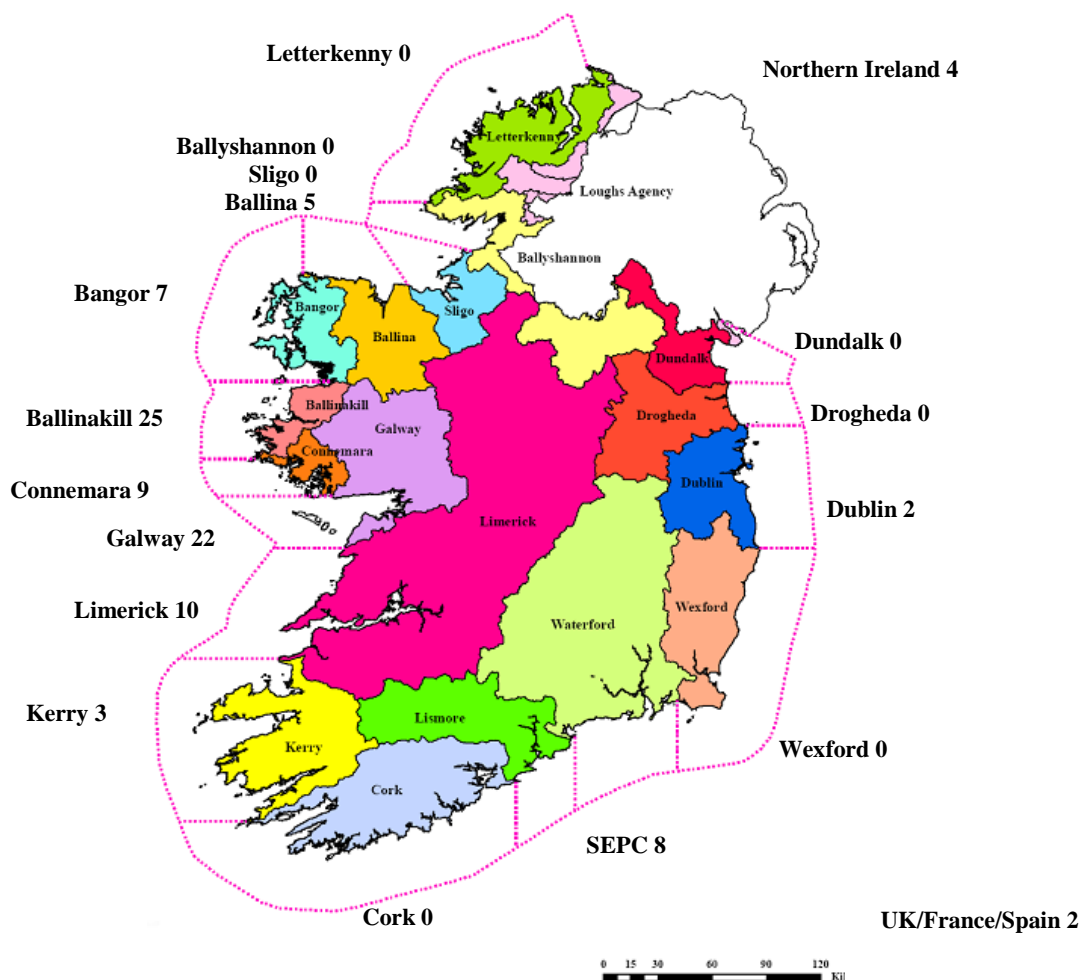
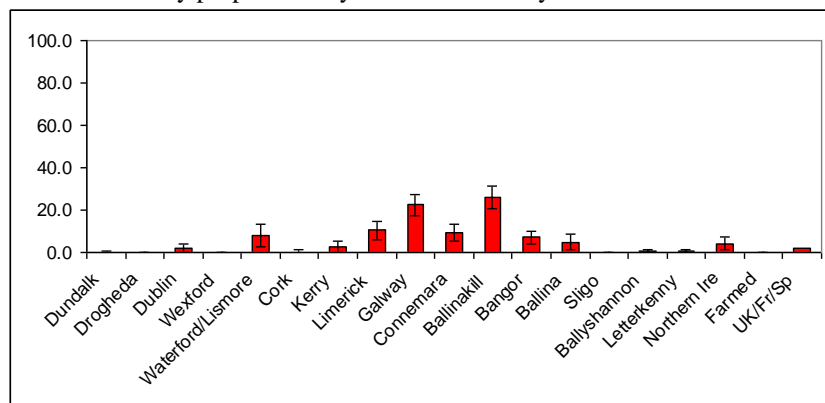
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.1 (0.3)	0
Drogheda	0.0 (0.2)	0
Dublin	1.7 (2.0)	2
Wexford	0.0 (0.2)	0
Waterford/Lismore	8.0 (5.2)	8
Cork	0.3 (0.9)	0
Kerry	2.7 (2.6)	3
Limerick	10.5 (4.4)	10
Galway	22.4 (4.9)	22
Connemara	9.4 (4.1)	9
Ballinakill	25.9 (5.2)	25
Bangor	7.0 (3.0)	7
Ballina	4.9 (3.8)	5
Sligo	0.0 (0.1)	0
Ballyshannon	0.4 (1.1)	0
Letterkenny	0.4 (1.2)	0
Northern Ireland	4.2 (2.8)	4
Farmed Strains	0.0 (0.1)	0
UK/France/Spain		2

Ballinakill drift nets 2006 (n = 96)

Estimated fishery proportions by district or country



Connemara drift nets 2005

Number screened = 100

Number of fish identified as being from UK/France/Spain = 56

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 44

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 90.9% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.1)	0	GY 145	Kilcogan	0.0 (0.2)	0
DK 4	Fane	0.0 (0.1)	0	GY 147	Corrib	5.3 (2.3)	5
DK 5	Glyde	0.0 (0.1)	0	GY 149	Owenboliska	0.0 (0.1)	0
DK 6	Dee	0.0 (0.1)	0	CN 152	Cashla	0.0 (0.1)	0
DR 8	Boyne	0.1 (0.3)	0	CN 155	Screebe	0.0 (0.1)	0
DB 15	Liffey	0.0 (0.1)	0	CN 161	Owenmore	0.5 (1.4)	1
DB 18	Dargle	0.0 (0.1)	0	BK 166	Dawros	0.1 (0.4)	0
DB 21	Vartry	0.0 (0.2)	0	BK 167	Culfin	1.0 (1.4)	1
WX 26	Avoca	0.0 (0.0)	0	BK 168	Erriff	4.1 (2.9)	4
WX 31	Slaney	0.2 (0.8)	0	BK 169	Bundorragha	0.8 (1.3)	1
WD/LS*	SEPC	2.8 (2.7)	3	BK 172	Bunowen	6.5 (2.7)	7
CK 66	Lee	0.1 (0.4)	0	BG 178	Newport	0.0 (0.1)	0
CK 69	Bandon	0.1 (0.4)	0	BG 179	Srahmore	0.1 (0.5)	0
CK 72	Ilen	0.0 (0.1)	0	BG 185	Owenduff	0.6 (1.1)	1
CK 78	Owvane	0.0 (0.2)	0	BG 186	Owenmore	0.5 (0.9)	0
CK 80	Glengariff	0.0 (0.1)	0	BA 194	Cloonaghmore	0.0 (0.1)	0
CK 81	Adrigole	0.0 (0.1)	0	BA 195	Moy	0.1 (0.3)	0
KY 84	Croanshagh	0.0 (0.1)	0	BA 196	Brusna	0.0 (0.2)	0
KY 85	Owenshagh	0.0 (0.1)	0	BA 200	Easkey	0.2 (0.8)	0
KY 86	Cloonee	0.4 (0.8)	0	SO 202	Ballysadare	0.0 (0.1)	0
KY 87	Sheen	0.0 (0.1)	0	SO 203	Garvogue	0.0 (0.1)	0
KY 88	Roughty	0.0 (0.1)	0	BS 208	Duff	1.5 (1.5)	1
KY 89	Finnihy	0.0 (0.1)	0	BS 209	Drowes	0.0 (0.1)	0
KY 90	KerryBlackwater	0.0 (0.1)	0	BS 210	Erne	0.5 (1.0)	1
KY 92	Sneem	0.0 (0.1)	0	BS 211	Abbey	0.1 (0.3)	0
KY 93	Owreagh	0.0 (0.1)	0	BS 213	Laghy	0.0 (0.1)	0
KY 97	Currane	0.0 (0.2)	0	BS 214	Eske	0.0 (0.1)	0
KY 98	Inny	0.3 (0.9)	0	BS 215	Eany	0.0 (0.1)	0
KY 102	Ferta	0.1 (0.5)	0	BS 219	Glen	0.0 (0.1)	0
KY 103	Behy	0.0 (0.1)	0	BS 220	Owenwee	0.0 (0.1)	0
KY 104	Caragh	0.5 (1.3)	1	LY 223	Owenea	5.9 (3.5)	6
KY 106	Laune	0.6 (1.1)	1	LY 225	Gweebarra	0.0 (0.1)	0
KY 107	Maine	0.0 (0.1)	0	LY 228	Gweedore	0.0 (0.1)	0
KY 108	Emlagh	0.0 (0.1)	0	LY 229	Clady	0.0 (0.1)	0
KY 109	Owenascaul	0.0 (0.1)	0	LY 240	Lackagh	0.0 (0.1)	0
KY 111	Milltown	0.0 (0.1)	0	LY 248	Leannan	0.0 (0.1)	0
KY 112	Feoghanagh	0.0 (0.1)	0	LY 249	Swilly	0.2 (0.6)	0
KY 117	TraleeLee	0.0 (0.1)	0	LY 253	Crana	0.0 (0.1)	0
LK 119	Feale	5.2 (2.6)	5	-	Northern Ireland	0.0 (0.3)	0
LK 120	Galey	0.0 (0.1)	0	-	Aqaugen	0.0 (0.1)	0
LK 126	Maigue	0.0 (0.1)	0	-	Fanad	0.0 (0.1)	0
LK 128	Mulcair	5.1 (3.0)	5	-	UK/France/Spain		56

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

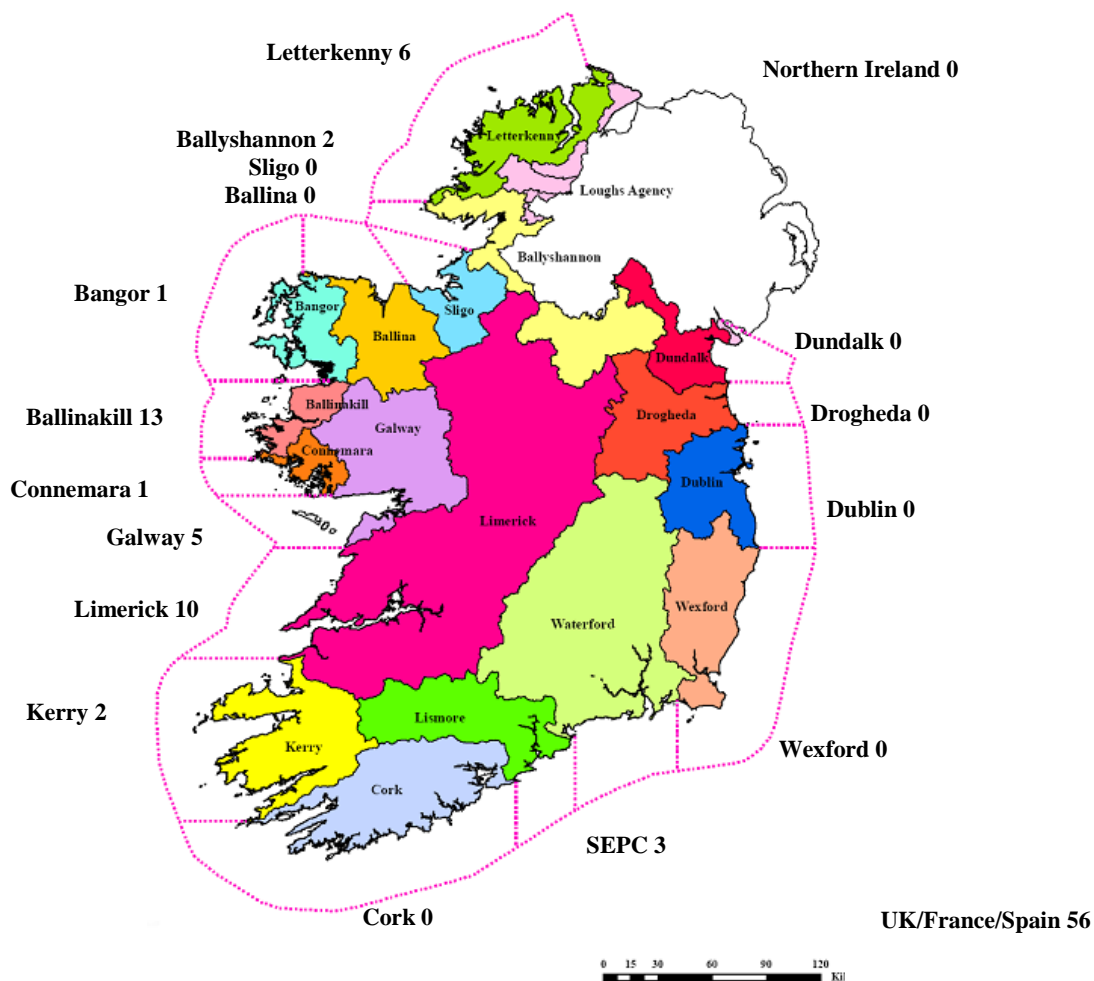
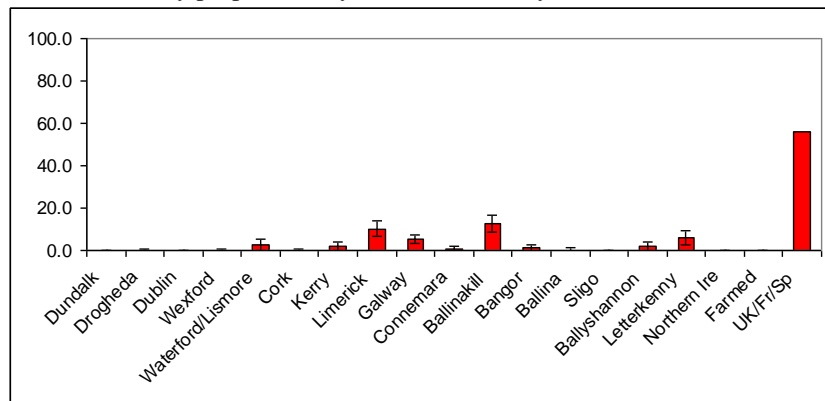
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.0 (0.2)	0
Drogheda	0.1 (0.3)	0
Dublin	0.0 (0.2)	0
Wexford	0.2 (0.8)	0
Waterford/Lismore	2.8 (2.7)	3
Cork	0.2 (0.6)	0
Kerry	2.2 (1.9)	2
Limerick	10.3 (3.6)	10
Galway	5.3 (2.3)	5
Connemara	0.5 (1.4)	1
Ballinakill	12.6 (4.1)	13
Bangor	1.2 (1.6)	1
Ballina	0.3 (0.9)	0
Sligo	0.0 (0.1)	0
Ballyshannon	2.1 (1.8)	2
Letterkenny	6.1 (3.5)	6
Northern Ireland	0.0 (0.3)	0
Farmed Strains	0.0 (0.1)	0
UK/France/Spain		56

Connemara drift nets 2005 (n = 100)

Estimated fishery proportions by district or country



Connemara drift nets 2006

Number screened = 77

Number of fish identified as being from UK/France/Spain = 0

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 77

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 89.3% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.7 (1.1)	1	GY 145	Kilcogan	0.0 (0.1)	0
DK 4	Fane	0.1 (0.4)	0	GY 147	Corrib	5.9 (3.6)	5
DK 5	Glyde	0.3 (0.9)	0	GY 149	Owenboliska	0.0 (0.1)	0
DK 6	Dee	0.0 (0.1)	0	CN 152	Cashla	4.1 (2.8)	3
DR 8	Boyne	0.2 (0.7)	0	CN 155	Screebe	24.1 (4.9)	19
DB 15	Liffey	0.0 (0.1)	0	CN 161	Owenmore	36.3 (6.1)	28
DB 18	Dargle	0.0 (0.1)	0	BK 166	Dawros	0.5 (1.7)	0
DB 21	Vartry	0.0 (0.2)	0	BK 167	Culfin	0.0 (0.3)	0
WX 26	Avoca	0.1 (0.5)	0	BK 168	Erriff	7.4 (4.2)	6
WX 31	Slaney	0.0 (0.2)	0	BK 169	Bundorragha	0.0 (0.2)	0
WD/LS*	SEPC	1.2 (1.8)	1	BK 172	Bunowen	0.9 (2.0)	1
CK 66	Lee	0.0 (0.2)	0	BG 178	Newport	0.0 (0.1)	0
CK 69	Bandon	0.0 (0.3)	0	BG 179	Srahmore	2.0 (1.7)	2
CK 72	Ilen	6.5 (3.6)	5	BG 185	Owenduff	0.1 (0.4)	0
CK 78	Owvane	0.0 (0.1)	0	BG 186	Owenmore	0.8 (1.5)	1
CK 80	Glengariff	0.0 (0.1)	0	BA 194	Cloonaghmore	0.0 (0.1)	0
CK 81	Adrigole	0.0 (0.1)	0	BA 195	Moy	3.7 (2.6)	3
KY 84	Croanshagh	0.0 (0.1)	0	BA 196	Brusna	0.2 (0.8)	0
KY 85	Owenshagh	0.1 (0.4)	0	BA 200	Easkey	0.2 (0.8)	0
KY 86	Cloonee	0.0 (0.1)	0	SO 202	Ballysadare	0.0 (0.2)	0
KY 87	Sheen	0.0 (0.2)	0	SO 203	Garvogue	0.0 (0.1)	0
KY 88	Roughty	0.0 (0.2)	0	BS 208	Duff	0.0 (0.2)	0
KY 89	Finnihey	0.0 (0.1)	0	BS 209	Drowes	0.1 (0.4)	0
KY 90	KerryBlackwater	0.0 (0.1)	0	BS 210	Erne	0.0 (0.1)	0
KY 92	Sneem	0.0 (0.1)	0	BS 211	Abbey	0.0 (0.1)	0
KY 93	Owreagh	0.0 (0.1)	0	BS 213	Laghy	0.0 (0.3)	0
KY 97	Currane	0.0 (0.2)	0	BS 214	Eske	0.0 (0.1)	0
KY 98	Inny	0.3 (1.0)	0	BS 215	Eany	0.0 (0.1)	0
KY 102	Ferta	0.1 (0.4)	0	BS 219	Glen	0.0 (0.2)	0
KY 103	Behy	0.0 (0.1)	0	BS 220	Owenwee	0.0 (0.2)	0
KY 104	Caragh	0.0 (0.2)	0	LY 223	Owenea	0.0 (0.1)	0
KY 106	Laune	0.1 (0.5)	0	LY 225	Gweebarra	0.0 (0.2)	0
KY 107	Maine	0.0 (0.3)	0	LY 228	Gweedore	0.0 (0.1)	0
KY 108	Emlagh	0.0 (0.1)	0	LY 229	Clady	0.0 (0.1)	0
KY 109	Owenascaul	0.0 (0.2)	0	LY 240	Lackagh	0.0 (0.1)	0
KY 111	Milltown	0.0 (0.2)	0	LY 248	Leannan	0.0 (0.2)	0
KY 112	Feoghanagh	0.0 (0.1)	0	LY 249	Swilly	0.2 (0.7)	0
KY 117	TraleeLee	0.0 (0.3)	0	LY 253	Crana	0.0 (0.2)	0
LK 119	Feale	0.0 (0.2)	0	-	Northern Ireland	0.1 (0.5)	0
LK 120	Galey	0.0 (0.1)	0	-	Aqaugen	0.0 (0.1)	0
LK 126	Maigue	3.0 (2.5)	2	-	Fanad	0.0 (0.1)	0
LK 128	Mulcair	0.0 (0.3)	0	-	UK/France/Spain		0

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

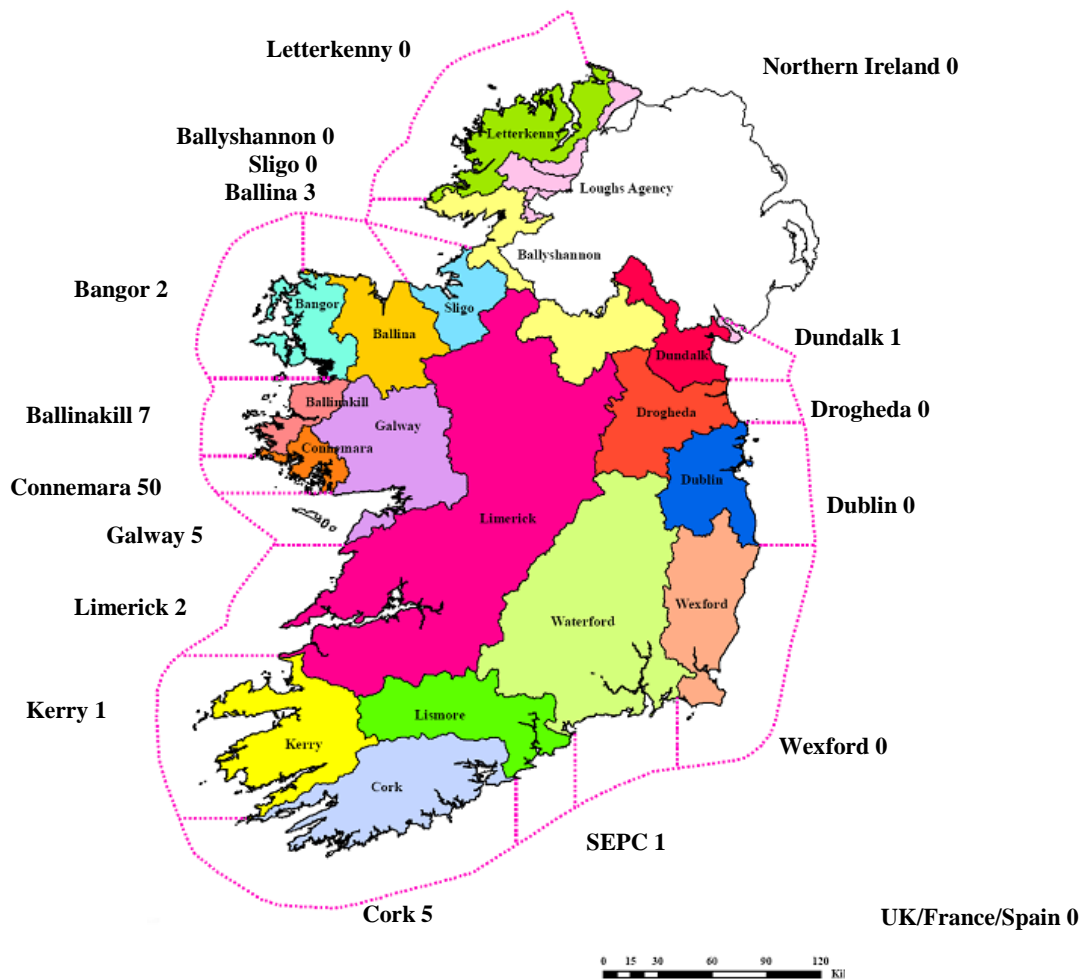
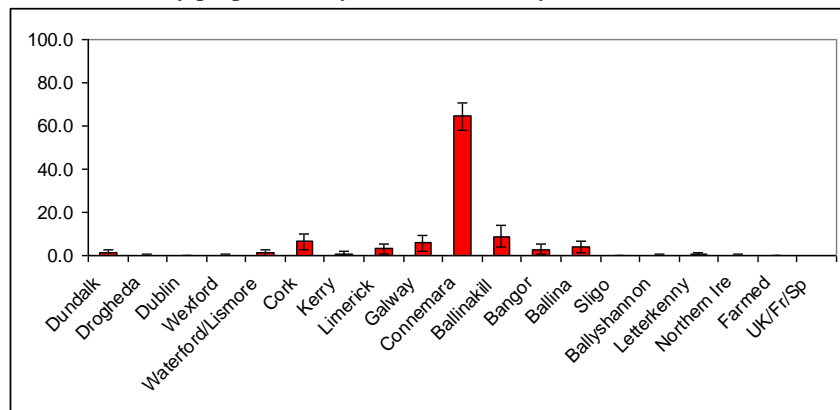
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	1.1 (1.5)	1
Drogheda	0.2 (0.7)	0
Dublin	0.0 (0.3)	0
Wexford	0.1 (0.5)	0
Waterford/Lismore	1.2 (1.8)	1
Cork	6.6 (3.6)	5
Kerry	0.8 (1.4)	1
Limerick	3.1 (2.5)	2
Galway	5.9 (3.6)	5
Connemara	64.5 (6.5)	50
Ballinakill	8.9 (5.1)	7
Bangor	2.8 (2.3)	2
Ballina	4.0 (2.9)	3
Sligo	0.0 (0.2)	0
Ballyshannon	0.2 (0.6)	0
Letterkenny	0.3 (0.9)	0
Northern Ireland	0.1 (0.5)	0
Farmed Strains	0.0 (0.2)	0
UK/France/Spain		0

Connemara drift nets 2006 (n = 77)

Estimated fishery proportions by district or country



Galway drift nets 2005

Number screened = 41

Number of fish identified as being from UK/France/Spain = 1

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 40

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 92.9% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.2)	0	GY 145	Kilcogan	0.0 (0.2)	0
DK 4	Fane	0.0 (0.2)	0	GY 147	Corrib	42.0 (8.4)	17
DK 5	Glyde	0.0 (0.4)	0	GY 149	Owenboliska	0.0 (0.2)	0
DK 6	Dee	0.0 (0.2)	0	CN 152	Cashla	0.9 (2.1)	0
DR 8	Boyne	0.1 (0.4)	0	CN 155	Screebe	0.1 (0.4)	0
DB 15	Liffey	0.0 (0.2)	0	CN 161	Owenmore	0.1 (0.4)	0
DB 18	Dargle	0.0 (0.2)	0	BK 166	Dawros	1.4 (3.5)	1
DB 21	Vartry	0.0 (0.2)	0	BK 167	Culfin	0.0 (0.2)	0
WX 26	Avoca	0.0 (0.3)	0	BK 168	Erriff	13.0 (7.6)	5
WX 31	Slaney	0.1 (0.3)	0	BK 169	Bundorragha	0.0 (0.2)	0
WD/LS*	SEPC	9.9 (6.2)	4	BK 172	Bunowen	0.0 (0.2)	0
CK 66	Lee	0.0 (0.3)	0	BG 178	Newport	0.1 (0.6)	0
CK 69	Bandon	0.4 (1.5)	0	BG 179	Srahmore	0.4 (1.2)	0
CK 72	Ilen	0.0 (0.3)	0	BG 185	Owenduff	0.0 (0.3)	0
CK 78	Owvane	0.0 (0.2)	0	BG 186	Owenmore	0.2 (1.0)	0
CK 80	Glengariff	0.0 (0.3)	0	BA 194	Cloonaghmore	0.0 (0.2)	0
CK 81	Adrigole	0.0 (0.2)	0	BA 195	Moy	0.1 (0.6)	0
KY 84	Croanshagh	0.0 (0.2)	0	BA 196	Brusna	0.0 (0.2)	0
KY 85	Owenshagh	0.0 (0.4)	0	BA 200	Easkey	0.1 (0.5)	0
KY 86	Cloonee	0.4 (1.3)	0	SO 202	Ballysadare	0.1 (0.5)	0
KY 87	Sheen	0.0 (0.2)	0	SO 203	Garvogue	0.0 (0.3)	0
KY 88	Roughty	0.0 (0.3)	0	BS 208	Duff	0.0 (0.3)	0
KY 89	Finnihiy	0.0 (0.2)	0	BS 209	Drowes	0.0 (0.2)	0
KY 90	KerryBlackwater	0.0 (0.2)	0	BS 210	Erne	0.0 (0.2)	0
KY 92	Sneem	0.0 (0.2)	0	BS 211	Abbey	0.0 (0.2)	0
KY 93	Owreagh	0.0 (0.2)	0	BS 213	Laghy	0.0 (0.2)	0
KY 97	Currane	0.0 (0.3)	0	BS 214	Eske	0.0 (0.2)	0
KY 98	Inny	0.0 (0.3)	0	BS 215	Eany	0.1 (0.9)	0
KY 102	Ferta	0.0 (0.4)	0	BS 219	Glen	0.1 (0.8)	0
KY 103	Behy	0.0 (0.2)	0	BS 220	Owenwee	0.0 (0.3)	0
KY 104	Caragh	0.0 (0.3)	0	LY 223	Owenea	0.0 (0.2)	0
KY 106	Laune	0.8 (1.9)	0	LY 225	Gweebarra	0.0 (0.2)	0
KY 107	Maine	0.1 (0.4)	0	LY 228	Gweedore	0.0 (0.2)	0
KY 108	Emlagh	0.0 (0.2)	0	LY 229	Clady	0.0 (0.2)	0
KY 109	Owenascaul	0.0 (0.2)	0	LY 240	Lackagh	0.0 (0.3)	0
KY 111	Milltown	0.0 (0.3)	0	LY 248	Leannan	0.0 (0.3)	0
KY 112	Feoghanagh	0.1 (0.6)	0	LY 249	Swilly	0.0 (0.4)	0
KY 117	TraleeLee	0.1 (0.5)	0	LY 253	Crana	0.0 (0.3)	0
LK 119	Feale	0.1 (0.8)	0	-	Northern Ireland	0.1 (0.5)	0
LK 120	Galey	0.0 (0.4)	0	-	Aqaugen	0.0 (0.2)	0
LK 126	Maigue	0.0 (0.3)	0	-	Fanad	0.0 (0.2)	0
LK 128	Mulcair	25.6 (8.7)	10	-	UK/France/Spain		1

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

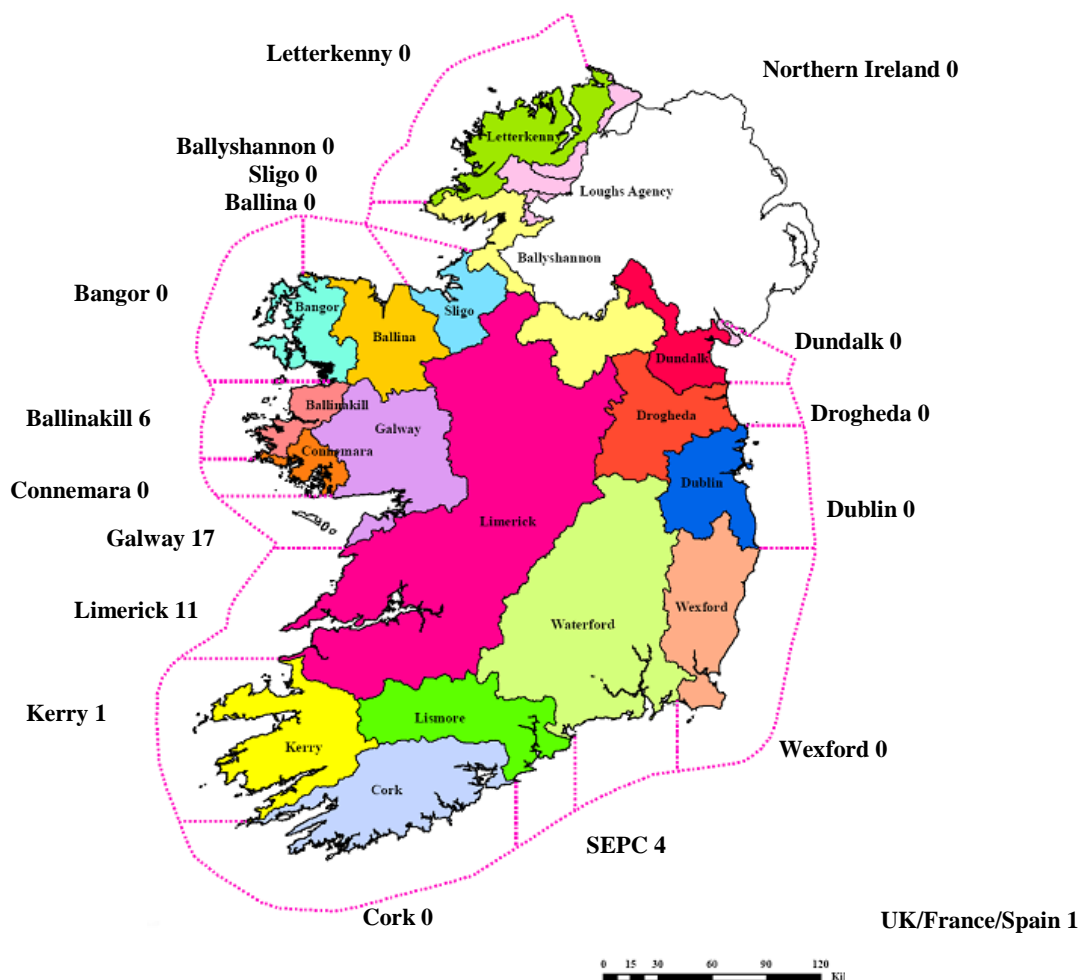
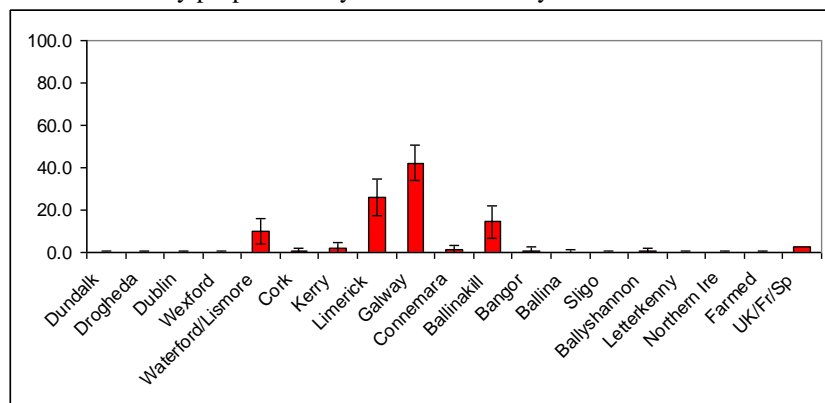
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.1 (0.5)	0
Drogheda	0.1 (0.4)	0
Dublin	0.1 (0.3)	0
Wexford	0.1 (0.4)	0
Waterford/Lismore	10.0 (6.2)	4
Cork	0.5 (1.7)	0
Kerry	1.8 (2.7)	1
Limerick	25.8 (8.7)	11
Galway	42.1 (8.4)	17
Connemara	1.1 (2.2)	0
Ballinakill	14.4 (7.8)	6
Bangor	0.6 (1.7)	0
Ballina	0.2 (0.8)	0
Sligo	0.1 (0.6)	0
Ballyshannon	0.4 (1.3)	0
Letterkenny	0.2 (0.8)	0
Northern Ireland	0.1 (0.5)	0
Farmed Strains	0.0 (0.3)	0
UK/France/Spain		1

Galway drift nets 2005 (n = 41)

Estimated fishery proportions by district or country



Shannon drift nets 2004

Number screened = 39

Proportion fish identified as being from UK/France/Spain = 6

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 33

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 91.1% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.2)	0	GY 145	Kilcogan	0.0 (0.3)	0
DK 4	Fane	0.0 (0.2)	0	GY 147	Corrib	4.3 (4.1)	2
DK 5	Glyde	0.0 (0.2)	0	GY 149	Owenboliska	0.0 (0.2)	0
DK 6	Dee	0.0 (0.2)	0	CN 152	Cashla	0.0 (0.2)	0
DR 8	Boyne	0.1 (0.4)	0	CN 155	Screebe	0.0 (0.2)	0
DB 15	Liffey	0.0 (0.2)	0	CN 161	Owenmore	0.1 (0.4)	0
DB 18	Dargle	0.1 (0.5)	0	BK 166	Dawros	0.0 (0.2)	0
DB 21	Vartry	0.0 (0.2)	0	BK 167	Culfin	0.0 (0.3)	0
WX 26	Avoca	0.1 (0.8)	0	BK 168	Erriff	0.1 (0.7)	0
WX 31	Slaney	0.1 (0.3)	0	BK 169	Bundorragha	0.0 (0.2)	0
WD/LS*	SEPC	1.4 (2.9)	1	BK 172	Bunowen	0.2 (1.2)	0
CK 66	Lee	5.2 (4.0)	2	BG 178	Newport	0.0 (0.2)	0
CK 69	Bandon	0.1 (0.5)	0	BG 179	Srahmore	0.0 (0.1)	0
CK 72	Ilen	0.0 (0.2)	0	BG 185	Owenduff	0.0 (0.3)	0
CK 78	Owvane	0.0 (0.2)	0	BG 186	Owenmore	0.1 (0.4)	0
CK 80	Glengariff	0.0 (0.3)	0	BA 194	Cloonaghmore	0.0 (0.2)	0
CK 81	Adrigole	0.0 (0.3)	0	BA 195	Moy	0.1 (0.5)	0
KY 84	Croanshagh	0.0 (0.2)	0	BA 196	Brusna	0.0 (0.2)	0
KY 85	Owenshagh	0.0 (0.2)	0	BA 200	Easkey	0.0 (0.2)	0
KY 86	Cloonee	0.0 (0.2)	0	SO 202	Ballysadare	2.6 (2.5)	1
KY 87	Sheen	0.2 (0.9)	0	SO 203	Garvogue	0.0 (0.2)	0
KY 88	Roughty	1.6 (2.3)	1	BS 208	Duff	0.0 (0.3)	0
KY 89	Finnihy	0.0 (0.2)	0	BS 209	Drowes	0.0 (0.2)	0
KY 90	KerryBlackwater	0.0 (0.2)	0	BS 210	Erne	0.0 (0.2)	0
KY 92	Sneem	0.0 (0.2)	0	BS 211	Abbey	0.0 (0.2)	0
KY 93	Owreagh	0.0 (0.2)	0	BS 213	Laghy	0.0 (0.2)	0
KY 97	Currane	0.0 (0.3)	0	BS 214	Eske	0.0 (0.1)	0
KY 98	Inny	0.0 (0.3)	0	BS 215	Eany	0.0 (0.3)	0
KY 102	Ferta	0.0 (0.2)	0	BS 219	Glen	0.0 (0.2)	0
KY 103	Behy	0.0 (0.3)	0	BS 220	Owenwee	0.0 (0.2)	0
KY 104	Caragh	0.0 (0.2)	0	LY 223	Owenea	0.0 (0.2)	0
KY 106	Laune	0.7 (2.1)	0	LY 225	Gweebarra	0.0 (0.3)	0
KY 107	Maine	0.0 (0.3)	0	LY 228	Gweedore	0.0 (0.2)	0
KY 108	Emlagh	0.0 (0.2)	0	LY 229	Clady	0.0 (0.4)	0
KY 109	Owenascaul	0.0 (0.3)	0	LY 240	Lackagh	0.0 (0.2)	0
KY 111	Milltown	0.0 (0.2)	0	LY 248	Leannan	0.0 (0.3)	0
KY 112	Feoghanagh	0.0 (0.3)	0	LY 249	Swilly	0.0 (0.2)	0
KY 117	TraleeLee	0.0 (0.2)	0	LY 253	Crana	0.0 (0.2)	0
LK 119	Feale	2.4 (3.3)	1	-	Northern Ireland	0.1 (0.4)	0
LK 120	Galey	0.0 (0.2)	0	-	Aqaugen	0.0 (0.2)	0
LK 126	Maigue	0.1 (0.5)	0	-	Fanad	0.1 (0.8)	0
LK 128	Mulcair	63.6 (7.0)	25	-	UK/France/Spain		6

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

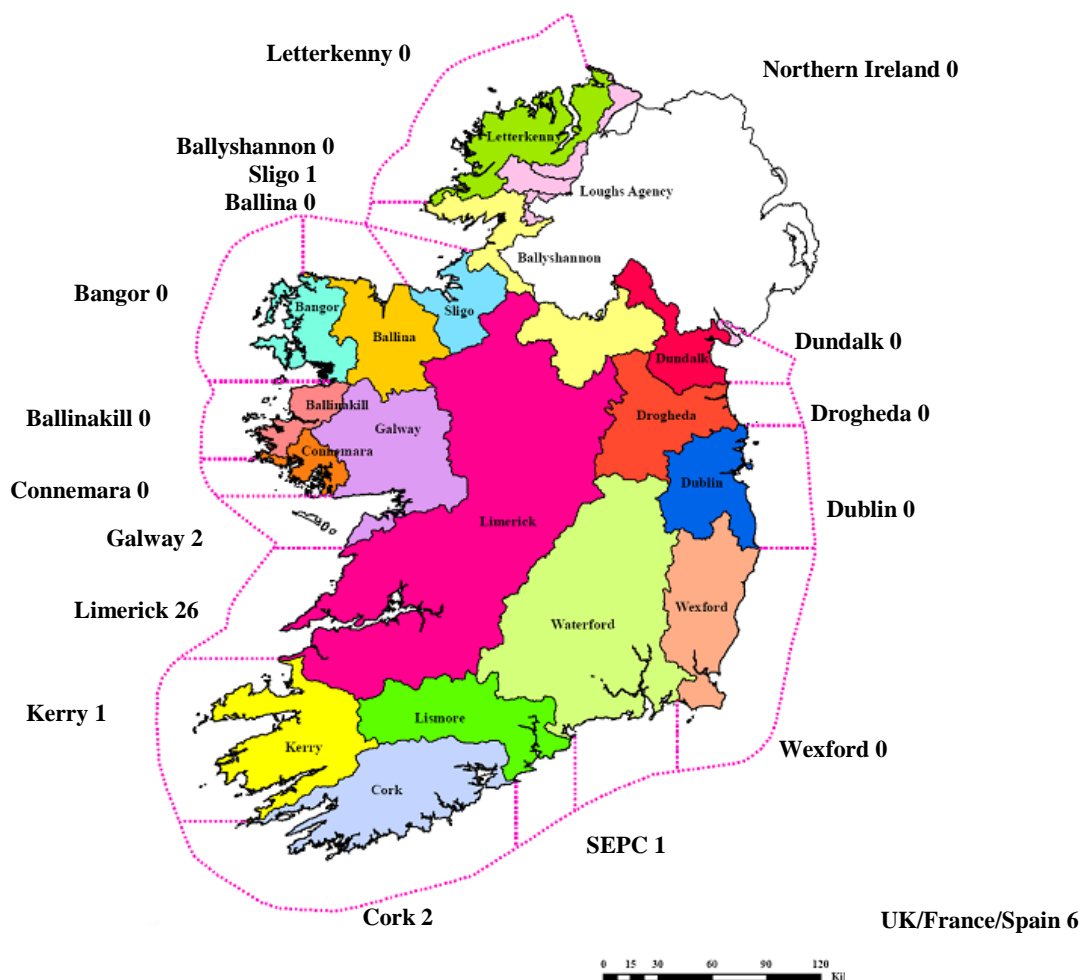
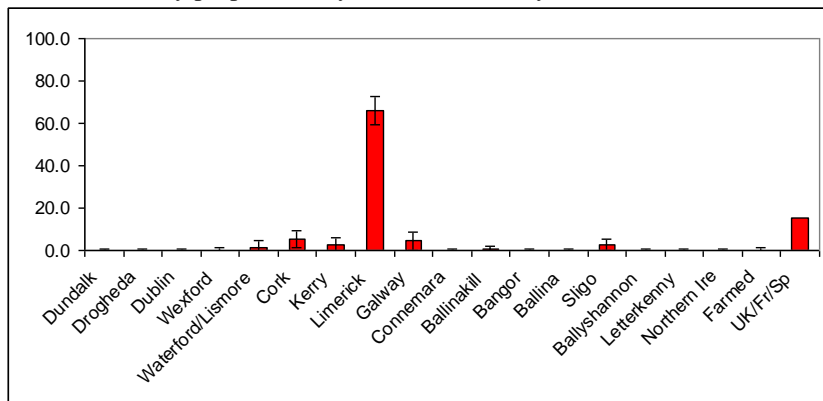
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.1 (0.4)	0
Drogheda	0.1 (0.4)	0
Dublin	0.1 (0.6)	0
Wexford	0.2 (0.8)	0
Waterford/Lismore	1.4 (2.9)	1
Cork	5.3 (4.0)	2
Kerry	2.9 (3.3)	1
Limerick	66.1 (6.8)	26
Galway	4.4 (4.1)	2
Connemara	0.1 (0.5)	0
Ballinakill	0.4 (1.4)	0
Bangor	0.1 (0.6)	0
Ballina	0.2 (0.6)	0
Sligo	2.7 (2.5)	1
Ballyshannon	0.2 (0.7)	0
Letterkenny	0.2 (0.7)	0
Northern Ireland	0.1 (0.4)	0
Farmed Strains	0.2 (0.9)	0
UK/France/Spain		6

Shannon drift nets 2004 (n = 39)

Estimated fishery proportions by district or country



Shannon drift nets 2005

Number screened = 136

Number of fish identified as being from UK/France/Spain = 6

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 130

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 93.1% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.1)	0	GY 145	Kilcogan	0.0 (0.1)	0
DK 4	Fane	0.0 (0.1)	0	GY 147	Corrib	1.6 (1.4)	2
DK 5	Glyde	0.0 (0.1)	0	GY 149	Owenboliska	0.0 (0.1)	0
DK 6	Dee	0.0 (0.1)	0	CN 152	Cashla	0.0 (0.1)	0
DR 8	Boyne	0.0 (0.1)	0	CN 155	Screebe	0.0 (0.1)	0
DB 15	Liffey	0.0 (0.1)	0	CN 161	Owenmore	0.1 (0.4)	0
DB 18	Dargle	0.0 (0.1)	0	BK 166	Dawros	0.0 (0.1)	0
DB 21	Vartry	0.0 (0.1)	0	BK 167	Culfin	0.0 (0.1)	0
WX 26	Avoca	0.0 (0.1)	0	BK 168	Erriff	0.0 (0.1)	0
WX 31	Slaney	2.5 (2.0)	3	BK 169	Bundorragha	0.0 (0.1)	0
WD/LS*	SEPC	0.7 (1.4)	1	BK 172	Bunowen	0.0 (0.1)	0
CK 66	Lee	0.6 (1.0)	1	BG 178	Newport	0.0 (0.1)	0
CK 69	Bandon	0.0 (0.2)	0	BG 179	Srahmore	0.0 (0.1)	0
CK 72	Ilen	0.3 (0.9)	0	BG 185	Owenduff	0.0 (0.1)	0
CK 78	Owvane	0.0 (0.1)	0	BG 186	Owenmore	0.4 (1.0)	1
CK 80	Glengariff	0.7 (0.7)	1	BA 194	Cloonaghmore	0.0 (0.1)	0
CK 81	Adrigole	0.0 (0.1)	0	BA 195	Moy	0.1 (0.4)	0
KY 84	Croanshagh	0.0 (0.1)	0	BA 196	Brusna	0.0 (0.2)	0
KY 85	Owenshagh	0.0 (0.1)	0	BA 200	Easkey	0.0 (0.2)	0
KY 86	Cloonee	0.0 (0.1)	0	SO 202	Ballysadare	0.0 (0.1)	0
KY 87	Sheen	0.0 (0.1)	0	SO 203	Garvogue	0.0 (0.1)	0
KY 88	Roughty	0.0 (0.1)	0	BS 208	Duff	0.0 (0.1)	0
KY 89	Finnihiy	0.0 (0.1)	0	BS 209	Drowes	0.0 (0.1)	0
KY 90	KerryBlackwater	0.0 (0.1)	0	BS 210	Erne	0.0 (0.1)	0
KY 92	Sneem	2.5 (1.5)	3	BS 211	Abbey	0.0 (0.1)	0
KY 93	Owreagh	0.5 (0.7)	1	BS 213	Laghy	0.0 (0.1)	0
KY 97	Currane	0.8 (1.3)	1	BS 214	Eske	0.0 (0.1)	0
KY 98	Inny	0.2 (0.6)	0	BS 215	Eany	0.0 (0.3)	0
KY 102	Ferta	0.0 (0.1)	0	BS 219	Glen	0.0 (0.1)	0
KY 103	Behy	0.0 (0.1)	0	BS 220	Owenwee	0.0 (0.1)	0
KY 104	Caragh	0.0 (0.1)	0	LY 223	Owenea	0.0 (0.1)	0
KY 106	Laune	1.1 (1.0)	1	LY 225	Gweebarra	0.0 (0.1)	0
KY 107	Maine	0.1 (0.3)	0	LY 228	Gweedore	0.0 (0.1)	0
KY 108	Emlagh	0.0 (0.1)	0	LY 229	Clady	0.0 (0.1)	0
KY 109	Owenascaul	0.0 (0.1)	0	LY 240	Lackagh	0.0 (0.1)	0
KY 111	Milltown	0.2 (0.7)	0	LY 248	Leannan	0.1 (0.3)	0
KY 112	Feoghanagh	0.2 (0.6)	0	LY 249	Swilly	0.0 (0.1)	0
KY 117	TraleeLee	0.0 (0.1)	0	LY 253	Crana	0.0 (0.1)	0
LK 119	Feale	1.8 (1.6)	2	-	Northern Ireland	0.8 (0.8)	1
LK 120	Galey	0.2 (0.7)	0	-	Aqaugen	0.0 (0.1)	0
LK 126	Maigue	0.0 (0.1)	0	-	Fanad	0.0 (0.1)	0
LK 128	Mulcair	79.2 (3.6)	108	-	UK/France/Spain		6

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

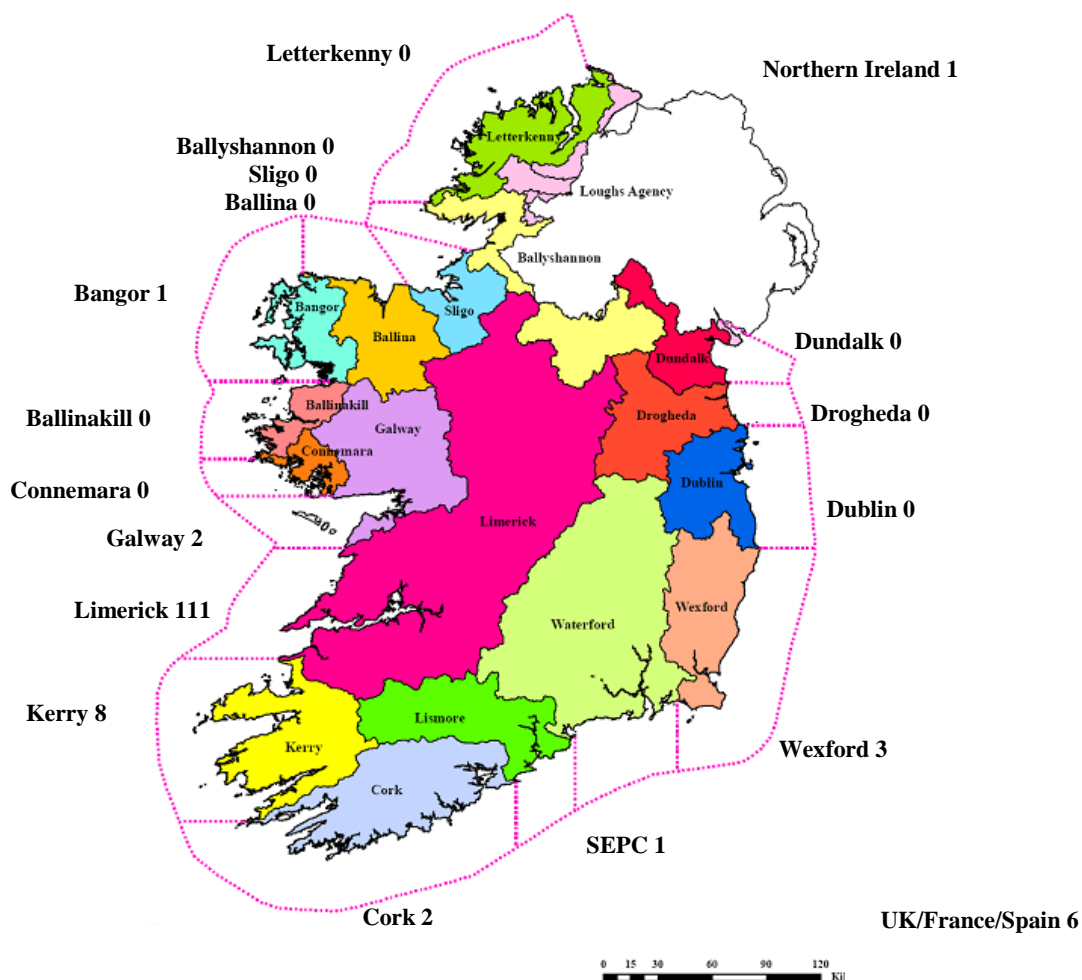
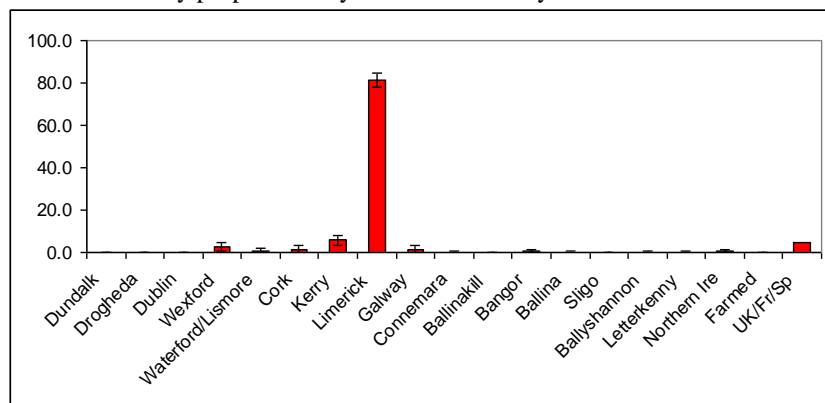
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.0 (0.1)	0
Drogheda	0.0 (0.1)	0
Dublin	0.0 (0.1)	0
Wexford	2.6 (2.0)	3
Waterford/Lismore	0.7 (1.4)	1
Cork	1.7 (1.5)	2
Kerry	5.7 (2.4)	8
Limerick	81.3 (3.4)	111
Galway	1.6 (1.4)	2
Connemara	0.1 (0.4)	0
Ballinakill	0.0 (0.2)	0
Bangor	0.4 (1.0)	1
Ballina	0.2 (0.5)	0
Sligo	0.0 (0.1)	0
Ballyshannon	0.1 (0.3)	0
Letterkenny	0.1 (0.4)	0
Northern Ireland	0.8 (0.8)	1
Farmed Strains	0.0 (0.1)	0
UK/France/Spain		6

Shannon drift nets 2005 (n = 136)

Estimated fishery proportions by district or country



Shannon drift nets 2006

Number screened = 241

Proportion fish identified as being from UK/France/Spain = 6

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 231

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 95.4% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.1)	0	GY 145	Kilcogan	0.0 (0.0)	0
DK 4	Fane	0.0 (0.1)	0	GY 147	Corrib	6.6 (2.3)	16
DK 5	Glyde	0.0 (0.1)	0	GY 149	Owenboliska	0.0 (0.0)	0
DK 6	Dee	0.0 (0.0)	0	CN 152	Cashla	0.0 (0.2)	0
DR 8	Boyne	0.7 (0.8)	2	CN 155	Screebe	1.9 (1.0)	5
DB 15	Liffey	0.0 (0.0)	0	CN 161	Owenmore	0.1 (0.3)	0
DB 18	Dargle	0.1 (0.5)	0	BK 166	Dawros	0.0 (0.1)	0
DB 21	Vartry	0.0 (0.2)	0	BK 167	Culfin	0.0 (0.1)	0
WX 26	Avoca	0.0 (0.0)	0	BK 168	Erriff	0.1 (0.4)	0
WX 31	Slaney	2.2 (1.6)	5	BK 169	Bundorragha	0.1 (0.3)	0
WD/LS*	SEPC	10.0 (2.8)	24	BK 172	Bunowen	0.0 (0.2)	0
CK 66	Lee	0.0 (0.1)	0	BG 178	Newport	0.0 (0.0)	0
CK 69	Bandon	0.0 (0.2)	0	BG 179	Srahmore	0.0 (0.1)	0
CK 72	Ilen	0.0 (0.0)	0	BG 185	Owenduff	0.0 (0.1)	0
CK 78	Owvane	0.0 (0.1)	0	BG 186	Owenmore	0.0 (0.1)	0
CK 80	Glengariff	0.0 (0.0)	0	BA 194	Cloonaghmore	0.0 (0.0)	0
CK 81	Adrigole	0.0 (0.0)	0	BA 195	Moy	0.5 (0.8)	1
KY 84	Croanshagh	0.0 (0.1)	0	BA 196	Brusna	0.1 (0.3)	0
KY 85	Owenshagh	0.0 (0.0)	0	BA 200	Easkey	0.0 (0.1)	0
KY 86	Cloonee	0.0 (0.1)	0	SO 202	Ballysadare	0.0 (0.1)	0
KY 87	Sheen	0.0 (0.1)	0	SO 203	Garvogue	0.0 (0.0)	0
KY 88	Roughty	0.0 (0.2)	0	BS 208	Duff	0.0 (0.1)	0
KY 89	Finnihiy	0.0 (0.0)	0	BS 209	Drowes	0.0 (0.0)	0
KY 90	KerryBlackwater	0.0 (0.0)	0	BS 210	Erne	0.0 (0.1)	0
KY 92	Sneem	0.0 (0.0)	0	BS 211	Abbey	0.0 (0.1)	0
KY 93	Owreagh	0.0 (0.0)	0	BS 213	Laghy	0.0 (0.1)	0
KY 97	Currane	0.2 (0.5)	1	BS 214	Eske	0.0 (0.0)	0
KY 98	Inny	0.0 (0.2)	0	BS 215	Eany	0.0 (0.1)	0
KY 102	Ferta	0.0 (0.1)	0	BS 219	Glen	0.2 (0.5)	0
KY 103	Behy	0.0 (0.0)	0	BS 220	Owenwee	0.0 (0.0)	0
KY 104	Caragh	0.0 (0.1)	0	LY 223	Owenea	0.0 (0.1)	0
KY 106	Laune	0.4 (0.6)	1	LY 225	Gweebarra	0.0 (0.1)	0
KY 107	Maine	0.1 (0.3)	0	LY 228	Gweedore	0.0 (0.0)	0
KY 108	Emlagh	0.0 (0.1)	0	LY 229	Clady	0.0 (0.0)	0
KY 109	Owenascaul	0.0 (0.0)	0	LY 240	Lackagh	0.5 (0.7)	1
KY 111	Milltown	0.0 (0.0)	0	LY 248	Leannan	0.0 (0.1)	0
KY 112	Feoghanagh	0.0 (0.0)	0	LY 249	Swilly	0.0 (0.1)	0
KY 117	TraleeLee	0.0 (0.1)	0	LY 253	Crana	0.0 (0.0)	0
LK 119	Feale	2.0 (1.5)	5	-	Northern Ireland	0.0 (0.2)	0
LK 120	Galey	2.6 (1.6)	6	-	Aqaugen	0.0 (0.0)	0
LK 126	Maigue	0.3 (0.4)	1	-	Fanad	0.4 (0.5)	1
LK 128	Mulcair	67.6 (3.7)	160	-	UK/France/Spain		6

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

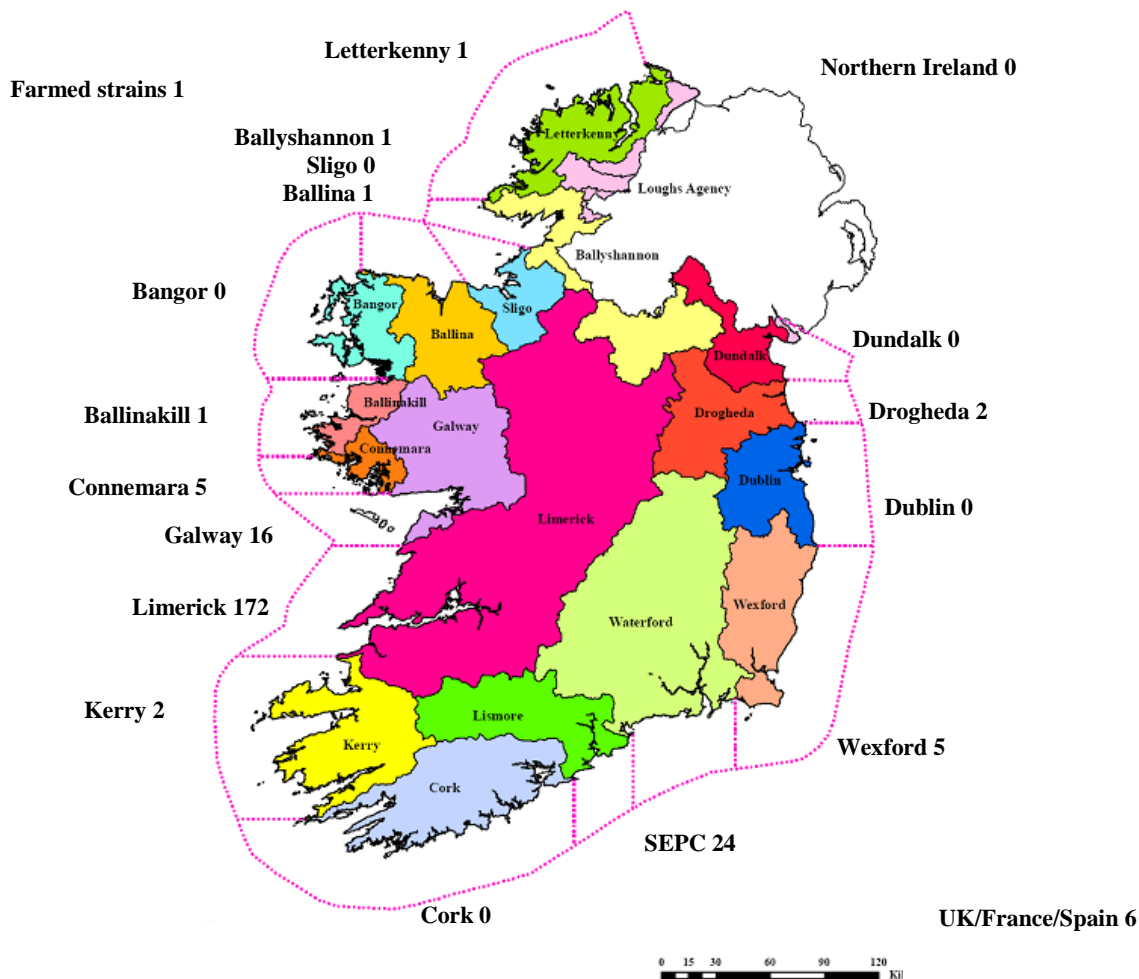
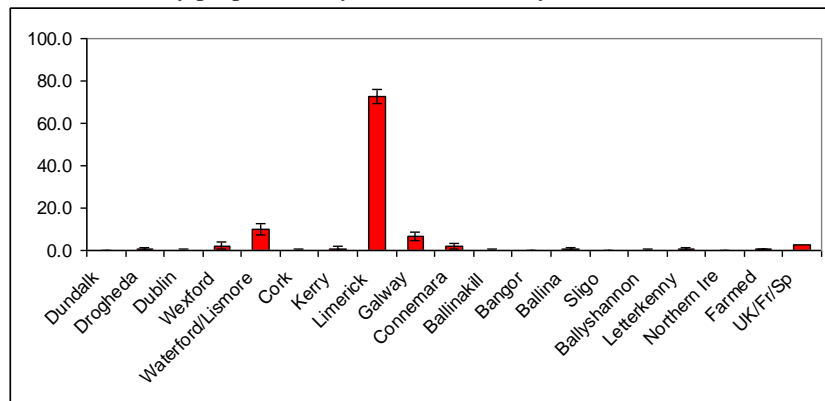
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.0 (0.1)	0
Drogheda	0.7 (0.8)	2
Dublin	0.2 (0.6)	0
Wexford	2.2 (1.6)	5
Waterford/Lismore	10.0 (2.8)	24
Cork	0.1 (0.3)	0
Kerry	0.8 (0.9)	2
Limerick	72.7 (3.5)	172
Galway	6.6 (2.3)	16
Connemara	2.0 (1.1)	5
Ballinakill	0.2 (0.5)	1
Bangor	0.0 (0.1)	0
Ballina	0.6 (0.9)	1
Sligo	0.0 (0.1)	0
Ballyshannon	0.2 (0.5)	1
Letterkenny	0.6 (0.8)	1
Northern Ireland	0.0 (0.2)	0
Farmed Strains	0.5 (0.5)	1
UK/France/Spain		6

Shannon drift nets 2006 (n = 237)

Estimated fishery proportions by district or country



Kerry drift nets 2005

Number screened = 103

Number of fish identified as being from UK/France/Spain = 9

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 85

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 88.1% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.1 (0.5)	0	GY 145	Kilcogan	0.0 (0.1)	0
DK 4	Fane	0.0 (0.1)	0	GY 147	Corrib	0.1 (0.5)	0
DK 5	Glyde	0.0 (0.1)	0	GY 149	Owenboliska	0.0 (0.1)	0
DK 6	Dee	0.0 (0.1)	0	CN 152	Cashla	0.0 (0.1)	0
DR 8	Boyne	1.1 (2.3)	1	CN 155	Screebe	0.0 (0.1)	0
DB 15	Liffey	1.1 (1.1)	1	CN 161	Owenmore	0.0 (0.2)	0
DB 18	Dargle	0.0 (0.1)	0	BK 166	Dawros	0.0 (0.3)	0
DB 21	Vartry	0.2 (0.9)	0	BK 167	Culfin	0.0 (0.1)	0
WX 26	Avoca	0.0 (0.1)	0	BK 168	Erriff	0.0 (0.3)	0
WX 31	Slaney	0.8 (2.1)	1	BK 169	Bundorragha	0.0 (0.1)	0
WD/LS*	SEPC	54.9 (6.6)	51	BK 172	Bunowen	0.3 (1.1)	0
CK 66	Lee	0.1 (0.5)	0	BG 178	Newport	0.0 (0.1)	0
CK 69	Bandon	6.9 (4.4)	6	BG 179	Srahmore	0.0 (0.1)	0
CK 72	Ilen	0.4 (1.2)	0	BG 185	Owenduff	0.0 (0.2)	0
CK 78	Owvane	0.7 (1.3)	1	BG 186	Owenmore	0.1 (0.4)	0
CK 80	Glengariff	0.0 (0.1)	0	BA 194	Cloonaghmore	0.0 (0.1)	0
CK 81	Adrigole	0.0 (0.1)	0	BA 195	Moy	4.6 (2.5)	4
KY 84	Croanshagh	0.0 (0.1)	0	BA 196	Brusna	0.0 (0.3)	0
KY 85	Owenshagh	0.0 (0.2)	0	BA 200	Easkey	0.0 (0.2)	0
KY 86	Cloonee	0.0 (0.1)	0	SO 202	Ballysadare	0.0 (0.2)	0
KY 87	Sheen	0.0 (0.3)	0	SO 203	Garvogue	0.0 (0.1)	0
KY 88	Roughty	0.4 (0.9)	0	BS 208	Duff	0.0 (0.2)	0
KY 89	Finnihey	0.0 (0.1)	0	BS 209	Drowes	0.0 (0.1)	0
KY 90	KerryBlackwater	0.0 (0.1)	0	BS 210	Erne	0.0 (0.2)	0
KY 92	Sneem	0.1 (0.5)	0	BS 211	Abbey	0.0 (0.1)	0
KY 93	Owreagh	0.0 (0.1)	0	BS 213	Laghy	0.0 (0.1)	0
KY 97	Currane	0.0 (0.2)	0	BS 214	Eske	0.0 (0.1)	0
KY 98	Inny	0.0 (0.4)	0	BS 215	Eany	0.0 (0.2)	0
KY 102	Ferta	0.1 (0.3)	0	BS 219	Glen	0.7 (1.5)	1
KY 103	Behy	0.0 (0.1)	0	BS 220	Owenwee	0.0 (0.1)	0
KY 104	Caragh	4.5 (3.9)	4	LY 223	Owenea	0.1 (0.5)	0
KY 106	Laune	8.5 (3.6)	8	LY 225	Gweebarra	0.0 (0.1)	0
KY 107	Maine	3.1 (3.4)	3	LY 228	Gweedore	0.0 (0.1)	0
KY 108	Emlagh	0.0 (0.1)	0	LY 229	Clady	0.0 (0.1)	0
KY 109	Owenascaul	0.0 (0.4)	0	LY 240	Lackagh	0.0 (0.1)	0
KY 111	Milltown	0.0 (0.2)	0	LY 248	Leannan	0.0 (0.1)	0
KY 112	Feoghanagh	0.1 (0.6)	0	LY 249	Swilly	0.0 (0.1)	0
KY 117	TraleeLee	0.5 (1.4)	0	LY 253	Crana	0.0 (0.1)	0
LK 119	Feale	0.0 (0.1)	0	-	Northern Ireland	1.0 (1.7)	1
LK 120	Galey	0.0 (0.1)	0	-	Aqaugen	0.0 (0.1)	0
LK 126	Maigue	0.0 (0.1)	0	-	Fanad	0.0 (0.1)	0
LK 128	Mulcair	0.2 (0.7)	0	-	UK/France/Spain		9

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

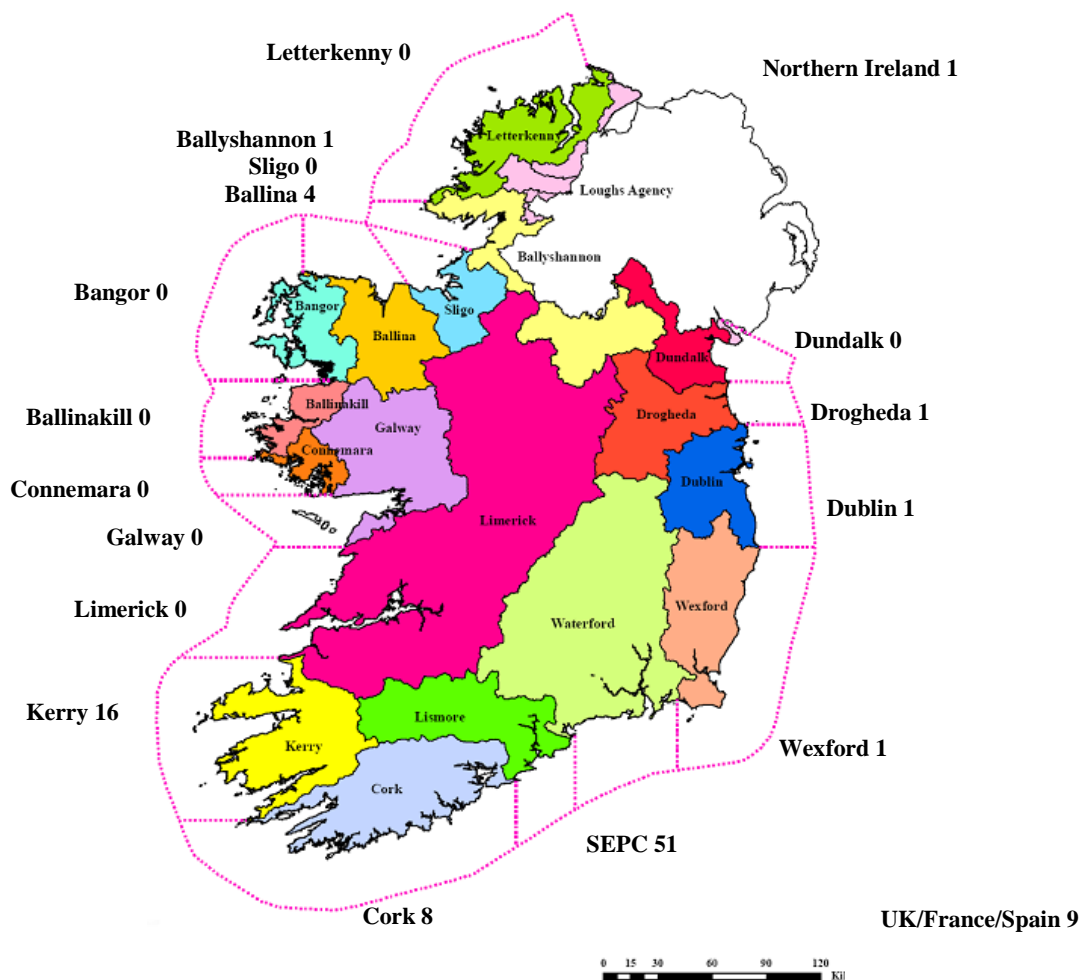
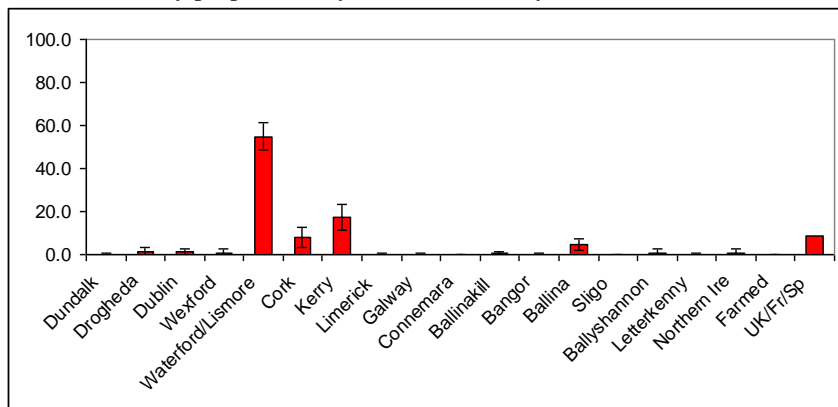
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.1 (0.5)	0
Drogheda	1.1 (2.3)	1
Dublin	1.3 (1.4)	1
Wexford	0.8 (2.1)	1
Waterford/Lismore	55.0 (6.6)	51
Cork	8.1 (4.4)	8
Kerry	17.4 (6.0)	16
Limerick	0.2 (0.7)	0
Galway	0.2 (0.5)	0
Connemara	0.1 (0.2)	0
Ballinakill	0.4 (1.2)	0
Bangor	0.1 (0.4)	0
Ballina	4.6 (2.5)	4
Sligo	0.0 (0.2)	0
Ballyshannon	0.8 (1.6)	1
Letterkenny	0.1 (0.5)	0
Northern Ireland	1.0 (1.7)	1
Farmed Strains	0.0 (0.1)	0
UK/France/Spain		9

Kerry drift nets 2005 (n = 94)

Estimated fishery proportions by district or country



Kerry drift nets 2006

Number screened = 257

Number of fish identified as being from UK/France/Spain = 41

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 129

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 92.2% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.2)	0	GY 145	Kilcogan	0.0 (0.1)	0
DK 4	Fane	0.0 (0.2)	0	GY 147	Corrib	0.1 (0.3)	0
DK 5	Glyde	0.0 (0.1)	0	GY 149	Owenboliska	0.0 (0.2)	0
DK 6	Dee	0.0 (0.1)	0	CN 152	Cashla	0.0 (0.1)	0
DR 8	Boyne	0.0 (0.1)	0	CN 155	Screebe	0.0 (0.1)	0
DB 15	Liffey	0.0 (0.1)	0	CN 161	Owenmore	0.0 (0.1)	0
DB 18	Dargle	1.8 (2.3)	3	BK 166	Dawros	0.0 (0.1)	0
DB 21	Vartry	1.5 (1.9)	2	BK 167	Culfin	0.0 (0.0)	0
WX 26	Avoca	0.2 (0.9)	0	BK 168	Erriff	0.0 (0.1)	0
WX 31	Slaney	0.2 (0.6)	0	BK 169	Bundorragha	0.0 (0.1)	0
WD/LS*	SEPC	26.4 (4.9)	41	BK 172	Bunowen	0.0 (0.1)	0
CK 66	Lee	1.5 (2.2)	2	BG 178	Newport	0.0 (0.1)	0
CK 69	Bandon	3.1 (3.1)	5	BG 179	Srahmore	3.4 (1.6)	5
CK 72	Ilen	0.0 (0.1)	0	BG 185	Owenduff	0.0 (0.1)	0
CK 78	Owvane	0.0 (0.2)	0	BG 186	Owenmore	0.1 (0.4)	0
CK 80	Glengariff	0.0 (0.1)	0	BA 194	Cloonaghmore	0.0 (0.1)	0
CK 81	Adrigole	0.2 (0.7)	0	BA 195	Moy	0.0 (0.1)	0
KY 84	Croanshagh	0.0 (0.1)	0	BA 196	Brusna	0.0 (0.1)	0
KY 85	Owenshagh	0.0 (0.1)	0	BA 200	Easkey	0.0 (0.1)	0
KY 86	Cloonee	0.0 (0.1)	0	SO 202	Ballysadare	0.0 (0.1)	0
KY 87	Sheen	4.8 (1.9)	7	SO 203	Garvogue	0.0 (0.1)	0
KY 88	Roughty	0.2 (0.5)	0	BS 208	Duff	0.2 (0.5)	0
KY 89	Finnihiy	0.0 (0.0)	0	BS 209	Drowes	0.0 (0.0)	0
KY 90	KerryBlackwater	0.0 (0.1)	0	BS 210	Erne	0.0 (0.1)	0
KY 92	Sneem	0.4 (0.8)	1	BS 211	Abbey	0.0 (0.1)	0
KY 93	Owreagh	0.0 (0.1)	0	BS 213	Laghy	0.0 (0.1)	0
KY 97	Currane	0.0 (0.2)	0	BS 214	Eske	0.0 (0.1)	0
KY 98	Inny	0.0 (0.1)	0	BS 215	Eany	0.0 (0.1)	0
KY 102	Ferta	0.0 (0.1)	0	BS 219	Glen	0.0 (0.1)	0
KY 103	Behy	0.0 (0.0)	0	BS 220	Owenwee	0.0 (0.0)	0
KY 104	Caragh	12.7 (3.3)	20	LY 223	Owenea	0.0 (0.3)	0
KY 106	Laune	25.8 (4.3)	40	LY 225	Gweebarra	0.0 (0.1)	0
KY 107	Maine	0.0 (0.2)	0	LY 228	Gweedore	0.0 (0.0)	0
KY 108	Emlagh	0.0 (0.1)	0	LY 229	Clady	0.0 (0.1)	0
KY 109	Owenascaul	0.2 (0.8)	0	LY 240	Lackagh	0.0 (0.1)	0
KY 111	Milltown	0.0 (0.1)	0	LY 248	Leannan	0.0 (0.1)	0
KY 112	Feoghanagh	0.0 (0.2)	0	LY 249	Swilly	0.0 (0.1)	0
KY 117	TraleeLee	0.0 (0.1)	0	LY 253	Crana	0.0 (0.2)	0
LK 119	Feale	0.0 (0.2)	0	-	Northern Ireland	0.1 (0.3)	0
LK 120	Galey	0.1 (0.3)	0	-	Aqaugen	0.0 (0.1)	0
LK 126	Maigue	0.0 (0.1)	0	-	Fanad	0.0 (0.1)	0
LK 128	Mulcair	0.2 (0.4)	0	-	UK/France/Spain		41

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

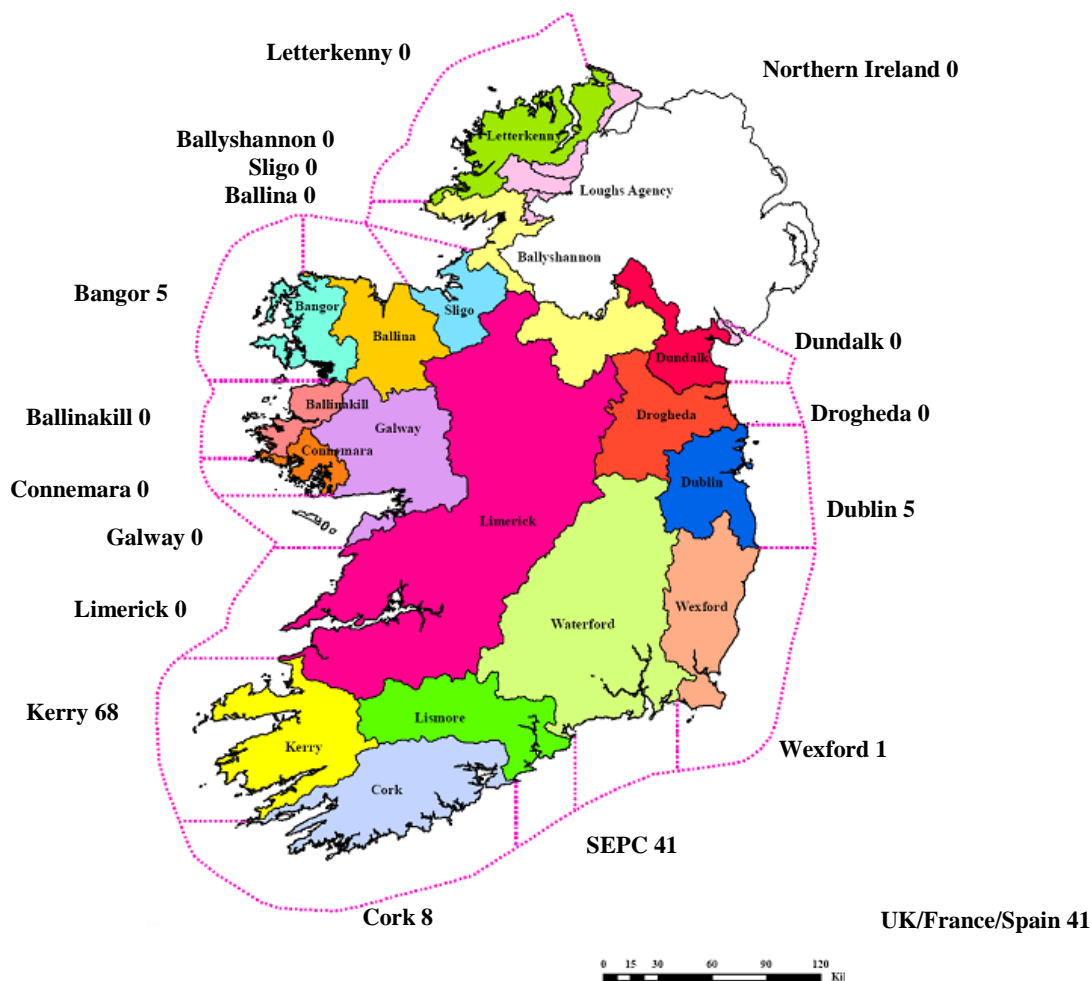
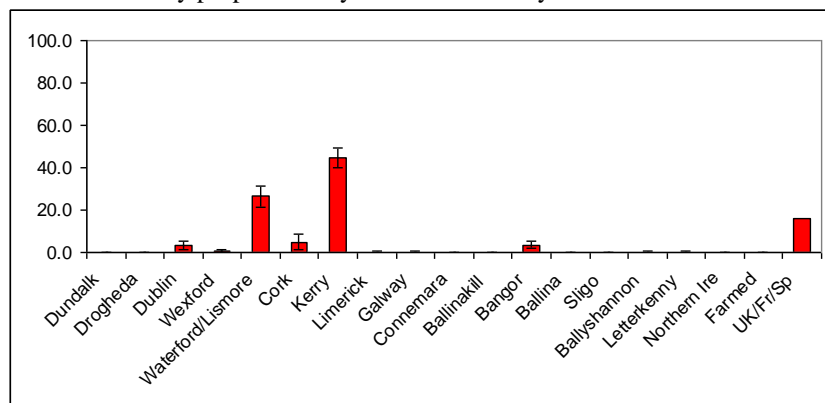
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.1 (0.3)	0
Drogheda	0.0 (0.1)	0
Dublin	3.3 (2.3)	5
Wexford	0.4 (1.1)	1
Waterford/Lismore	26.4 (4.9)	41
Cork	4.9 (3.6)	8
Kerry	44.5 (4.7)	68
Limerick	0.3 (0.6)	0
Galway	0.1 (0.4)	0
Connemara	0.0 (0.2)	0
Ballinakill	0.0 (0.2)	0
Bangor	3.4 (1.6)	5
Ballina	0.1 (0.2)	0
Sligo	0.0 (0.1)	0
Ballyshannon	0.2 (0.5)	0
Letterkenny	0.1 (0.4)	0
Northern Ireland	0.1 (0.3)	0
Farmed Strains	0.0 (0.1)	0
UK/France/Spain		41

Kerry drift nets 2006 (n = 170)

Estimated fishery proportions by district or country



Cork drift nets 2005

Number screened = 504

Number of fish identified as being from UK/France/Spain = 1

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 477

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 87.7% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.0)	0	GY 145	Kilcogan	0.0 (0.0)	0
DK 4	Fane	0.0 (0.0)	0	GY 147	Corrib	0.9 (0.6)	4
DK 5	Glyde	0.0 (0.0)	0	GY 149	Owenboliska	0.0 (0.0)	0
DK 6	Dee	0.0 (0.0)	0	CN 152	Cashla	0.1 (0.3)	0
DR 8	Boyne	0.0 (0.1)	0	CN 155	Screebe	0.0 (0.1)	0
DB 15	Liffey	0.4 (0.3)	2	CN 161	Owenmore	0.0 (0.1)	0
DB 18	Dargle	0.0 (0.1)	0	BK 166	Dawros	0.0 (0.0)	0
DB 21	Vartry	0.0 (0.0)	0	BK 167	Culfin	0.0 (0.0)	0
WX 26	Avoca	1.2 (0.9)	6	BK 168	Erriff	0.0 (0.1)	0
WX 31	Slaney	0.0 (0.2)	0	BK 169	Bundorragha	0.0 (0.1)	0
WD/LS*	SEPC	57.3 (7.1)	274	BK 172	Bunowen	0.0 (0.2)	0
CK 66	Lee	4.3 (4.4)	20	BG 178	Newport	0.0 (0.0)	0
CK 69	Bandon	3.6 (2.1)	17	BG 179	Srahmore	1.7 (0.6)	8
CK 72	Ilen	5.1 (1.6)	24	BG 185	Owenduff	0.0 (0.0)	0
CK 78	Owvane	0.0 (0.1)	0	BG 186	Owenmore	1.8 (2.9)	8
CK 80	Glengariff	0.0 (0.0)	0	BA 194	Cloonaghmore	0.0 (0.0)	0
CK 81	Adrigole	0.0 (0.0)	0	BA 195	Moy	0.7 (0.6)	3
KY 84	Croanshagh	0.8 (0.7)	4	BA 196	Brusna	0.0 (0.2)	0
KY 85	Owenshagh	0.0 (0.1)	0	BA 200	Easkey	0.0 (0.0)	0
KY 86	Cloonee	0.0 (0.0)	0	SO 202	Ballysadare	0.0 (0.0)	0
KY 87	Sheen	6.0 (1.4)	29	SO 203	Garvogue	0.0 (0.0)	0
KY 88	Roughy	2.5 (0.9)	12	BS 208	Duff	0.0 (0.1)	0
KY 89	Finnihiy	0.0 (0.0)	0	BS 209	Drowes	0.2 (0.4)	1
KY 90	KerryBlackwater	0.1 (0.2)	0	BS 210	Erne	0.2 (0.4)	1
KY 92	Sneem	0.2 (0.5)	1	BS 211	Abbey	0.0 (0.0)	0
KY 93	Owreagh	0.0 (0.0)	0	BS 213	Laghy	0.0 (0.0)	0
KY 97	Currane	2.6 (0.8)	12	BS 214	Eske	0.0 (0.0)	0
KY 98	Inny	1.0 (1.4)	5	BS 215	Eany	0.0 (0.0)	0
KY 102	Ferta	0.0 (0.0)	0	BS 219	Glen	0.0 (0.0)	0
KY 103	Behy	0.0 (0.0)	0	BS 220	Owenwee	0.0 (0.0)	0
KY 104	Caragh	1.7 (1.0)	8	LY 223	Owenea	0.0 (0.2)	0
KY 106	Laune	3.9 (1.6)	19	LY 225	Gweebarra	0.0 (0.0)	0
KY 107	Maine	2.0 (3.9)	10	LY 228	Gweedore	0.0 (0.0)	0
KY 108	Emlagh	0.0 (0.0)	0	LY 229	Clady	0.0 (0.0)	0
KY 109	Owenascaul	0.0 (0.1)	0	LY 240	Lackagh	0.0 (0.1)	0
KY 111	Milltown	0.0 (0.0)	0	LY 248	Leannan	0.0 (0.0)	0
KY 112	Feoghanagh	0.1 (0.4)	1	LY 249	Swilly	0.0 (0.0)	0
KY 117	TraleeLee	0.0 (0.1)	0	LY 253	Crana	0.0 (0.0)	0
LK 119	Feale	0.0 (0.1)	0	-	Northern Ireland	0.1 (0.2)	0
LK 120	Galey	0.0 (0.1)	0	-	Aqaugen	0.0 (0.0)	0
LK 126	Maigue	0.0 (0.0)	0	-	Fanad	0.2 (0.2)	1
LK 128	Mulcair	0.8 (0.6)	4	-	UK/France/Spain		1

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

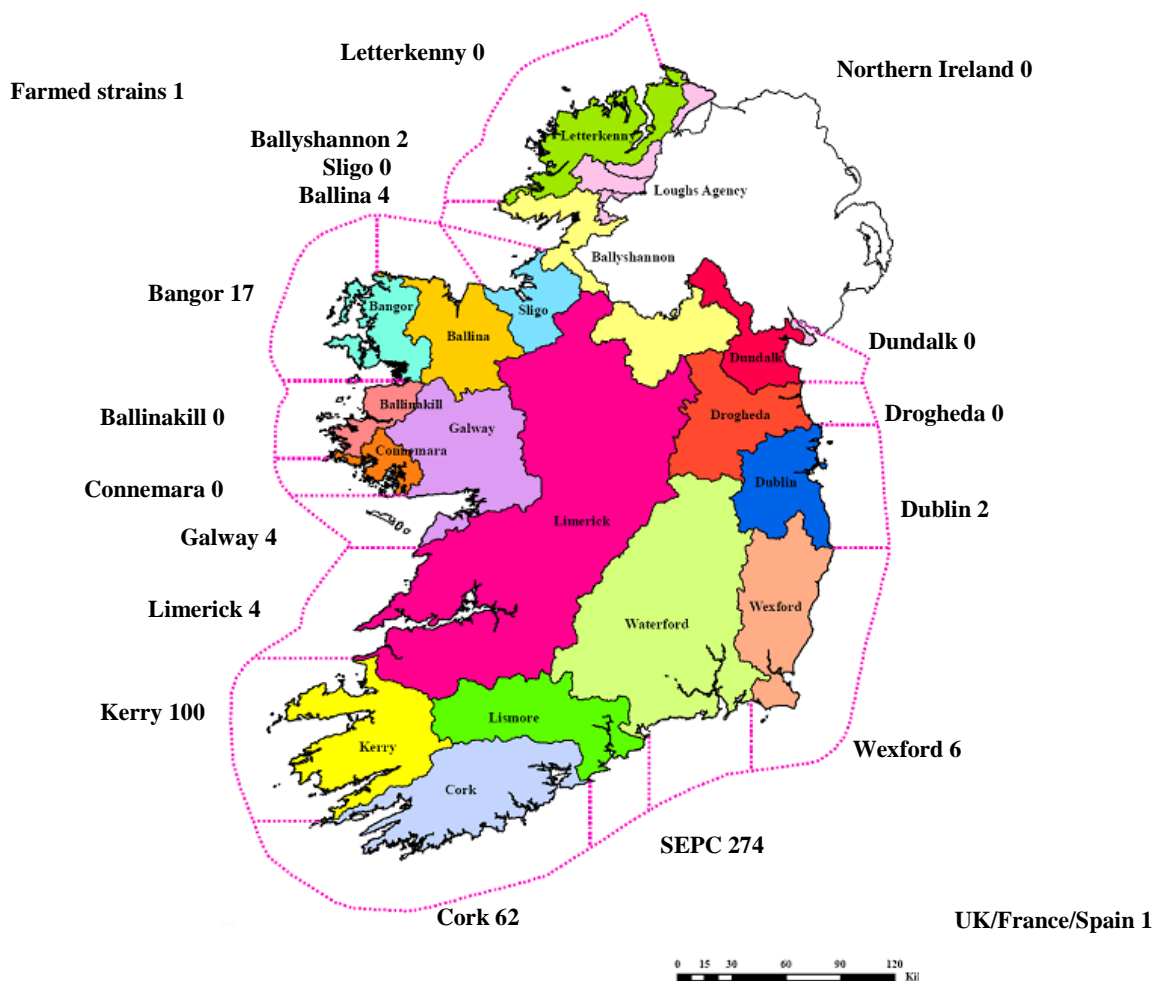
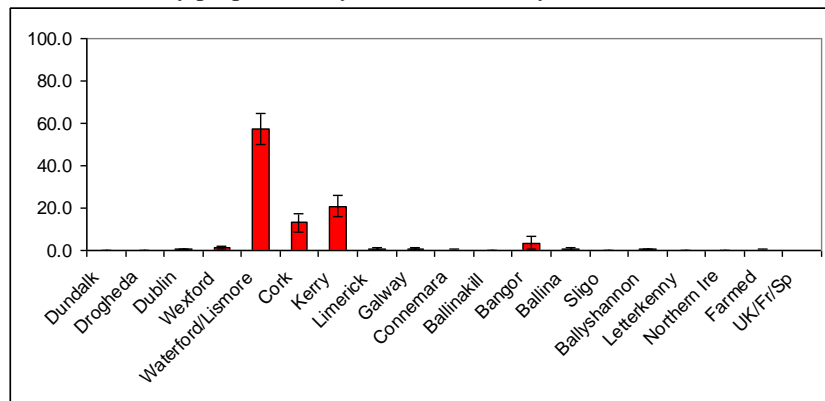
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.0 (0.1)	0
Drogheda	0.0 (0.1)	0
Dublin	0.4 (0.3)	2
Wexford	1.3 (0.9)	6
Waterford/Lismore	57.3 (7.1)	274
Cork	13.0 (4.4)	62
Kerry	21.0 (4.7)	100
Limerick	0.8 (0.6)	4
Galway	0.9 (0.6)	4
Connemara	0.1 (0.3)	0
Ballinakill	0.1 (0.2)	0
Bangor	3.5 (2.9)	17
Ballina	0.7 (0.6)	4
Sligo	0.0 (0.0)	0
Ballyshannon	0.4 (0.6)	2
Letterkenny	0.1 (0.2)	0
Northern Ireland	0.1 (0.2)	0
Farmed Strains	0.2 (0.2)	1
UK/France/Spain		1

Cork drift nets 2005 (n = 478)

Estimated fishery proportions by district or country



Cork drift nets 2006

Number screened = 64

Proportion fish identified as being from UK/France/Spain = 4

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 52

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 89.4% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.2)	0	GY 145	Kilcogan	0.0 (0.1)	0
DK 4	Fane	0.0 (0.1)	0	GY 147	Corrib	0.1 (0.5)	0
DK 5	Glyde	0.0 (0.2)	0	GY 149	Owenboliska	0.0 (0.1)	0
DK 6	Dee	0.0 (0.1)	0	CN 152	Cashla	0.0 (0.2)	0
DR 8	Boyne	0.1 (0.8)	0	CN 155	Screebe	0.0 (0.3)	0
DB 15	Liffey	0.0 (0.1)	0	CN 161	Owenmore	0.0 (0.2)	0
DB 18	Dargle	0.0 (0.4)	0	BK 166	Dawros	0.0 (0.1)	0
DB 21	Vartry	0.0 (0.1)	0	BK 167	Culfin	0.0 (0.2)	0
WX 26	Avoca	0.0 (0.1)	0	BK 168	Erriff	0.1 (0.4)	0
WX 31	Slaney	0.1 (0.3)	0	BK 169	Bundorragha	0.0 (0.2)	0
WD/LS*	SEPC	42.2 (8.3)	23	BK 172	Bunowen	0.1 (0.5)	0
CK 66	Lee	5.2 (4.5)	3	BG 178	Newport	0.0 (0.2)	0
CK 69	Bandon	21.9 (7.7)	12	BG 179	Srahmore	0.0 (0.2)	0
CK 72	Ilen	0.1 (0.7)	0	BG 185	Owenduff	0.0 (0.2)	0
CK 78	Owvane	1.0 (2.0)	1	BG 186	Owenmore	0.0 (0.3)	0
CK 80	Glengariff	0.0 (0.1)	0	BA 194	Cloonaghmore	0.0 (0.1)	0
CK 81	Adrigole	0.0 (0.1)	0	BA 195	Moy	0.1 (0.5)	0
KY 84	Croanshagh	0.0 (0.2)	0	BA 196	Brusna	0.0 (0.1)	0
KY 85	Owenshagh	0.0 (0.2)	0	BA 200	Easkey	2.2 (3.0)	1
KY 86	Cloonee	0.0 (0.2)	0	SO 202	Ballysadare	0.0 (0.2)	0
KY 87	Sheen	5.8 (4.1)	3	SO 203	Garvogue	0.0 (0.1)	0
KY 88	Roughy	3.0 (2.7)	2	BS 208	Duff	0.0 (0.2)	0
KY 89	Finnihiy	0.0 (0.2)	0	BS 209	Drowes	0.0 (0.1)	0
KY 90	KerryBlackwater	0.0 (0.2)	0	BS 210	Erne	0.0 (0.2)	0
KY 92	Sneem	0.1 (0.8)	0	BS 211	Abbey	0.0 (0.1)	0
KY 93	Owreagh	0.1 (0.4)	0	BS 213	Laghy	0.0 (0.1)	0
KY 97	Currane	1.7 (2.3)	1	BS 214	Eske	0.0 (0.2)	0
KY 98	Inny	0.6 (2.3)	0	BS 215	Eany	0.0 (0.1)	0
KY 102	Ferta	0.0 (0.3)	0	BS 219	Glen	0.0 (0.3)	0
KY 103	Behy	0.0 (0.1)	0	BS 220	Owenwee	0.0 (0.1)	0
KY 104	Caragh	0.0 (0.3)	0	LY 223	Owenea	0.1 (0.6)	0
KY 106	Laune	0.4 (1.2)	0	LY 225	Gweebarra	0.0 (0.2)	0
KY 107	Maine	5.0 (4.0)	3	LY 228	Gweedore	0.0 (0.2)	0
KY 108	Emlagh	0.0 (0.1)	0	LY 229	Clady	0.0 (0.2)	0
KY 109	Owenascaul	0.1 (0.6)	0	LY 240	Lackagh	0.0 (0.1)	0
KY 111	Milltown	0.1 (0.8)	0	LY 248	Leannan	0.0 (0.3)	0
KY 112	Feoghanagh	0.0 (0.2)	0	LY 249	Swilly	0.0 (0.2)	0
KY 117	TraleeLee	0.0 (0.2)	0	LY 253	Crana	0.0 (0.2)	0
LK 119	Feale	0.0 (0.3)	0	-	Northern Ireland	2.2 (2.6)	1
LK 120	Galey	0.0 (0.1)	0	-	Aqaugen	0.0 (0.2)	0
LK 126	Maigue	0.1 (0.6)	0	-	Fanad	0.0 (0.1)	0
LK 128	Mulcair	0.2 (1.1)	0	-	UK/France/Spain		4

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

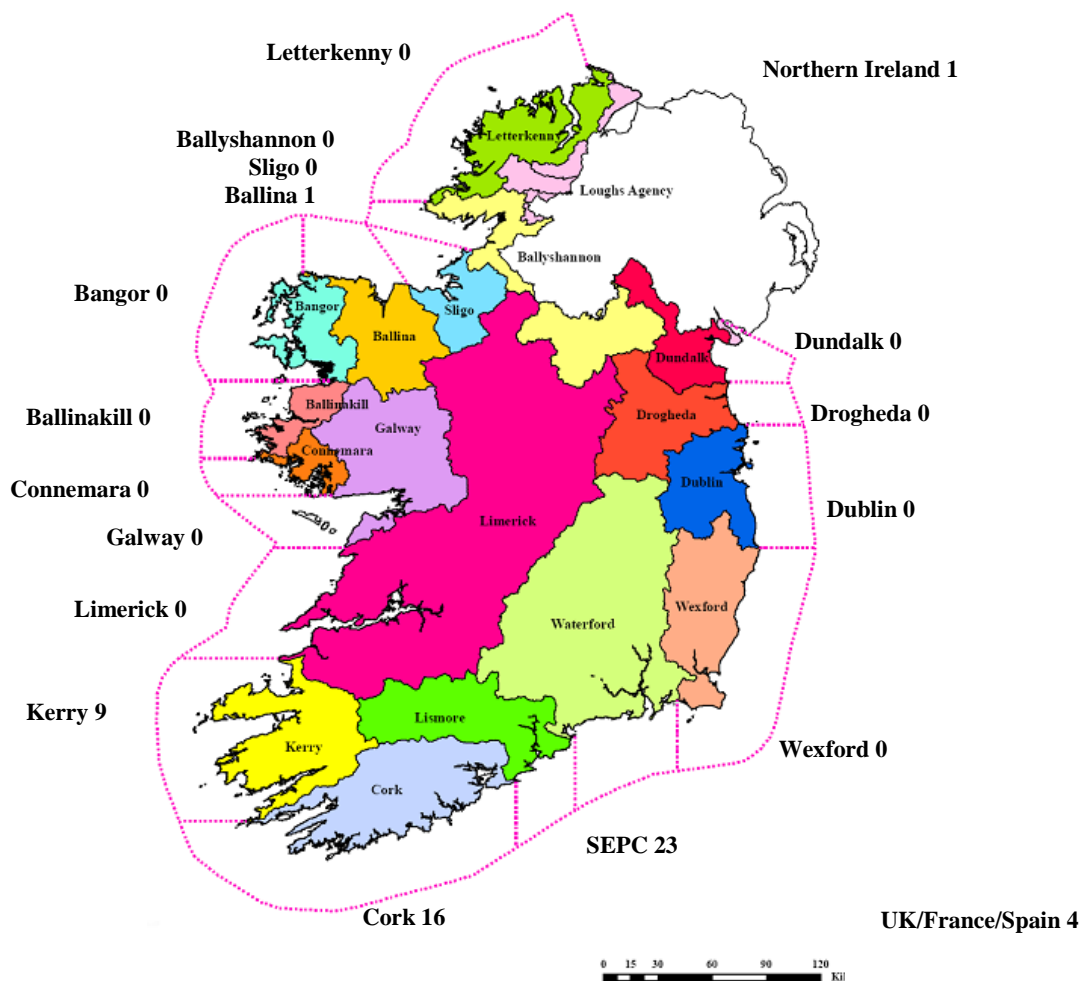
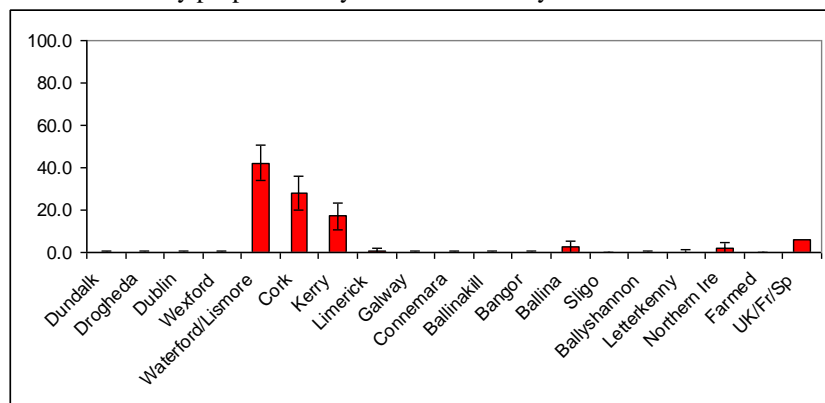
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.1 (0.3)	0
Drogheda	0.1 (0.8)	0
Dublin	0.1 (0.4)	0
Wexford	0.1 (0.4)	0
Waterford/Lismore	42.2 (8.3)	23
Cork	28.3 (8.0)	16
Kerry	17.0 (6.7)	9
Limerick	0.4 (1.3)	0
Galway	0.1 (0.5)	0
Connemara	0.1 (0.4)	0
Ballinakill	0.2 (0.7)	0
Bangor	0.1 (0.4)	0
Ballina	2.4 (3.1)	1
Sligo	0.0 (0.3)	0
Ballyshannon	0.1 (0.5)	0
Letterkenny	0.2 (0.8)	0
Northern Ireland	2.2 (2.6)	1
Farmed Strains	0.0 (0.2)	0
UK/France/Spain		4

Cork drift nets 2006 (n = 56)

Estimated fishery proportions by district or country



Lismore drift nets 2005

Number screened = 277

Number of fish identified as being from UK/France/Spain = 7

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 235

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 95.3% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.1)	0	GY 145	Kilcogan	0.0 (0.0)	0
DK 4	Fane	0.2 (0.5)	0	GY 147	Corrib	0.2 (0.5)	0
DK 5	Glyde	0.0 (0.0)	0	GY 149	Owenboliska	0.0 (0.0)	0
DK 6	Dee	0.0 (0.1)	0	CN 152	Cashla	0.2 (0.6)	1
DR 8	Boyne	0.0 (0.1)	0	CN 155	Screebe	0.0 (0.0)	0
DB 15	Liffey	0.0 (0.0)	0	CN 161	Owenmore	0.0 (0.1)	0
DB 18	Dargle	0.0 (0.3)	0	BK 166	Dawros	0.0 (0.1)	0
DB 21	Vartry	0.0 (0.2)	0	BK 167	Culfin	1.2 (0.9)	3
WX 26	Avoca	0.0 (0.1)	0	BK 168	Erriff	5.3 (2.9)	13
WX 31	Slaney	0.7 (1.3)	2	BK 169	Bundorragha	0.1 (0.3)	0
WD/LS*	SEPC	74.9 (4.0)	181	BK 172	Bunowen	1.2 (1.6)	3
CK 66	Lee	0.0 (0.1)	0	BG 178	Newport	0.0 (0.1)	0
CK 69	Bandon	0.0 (0.1)	0	BG 179	Srahmore	1.8 (1.0)	4
CK 72	Ilen	0.1 (0.5)	0	BG 185	Owenduff	0.0 (0.1)	0
CK 78	Owvane	0.0 (0.1)	0	BG 186	Owenmore	0.0 (0.1)	0
CK 80	Glengariff	0.0 (0.0)	0	BA 194	Cloonaghmore	0.0 (0.1)	0
CK 81	Adrigole	0.0 (0.0)	0	BA 195	Moy	0.2 (0.5)	0
KY 84	Croanshagh	0.0 (0.1)	0	BA 196	Brusna	0.1 (0.3)	0
KY 85	Owenshagh	0.0 (0.0)	0	BA 200	Easkey	0.0 (0.1)	0
KY 86	Cloonee	0.0 (0.1)	0	SO 202	Ballysadare	0.0 (0.1)	0
KY 87	Sheen	0.0 (0.1)	0	SO 203	Garvogue	0.0 (0.0)	0
KY 88	Roughty	0.0 (0.1)	0	BS 208	Duff	0.0 (0.1)	0
KY 89	Finnihey	0.0 (0.0)	0	BS 209	Drowes	0.0 (0.0)	0
KY 90	KerryBlackwater	0.0 (0.0)	0	BS 210	Erne	0.0 (0.1)	0
KY 92	Sneem	0.0 (0.1)	0	BS 211	Abbey	0.0 (0.1)	0
KY 93	Owreagh	0.0 (0.1)	0	BS 213	Laghy	0.0 (0.2)	0
KY 97	Currane	0.0 (0.1)	0	BS 214	Eske	0.0 (0.0)	0
KY 98	Inny	2.2 (1.7)	5	BS 215	Eany	0.0 (0.1)	0
KY 102	Ferta	0.0 (0.0)	0	BS 219	Glen	0.0 (0.2)	0
KY 103	Behy	0.0 (0.0)	0	BS 220	Owenwee	0.0 (0.0)	0
KY 104	Caragh	0.3 (0.7)	1	LY 223	Owenea	0.0 (0.2)	0
KY 106	Laune	4.9 (1.8)	12	LY 225	Gweebarra	0.0 (0.2)	0
KY 107	Maine	0.1 (0.4)	0	LY 228	Gweedore	0.0 (0.0)	0
KY 108	Emlagh	0.0 (0.1)	0	LY 229	Clady	0.0 (0.0)	0
KY 109	Owenascaul	0.0 (0.1)	0	LY 240	Lackagh	0.1 (0.3)	0
KY 111	Milltown	0.0 (0.1)	0	LY 248	Leannan	0.0 (0.1)	0
KY 112	Feoghanagh	0.0 (0.0)	0	LY 249	Swilly	0.0 (0.1)	0
KY 117	TraleeLee	0.0 (0.2)	0	LY 253	Crana	0.0 (0.2)	0
LK 119	Feale	0.0 (0.2)	0	-	Northern Ireland	0.0 (0.2)	0
LK 120	Galey	0.5 (0.5)	1	-	Aqaugen	0.0 (0.0)	0
LK 126	Maigue	0.0 (0.0)	0	-	Fanad	0.0 (0.0)	0
LK 128	Mulcair	2.5 (1.3)	6	-	UK/France/Spain		7

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

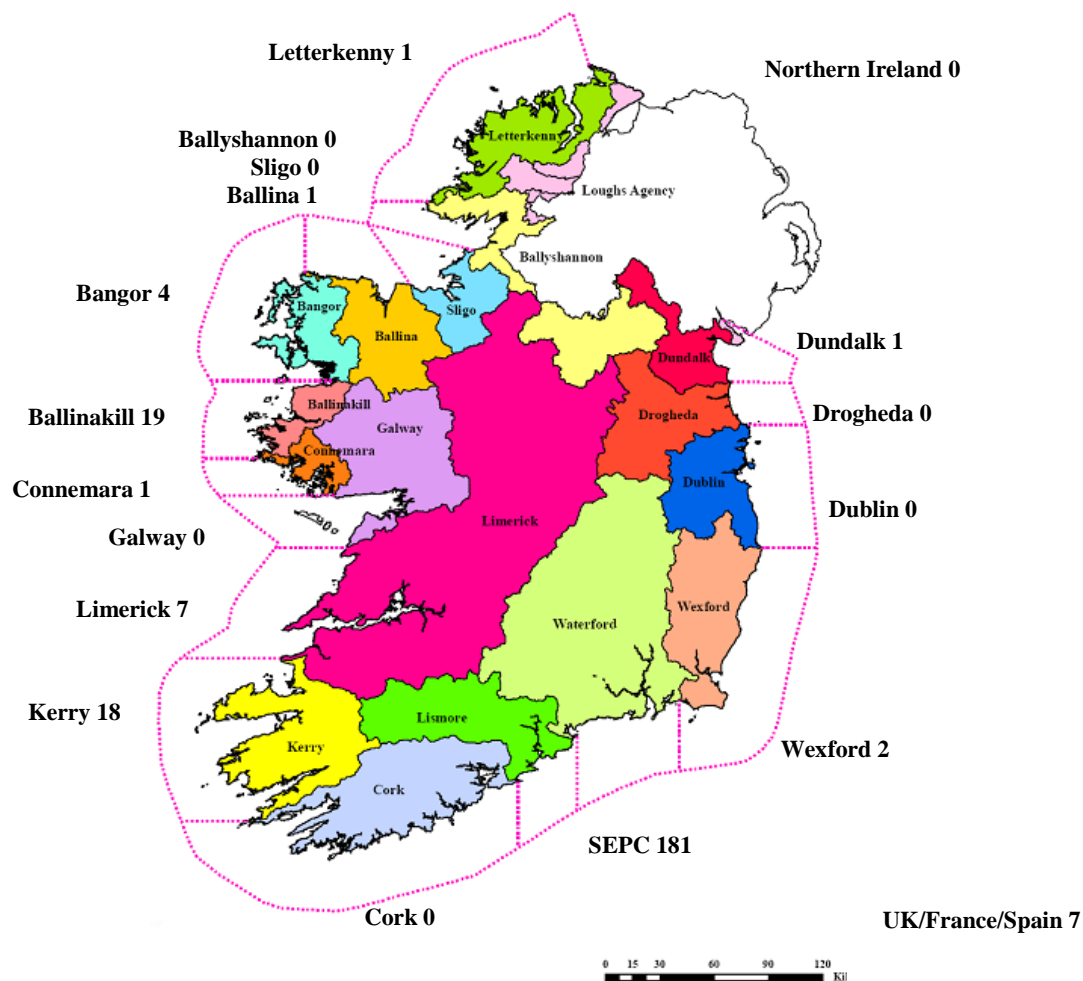
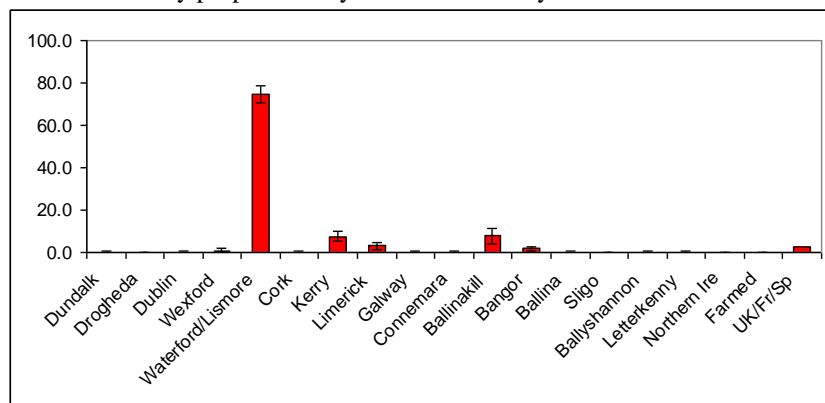
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.2 (0.5)	1
Drogheda	0.0 (0.1)	0
Dublin	0.1 (0.3)	0
Wexford	0.7 (1.3)	2
Waterford/Lismore	75.0 (4.0)	181
Cork	0.2 (0.5)	0
Kerry	7.6 (2.5)	18
Limerick	3.0 (1.4)	7
Galway	0.2 (0.5)	0
Connemara	0.2 (0.6)	1
Ballinakill	7.7 (3.4)	19
Bangor	1.8 (1.0)	4
Ballina	0.3 (0.6)	1
Sligo	0.0 (0.1)	0
Ballyshannon	0.1 (0.3)	0
Letterkenny	0.3 (0.5)	1
Northern Ireland	0.0 (0.2)	0
Farmed Strains	0.0 (0.1)	0
UK/France/Spain		7

Lismore drift nets 2005 (n = 242)

Estimated fishery proportions by district or country



Waterford drift nets 2006

Number screened = 320

Number of fish identified as being from UK/France/Spain = 20

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 286

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 94.5% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.1)	0	GY 145	Kilcogan	0.0 (0.0)	0
DK 4	Fane	0.0 (0.0)	0	GY 147	Corrib	0.0 (0.1)	0
DK 5	Glyde	0.0 (0.1)	0	GY 149	Owenboliska	0.0 (0.0)	0
DK 6	Dee	0.0 (0.3)	0	CN 152	Cashla	0.0 (0.1)	0
DR 8	Boyne	0.0 (0.2)	0	CN 155	Screebe	0.0 (0.1)	0
DB 15	Liffey	0.0 (0.0)	0	CN 161	Owenmore	0.0 (0.1)	0
DB 18	Dargle	1.1 (1.2)	3	BK 166	Dawros	0.0 (0.0)	0
DB 21	Vartry	0.1 (0.4)	0	BK 167	Culfin	0.0 (0.1)	0
WX 26	Avoca	0.0 (0.1)	0	BK 168	Erriff	0.1 (0.3)	0
WX 31	Slaney	2.1 (3.3)	6	BK 169	Bundorragha	0.0 (0.0)	0
WD/LS*	SEPC	86.9 (3.9)	265	BK 172	Bunowen	0.0 (0.1)	0
CK 66	Lee	0.1 (0.3)	0	BG 178	Newport	0.0 (0.0)	0
CK 69	Bandon	0.1 (0.4)	0	BG 179	Srahmore	0.0 (0.0)	0
CK 72	Ilen	0.0 (0.1)	0	BG 185	Owenduff	0.0 (0.1)	0
CK 78	Owvane	0.0 (0.1)	0	BG 186	Owenmore	0.0 (0.1)	0
CK 80	Glengariff	0.0 (0.0)	0	BA 194	Cloonaghmore	0.0 (0.0)	0
CK 81	Adrigole	0.0 (0.0)	0	BA 195	Moy	0.0 (0.1)	0
KY 84	Croanshagh	0.0 (0.0)	0	BA 196	Brusna	0.0 (0.1)	0
KY 85	Owenshagh	0.0 (0.0)	0	BA 200	Easkey	0.0 (0.0)	0
KY 86	Cloonee	0.0 (0.0)	0	SO 202	Ballysadare	0.0 (0.0)	0
KY 87	Sheen	0.0 (0.0)	0	SO 203	Garvogue	0.0 (0.0)	0
KY 88	Roughty	0.0 (0.0)	0	BS 208	Duff	0.0 (0.1)	0
KY 89	Finnihey	0.0 (0.0)	0	BS 209	Drowes	0.0 (0.0)	0
KY 90	KerryBlackwater	0.0 (0.1)	0	BS 210	Erne	0.3 (0.6)	1
KY 92	Sneem	0.0 (0.0)	0	BS 211	Abbey	0.0 (0.1)	0
KY 93	Owreagh	0.0 (0.0)	0	BS 213	Laghy	0.0 (0.0)	0
KY 97	Currane	0.0 (0.1)	0	BS 214	Eske	0.0 (0.0)	0
KY 98	Inny	0.0 (0.0)	0	BS 215	Eany	0.0 (0.0)	0
KY 102	Ferta	0.0 (0.0)	0	BS 219	Glen	0.0 (0.0)	0
KY 103	Behy	0.0 (0.0)	0	BS 220	Owenwee	0.0 (0.0)	0
KY 104	Caragh	0.2 (0.5)	1	LY 223	Owenea	0.0 (0.0)	0
KY 106	Laune	1.3 (1.1)	4	LY 225	Gweebarra	0.0 (0.0)	0
KY 107	Maine	0.0 (0.1)	0	LY 228	Gweedore	0.0 (0.0)	0
KY 108	Emlagh	0.0 (0.0)	0	LY 229	Clady	0.0 (0.0)	0
KY 109	Owenascaul	0.0 (0.0)	0	LY 240	Lackagh	0.0 (0.0)	0
KY 111	Milltown	0.0 (0.1)	0	LY 248	Leannan	0.0 (0.0)	0
KY 112	Feoghanagh	0.0 (0.0)	0	LY 249	Swilly	0.0 (0.0)	0
KY 117	TraleeLee	0.0 (0.0)	0	LY 253	Crana	0.0 (0.0)	0
LK 119	Feale	0.0 (0.1)	0	-	Northern Ireland	0.0 (0.1)	0
LK 120	Galey	0.1 (0.3)	0	-	Aqaugen	0.0 (0.0)	0
LK 126	Maigue	0.0 (0.0)	0	-	Fanad	0.0 (0.0)	0
LK 128	Mulcair	0.7 (1.0)	2	-	UK/France/Spain		20

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

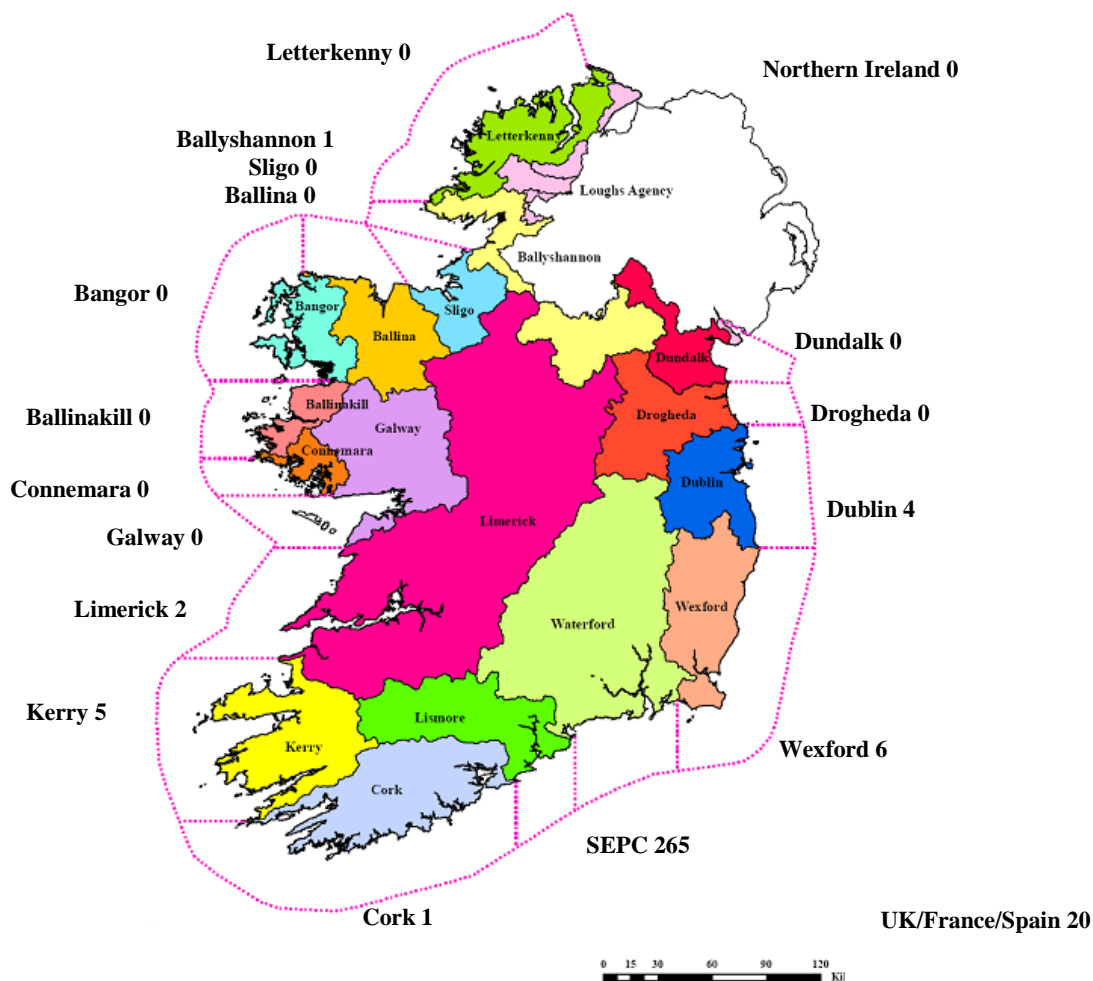
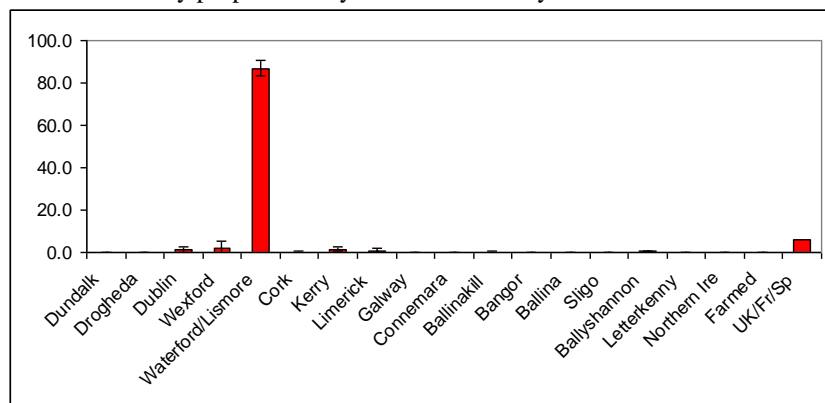
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

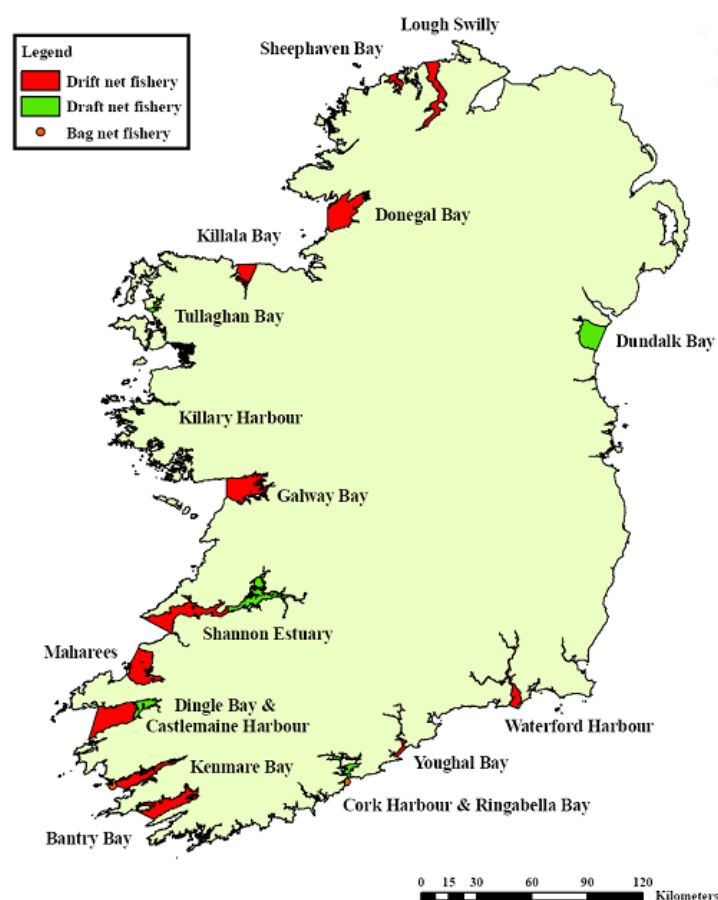
District	MSA (SD)	#
Dundalk	0.1 (0.3)	0
Drogheda	0.0 (0.2)	0
Dublin	1.2 (1.2)	4
Wexford	2.1 (3.3)	6
Waterford/Lismore	87.0 (3.9)	265
Cork	0.2 (0.5)	1
Kerry	1.6 (1.2)	5
Limerick	0.8 (1.1)	2
Galway	0.0 (0.1)	0
Connemara	0.0 (0.1)	0
Ballinakill	0.1 (0.3)	0
Bangor	0.0 (0.1)	0
Ballina	0.0 (0.1)	0
Sligo	0.0 (0.1)	0
Ballyshannon	0.4 (0.6)	1
Letterkenny	0.0 (0.1)	0
Northern Ireland	0.0 (0.1)	0
Farmed Strains	0.0 (0.0)	0
UK/France/Spain		20

Waterford drift nets 2006 (n = 306)

Estimated fishery proportions by district or country



Inshore Fisheries



Numbers of in-shore fishery-caught salmon screened

Location	Year	No. screened
Lough Swilly drift nets	2006	54
Sheephaven Bay drift nets	2006	121
Donegal Bay drift nets	2006	32
Killalla Bay drift nets	2006	448
Tullaghan Bay draft nets	2006	126
Outer Killybegs drift nets	2006	39
Inner Killybegs draft nets	2006	116
Galway Bay drift nets	2006	303
Outer Shannon drift nets	2006	79
Inner Shannon draft nets	2006	71
Maharees drift nets	2004	284
Dingle Bay drift nets	2006	241
Castlemaine draft nets	2006	233
Kenmare Lambs Head fixed bag nets	2006	86
Kenmare Sanctuary drift nets	2006	71
Bantry Bay drift nets	2006	45
Cork Harbour Ringabella fixed bag nets	2006	28
Cork Harbour draft nets	2006	32
Youghal drift nets	2006	115
Waterford Harbour drift nets	2006	140
Dundalk Bay drift nets	2006	85
Foyle Fishery drift nets	2006	72

Lough Swilly drift nets 2006

Number screened = 54

Number of fish identified as being from UK/France/Spain = 1

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 52

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 65.5% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	2.0 (3.5)	1	GY 145	Kilcogan	0.0 (0.1)	0
DK 4	Fane	0.0 (0.2)	0	GY 147	Corrib	0.5 (1.5)	0
DK 5	Glyde	0.0 (0.1)	0	GY 149	Owenboliska	0.0 (0.2)	0
DK 6	Dee	0.0 (0.2)	0	CN 152	Cashla	2.5 (3.7)	1
DR 8	Boyne	2.2 (2.8)	1	CN 155	Screebe	0.0 (0.2)	0
DB 15	Liffey	0.0 (0.2)	0	CN 161	Owenmore	1.1 (2.0)	1
DB 18	Dargle	0.1 (0.5)	0	BK 166	Dawros	0.1 (0.5)	0
DB 21	Vartry	0.0 (0.2)	0	BK 167	Culfin	0.0 (0.3)	0
WX 26	Avoca	0.1 (0.5)	0	BK 168	Erriff	0.2 (1.1)	0
WX 31	Slaney	0.1 (0.3)	0	BK 169	Bundorragha	0.1 (0.5)	0
WD/LS*	SEPC	23.7 (9.7)	13	BK 172	Bunowen	4.3 (5.0)	2
CK 66	Lee	0.0 (0.2)	0	BG 178	Newport	0.0 (0.2)	0
CK 69	Bandon	2.7 (3.5)	1	BG 179	Srahmore	0.1 (0.5)	0
CK 72	Ilen	0.0 (0.2)	0	BG 185	Owenduff	0.1 (0.6)	0
CK 78	Owvane	0.0 (0.2)	0	BG 186	Owenmore	1.2 (2.8)	1
CK 80	Glengariff	0.0 (0.1)	0	BA 194	Cloonaghmore	4.9 (3.1)	3
CK 81	Adrigole	0.0 (0.2)	0	BA 195	Moy	6.5 (6.9)	3
KY 84	Croanshagh	0.0 (0.2)	0	BA 196	Brusna	0.0 (0.2)	0
KY 85	Owenshagh	0.0 (0.1)	0	BA 200	Easkey	0.7 (1.9)	0
KY 86	Cloonee	0.0 (0.1)	0	SO 202	Ballysadare	0.0 (0.2)	0
KY 87	Sheen	0.0 (0.1)	0	SO 203	Garvogue	0.0 (0.1)	0
KY 88	Roughty	0.0 (0.2)	0	BS 208	Duff	0.0 (0.3)	0
KY 89	Finnihiy	0.0 (0.2)	0	BS 209	Drowes	0.1 (0.6)	0
KY 90	KerryBlackwater	0.0 (0.1)	0	BS 210	Erne	0.0 (0.3)	0
KY 92	Sneem	0.0 (0.2)	0	BS 211	Abbey	0.0 (0.2)	0
KY 93	Owreagh	4.6 (3.0)	2	BS 213	Laghy	0.0 (0.2)	0
KY 97	Currane	0.0 (0.2)	0	BS 214	Eske	0.0 (0.1)	0
KY 98	Inny	0.0 (0.2)	0	BS 215	Eany	0.0 (0.1)	0
KY 102	Ferta	0.0 (0.2)	0	BS 219	Glen	0.0 (0.2)	0
KY 103	Behy	0.0 (0.1)	0	BS 220	Owenwee	4.2 (4.6)	2
KY 104	Caragh	0.1 (0.4)	0	LY 223	Owenea	0.7 (2.3)	0
KY 106	Laune	0.8 (2.4)	0	LY 225	Gweebarra	0.0 (0.1)	0
KY 107	Maine	0.0 (0.3)	0	LY 228	Gweedore	0.0 (0.1)	0
KY 108	Emlagh	0.0 (0.1)	0	LY 229	Clady	0.0 (0.4)	0
KY 109	Owenascaul	0.0 (0.2)	0	LY 240	Lackagh	0.1 (0.6)	0
KY 111	Milltown	0.0 (0.2)	0	LY 248	Leannan	0.1 (0.7)	0
KY 112	Feoghanagh	0.0 (0.1)	0	LY 249	Swilly	3.2 (4.9)	2
KY 117	TraleeLee	0.1 (0.5)	0	LY 253	Crana	24.0 (7.5)	13
LK 119	Feale	0.0 (0.3)	0	-	Northern Ireland	4.7 (5.6)	2
LK 120	Galey	0.0 (0.2)	0	-	Aqaugen	0.0 (0.2)	0
LK 126	Maigue	0.0 (0.1)	0	-	Fanad	1.8 (2.2)	1
LK 128	Mulcair	0.0 (0.2)	0	-	UK/France/Spain		1

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

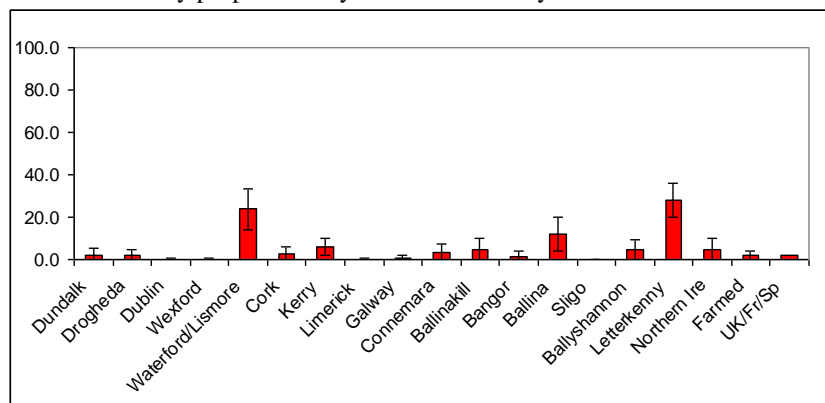
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	2.0 (3.5)	1
Drogheda	2.2 (2.8)	1
Dublin	0.1 (0.6)	0
Wexford	0.1 (0.6)	0
Waterford/Lismore	23.7 (9.7)	13
Cork	2.8 (3.5)	1
Kerry	5.8 (3.9)	3
Limerick	0.1 (0.5)	0
Galway	0.5 (1.6)	0
Connemara	3.6 (3.8)	2
Ballinakill	4.7 (5.2)	2
Bangor	1.3 (2.9)	1
Ballina	12.0 (8.0)	6
Sligo	0.0 (0.3)	0
Ballyshannon	4.5 (4.7)	2
Letterkenny	28.3 (8.1)	15
Northern Ireland	4.7 (5.6)	2
Farmed Strains	1.8 (2.2)	1
UK/France/Spain		1

Lough Swilly drift nets 2006 (n = 53)

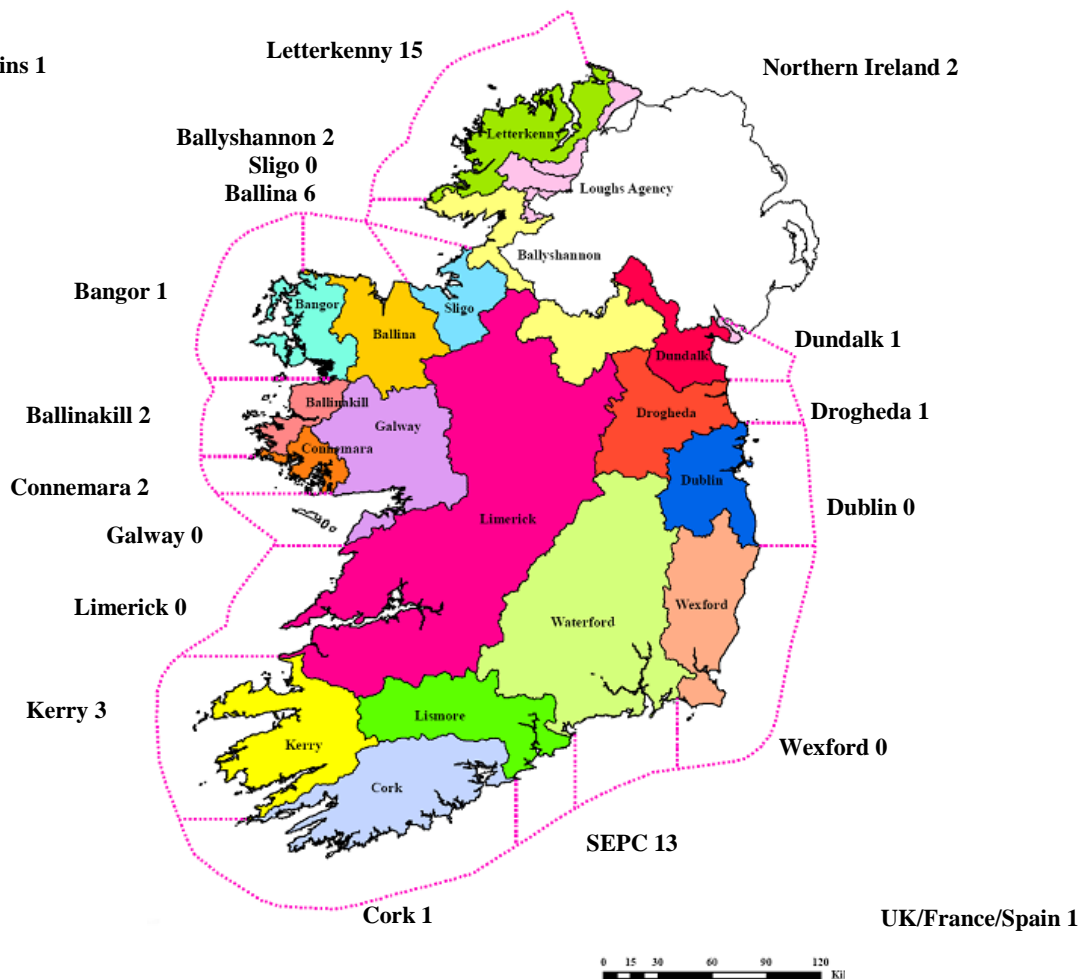
Estimated fishery proportions by district or country



Farmed strains 1

Letterkenny 15

Northern Ireland 2



Sheephaven Bay drift nets 2006

Number screened = 121

Number of fish identified as being from UK/France/Spain = 1

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 113

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 90.2% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.3)	0	GY 145	Kilcogan	0.0 (0.1)	0
DK 4	Fane	0.0 (0.2)	0	GY 147	Corrib	0.1 (0.2)	0
DK 5	Glyde	0.0 (0.1)	0	GY 149	Owenboliska	0.0 (0.1)	0
DK 6	Dee	0.0 (0.2)	0	CN 152	Cashla	0.0 (0.1)	0
DR 8	Boyne	0.1 (0.3)	0	CN 155	Screebe	0.0 (0.1)	0
DB 15	Liffey	0.0 (0.1)	0	CN 161	Owenmore	0.0 (0.2)	0
DB 18	Dargle	0.0 (0.1)	0	BK 166	Dawros	2.8 (2.4)	3
DB 21	Vartry	0.0 (0.3)	0	BK 167	Culfin	0.1 (0.4)	0
WX 26	Avoca	0.4 (1.4)	0	BK 168	Erriff	0.1 (0.7)	0
WX 31	Slaney	0.1 (0.3)	0	BK 169	Bundorragha	0.0 (0.3)	0
WD/LS*	SEPC	20.4 (5.4)	23	BK 172	Bunowen	5.9 (3.9)	7
CK 66	Lee	0.0 (0.2)	0	BG 178	Newport	0.0 (0.1)	0
CK 69	Bandon	0.0 (0.3)	0	BG 179	Srahmore	5.1 (2.2)	6
CK 72	Ilen	0.0 (0.1)	0	BG 185	Owenduff	1.3 (1.4)	1
CK 78	Owvane	0.0 (0.1)	0	BG 186	Owenmore	4.8 (3.9)	5
CK 80	Glengariff	1.0 (1.0)	1	BA 194	Cloonaghmore	0.0 (0.1)	0
CK 81	Adrigole	0.0 (0.2)	0	BA 195	Moy	24.0 (6.0)	27
KY 84	Croanshagh	0.0 (0.1)	0	BA 196	Brusna	0.0 (0.2)	0
KY 85	Owenshagh	0.0 (0.1)	0	BA 200	Easkey	0.0 (0.1)	0
KY 86	Cloonee	0.1 (0.4)	0	SO 202	Ballysadare	2.2 (1.5)	3
KY 87	Sheen	0.0 (0.1)	0	SO 203	Garvogue	0.0 (0.1)	0
KY 88	Roughty	0.0 (0.3)	0	BS 208	Duff	0.0 (0.1)	0
KY 89	Finnihey	0.0 (0.1)	0	BS 209	Drowes	0.0 (0.2)	0
KY 90	KerryBlackwater	0.0 (0.1)	0	BS 210	Erne	0.3 (1.1)	0
KY 92	Sneem	0.0 (0.1)	0	BS 211	Abbey	0.1 (0.6)	0
KY 93	Owreagh	0.0 (0.1)	0	BS 213	Laghy	0.0 (0.1)	0
KY 97	Currane	0.0 (0.1)	0	BS 214	Eske	0.3 (0.7)	0
KY 98	Inny	0.5 (1.1)	1	BS 215	Eany	0.0 (0.1)	0
KY 102	Ferta	0.0 (0.2)	0	BS 219	Glen	0.0 (0.2)	0
KY 103	Behy	0.0 (0.1)	0	BS 220	Owenwee	0.0 (0.2)	0
KY 104	Caragh	0.1 (0.4)	0	LY 223	Owenea	3.7 (3.5)	4
KY 106	Laune	6.9 (3.4)	8	LY 225	Gweebarra	1.9 (1.4)	2
KY 107	Maine	0.5 (1.1)	1	LY 228	Gweedore	0.4 (0.7)	0
KY 108	Emlagh	0.0 (0.1)	0	LY 229	Clady	7.0 (2.6)	8
KY 109	Owenascaul	0.0 (0.1)	0	LY 240	Lackagh	2.4 (1.9)	3
KY 111	Milltown	0.0 (0.3)	0	LY 248	Leannan	0.0 (0.1)	0
KY 112	Feoghanagh	0.0 (0.1)	0	LY 249	Swilly	0.0 (0.1)	0
KY 117	TraleeLee	0.1 (0.5)	0	LY 253	Crana	0.4 (0.9)	0
LK 119	Feale	2.3 (1.9)	3	-	Northern Ireland	1.8 (2.0)	2
LK 120	Galey	0.0 (0.1)	0	-	Aqaugen	0.0 (0.1)	0
LK 126	Maigue	0.0 (0.1)	0	-	Fanad	0.0 (0.1)	0
LK 128	Mulcair	1.2 (1.9)	1	-	UK/France/Spain		1

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

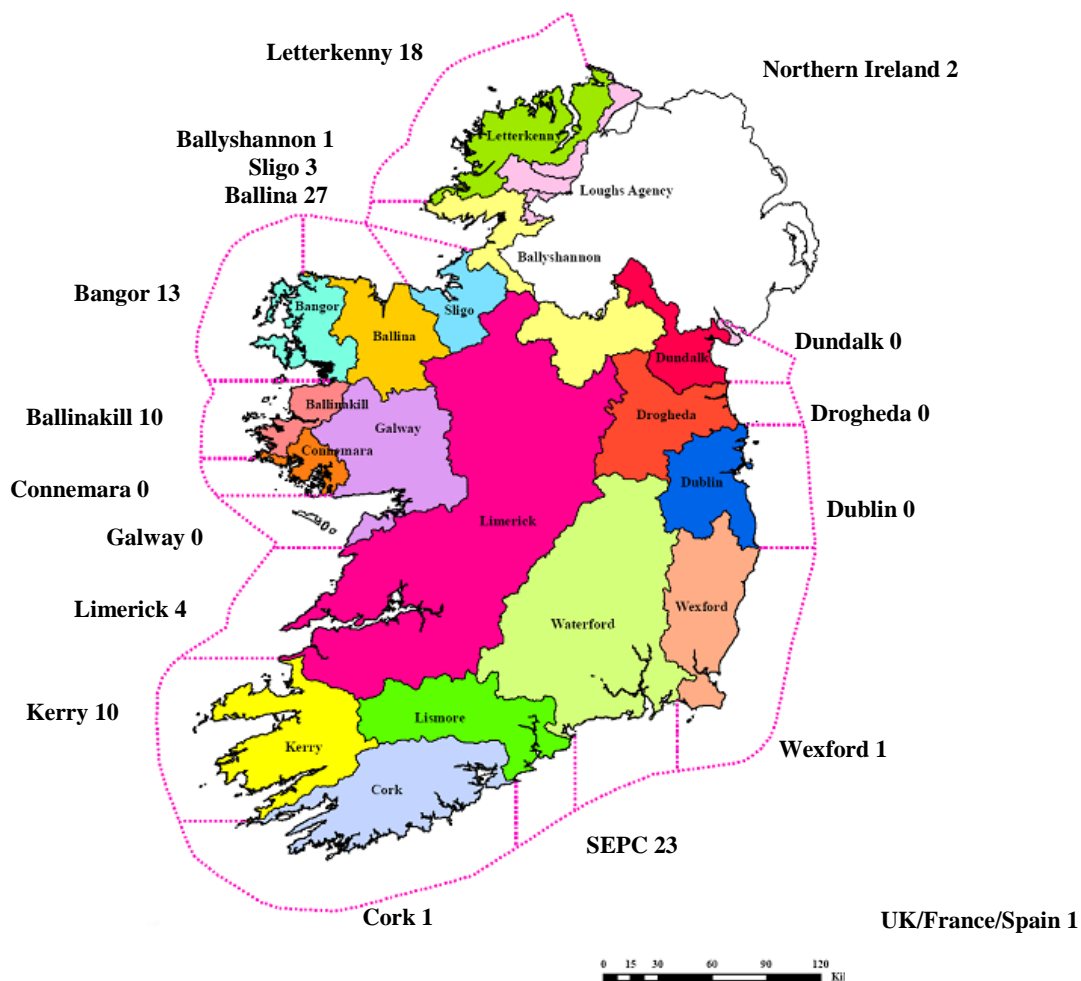
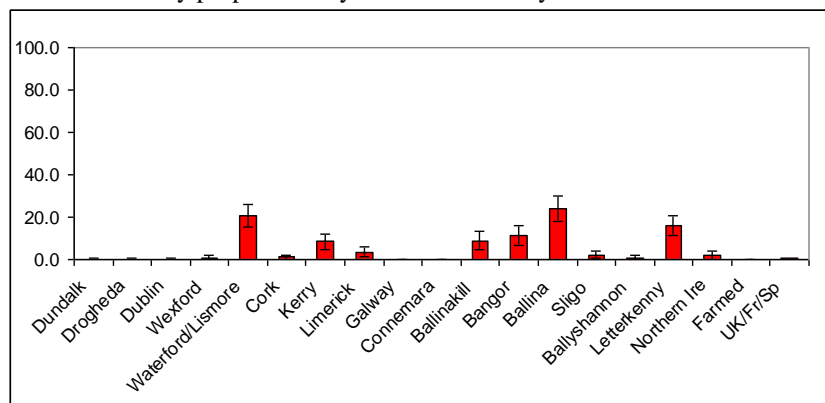
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.1 (0.4)	0
Drogheda	0.1 (0.3)	0
Dublin	0.1 (0.4)	0
Wexford	0.4 (1.4)	1
Waterford/Lismore	20.5 (5.4)	23
Cork	1.1 (1.1)	1
Kerry	8.4 (3.7)	10
Limerick	3.6 (2.6)	4
Galway	0.1 (0.2)	0
Connemara	0.0 (0.2)	0
Ballinakill	8.9 (4.3)	10
Bangor	11.2 (4.5)	13
Ballina	24.0 (6.0)	27
Sligo	2.2 (1.5)	3
Ballyshannon	0.8 (1.5)	1
Letterkenny	15.9 (4.6)	18
Northern Ireland	1.8 (2.0)	2
Farmed Strains	0.0 (0.1)	0
UK/France/Spain		1

Sheephaven Bay drift nets 2006 (n = 114)

Estimated fishery proportions by district or country



Donegal Bay drift nets 2006

Number screened = 43

Number of fish identified as being from UK/France/Spain = 2

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 40

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 76.3% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.2)	0	GY 145	Kilcogan	0.0 (0.2)	0
DK 4	Fane	0.0 (0.2)	0	GY 147	Corrib	0.2 (0.7)	0
DK 5	Glyde	0.0 (0.2)	0	GY 149	Owenboliska	0.0 (0.3)	0
DK 6	Dee	0.1 (0.6)	0	CN 152	Cashla	0.0 (0.3)	0
DR 8	Boyne	0.1 (0.5)	0	CN 155	Screebe	0.5 (1.4)	0
DB 15	Liffey	0.0 (0.2)	0	CN 161	Owenmore	0.1 (0.3)	0
DB 18	Dargle	1.0 (2.7)	0	BK 166	Dawros	0.1 (0.4)	0
DB 21	Vartry	0.0 (0.2)	0	BK 167	Culfin	0.0 (0.2)	0
WX 26	Avoca	0.0 (0.2)	0	BK 168	Erriff	0.2 (0.9)	0
WX 31	Slaney	0.1 (0.3)	0	BK 169	Bundorragha	1.3 (3.2)	1
WD/LS*	SEPC	11.2 (5.9)	5	BK 172	Bunowen	0.1 (0.8)	0
CK 66	Lee	0.0 (0.3)	0	BG 178	Newport	0.0 (0.3)	0
CK 69	Bandon	0.1 (0.5)	0	BG 179	Srahmore	0.2 (1.2)	0
CK 72	Ilen	0.1 (0.6)	0	BG 185	Owenduff	5.0 (3.5)	2
CK 78	Owvane	0.0 (0.3)	0	BG 186	Owenmore	2.2 (4.5)	1
CK 80	Glengariff	0.0 (0.3)	0	BA 194	Cloonaghmore	0.3 (1.3)	0
CK 81	Adrigole	0.0 (0.2)	0	BA 195	Moy	16.1 (7.5)	7
KY 84	Croanshagh	0.0 (0.2)	0	BA 196	Brusna	4.4 (5.2)	2
KY 85	Owenshagh	0.0 (0.3)	0	BA 200	Easkey	5.4 (4.7)	2
KY 86	Cloonee	0.0 (0.2)	0	SO 202	Ballysadare	0.0 (0.3)	0
KY 87	Sheen	0.0 (0.3)	0	SO 203	Garvogue	0.0 (0.2)	0
KY 88	Roughty	0.0 (0.3)	0	BS 208	Duff	6.7 (3.9)	3
KY 89	Finnihy	0.0 (0.2)	0	BS 209	Drowes	10.0 (5.2)	4
KY 90	KerryBlackwater	0.1 (0.5)	0	BS 210	Erne	3.8 (3.9)	2
KY 92	Sneem	0.0 (0.4)	0	BS 211	Abbey	0.0 (0.2)	0
KY 93	Owreagh	0.0 (0.2)	0	BS 213	Laghy	0.0 (0.3)	0
KY 97	Currane	0.0 (0.3)	0	BS 214	Eske	0.0 (0.2)	0
KY 98	Inny	0.0 (0.4)	0	BS 215	Eany	2.3 (3.6)	1
KY 102	Ferta	0.0 (0.3)	0	BS 219	Glen	0.0 (0.2)	0
KY 103	Behy	0.0 (0.2)	0	BS 220	Owenwee	0.0 (0.4)	0
KY 104	Caragh	0.6 (2.2)	0	LY 223	Owenea	0.0 (0.3)	0
KY 106	Laune	10.3 (6.8)	4	LY 225	Gweebarra	0.0 (0.3)	0
KY 107	Maine	0.1 (0.5)	0	LY 228	Gweedore	0.0 (0.2)	0
KY 108	Emlagh	0.0 (0.2)	0	LY 229	Clady	0.0 (0.4)	0
KY 109	Owenascaul	0.0 (0.3)	0	LY 240	Lackagh	0.0 (0.2)	0
KY 111	Milltown	0.0 (0.3)	0	LY 248	Leannan	0.0 (0.2)	0
KY 112	Feoghanagh	3.6 (3.6)	2	LY 249	Swilly	0.0 (0.4)	0
KY 117	TraleeLee	0.0 (0.2)	0	LY 253	Crana	0.0 (0.2)	0
LK 119	Feale	7.4 (4.6)	3	-	Northern Ireland	1.0 (2.1)	0
LK 120	Galey	0.0 (0.2)	0	-	Aqaugen	0.0 (0.2)	0
LK 126	Maigue	0.0 (0.2)	0	-	Fanad	0.0 (0.2)	0
LK 128	Mulcair	0.2 (1.1)	0	-	UK/France/Spain		2

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

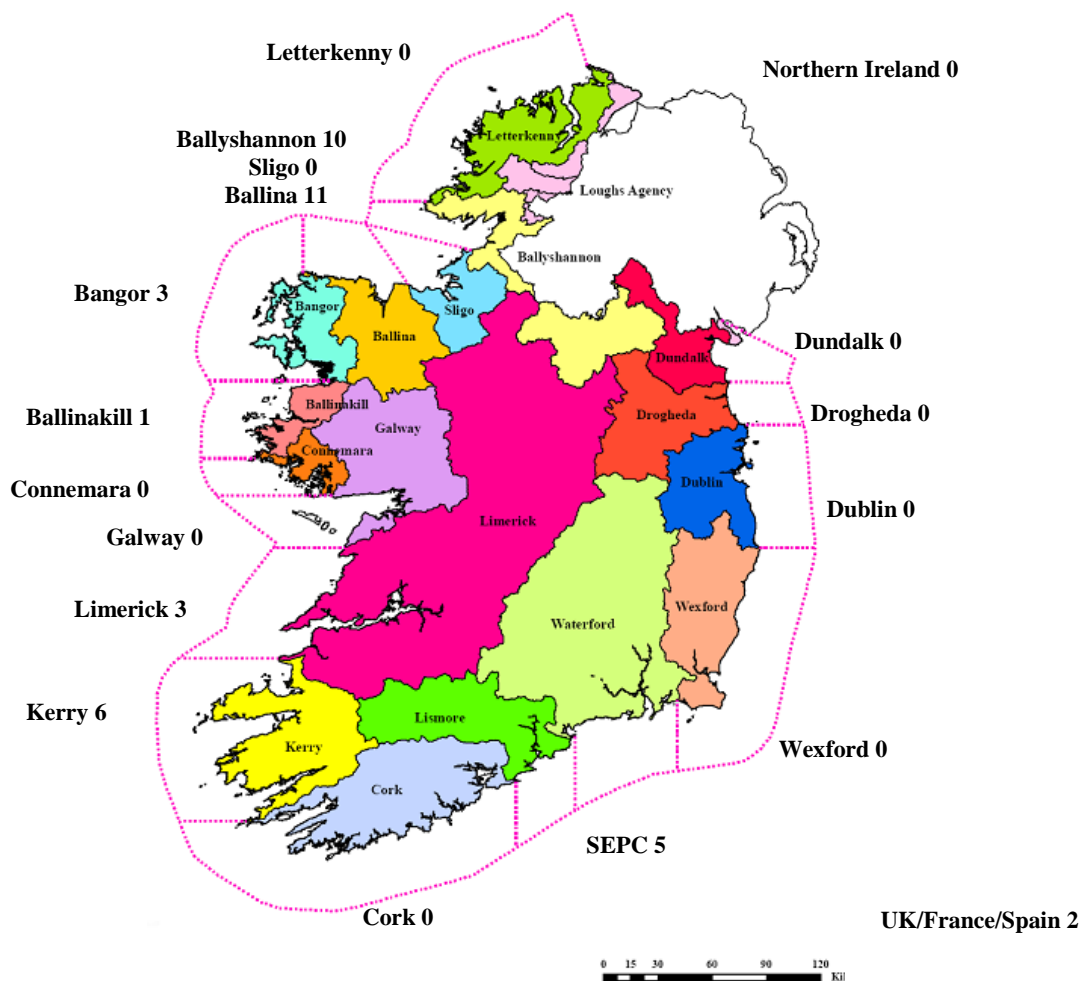
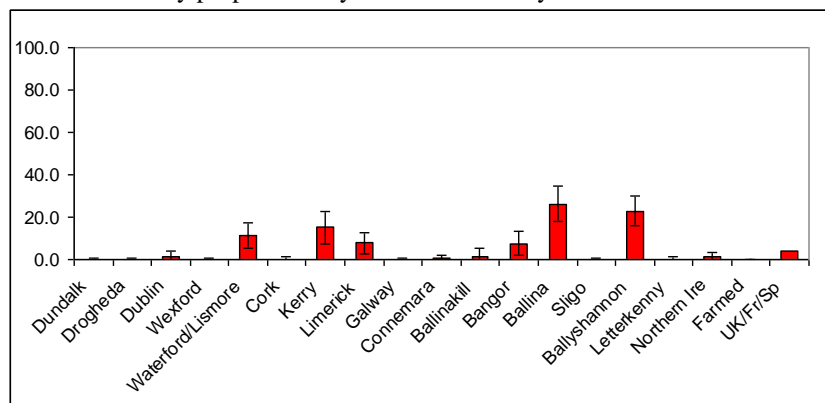
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.1 (0.7)	0
Drogheda	0.1 (0.5)	0
Dublin	1.0 (2.7)	0
Wexford	0.1 (0.4)	0
Waterford/Lismore	11.2 (5.9)	5
Cork	0.2 (1.0)	0
Kerry	15.0 (7.7)	6
Limerick	7.7 (4.7)	3
Galway	0.2 (0.8)	0
Connemara	0.6 (1.5)	0
Ballinakill	1.7 (3.4)	1
Bangor	7.4 (5.6)	3
Ballina	26.2 (8.4)	11
Sligo	0.1 (0.3)	0
Ballyshannon	23.0 (7.2)	10
Letterkenny	0.2 (0.8)	0
Northern Ireland	1.0 (2.1)	0
Farmed Strains	0.0 (0.3)	0
UK/France/Spain		2

Donegal Bay drift nets 2006 (n = 41)

Estimated fishery proportions by district or country



Killalla Bay drift nets 2006

Number screened = 448

Number of fish identified as being from UK/France/Spain = 10

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 365

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 91.4% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.1)	0	GY 145	Kilcogan	1.3 (0.7)	5
DK 4	Fane	0.0 (0.0)	0	GY 147	Corrib	3.2 (1.2)	12
DK 5	Glyde	0.0 (0.0)	0	GY 149	Owenboliska	0.0 (0.0)	0
DK 6	Dee	0.1 (0.2)	0	CN 152	Cashla	0.0 (0.1)	0
DR 8	Boyne	0.0 (0.1)	0	CN 155	Screebe	1.5 (0.7)	6
DB 15	Liffey	0.0 (0.0)	0	CN 161	Owenmore	0.0 (0.0)	0
DB 18	Dargle	1.0 (1.2)	4	BK 166	Dawros	0.0 (0.0)	0
DB 21	Vartry	0.0 (0.1)	0	BK 167	Culfin	0.0 (0.0)	0
WX 26	Avoca	0.1 (0.3)	0	BK 168	Erriff	0.2 (0.6)	1
WX 31	Slaney	0.9 (0.9)	3	BK 169	Bundorragha	0.1 (0.3)	0
WD/LS*	SEPC	8.3 (2.2)	31	BK 172	Bunowen	0.1 (0.5)	0
CK 66	Lee	0.8 (0.9)	3	BG 178	Newport	0.1 (0.3)	0
CK 69	Bandon	1.1 (1.2)	4	BG 179	Srahmore	4.0 (1.1)	15
CK 72	Ilen	1.4 (1.1)	5	BG 185	Owenduff	0.4 (0.6)	2
CK 78	Owvane	0.0 (0.1)	0	BG 186	Owenmore	0.4 (0.8)	2
CK 80	Glengariff	1.3 (0.6)	5	BA 194	Cloonaghmore	0.1 (0.3)	1
CK 81	Adrigole	0.0 (0.0)	0	BA 195	Moy	50.3 (3.2)	188
KY 84	Croanshagh	0.0 (0.0)	0	BA 196	Brusna	4.4 (1.8)	16
KY 85	Owenshagh	0.0 (0.0)	0	BA 200	Easkey	4.3 (1.3)	16
KY 86	Cloonee	0.0 (0.0)	0	SO 202	Ballysadare	4.1 (1.1)	15
KY 87	Sheen	0.0 (0.1)	0	SO 203	Garvogue	0.0 (0.2)	0
KY 88	Roughy	0.0 (0.0)	0	BS 208	Duff	1.2 (0.7)	4
KY 89	Finnihiy	0.0 (0.0)	0	BS 209	Drowes	1.1 (0.7)	4
KY 90	KerryBlackwater	0.0 (0.0)	0	BS 210	Erne	0.0 (0.1)	0
KY 92	Sneem	0.0 (0.0)	0	BS 211	Abbey	0.0 (0.0)	0
KY 93	Owreagh	0.0 (0.0)	0	BS 213	Laghy	0.0 (0.1)	0
KY 97	Currane	0.0 (0.0)	0	BS 214	Eske	0.0 (0.0)	0
KY 98	Inny	0.0 (0.0)	0	BS 215	Eany	0.7 (0.8)	3
KY 102	Ferta	0.0 (0.0)	0	BS 219	Glen	0.3 (0.4)	1
KY 103	Behy	0.0 (0.0)	0	BS 220	Owenwee	0.0 (0.0)	0
KY 104	Caragh	0.0 (0.1)	0	LY 223	Owenea	1.9 (1.3)	7
KY 106	Laune	0.1 (0.3)	0	LY 225	Gweebarra	0.0 (0.1)	0
KY 107	Maine	0.1 (0.3)	0	LY 228	Gweedore	0.0 (0.0)	0
KY 108	Emlagh	0.0 (0.0)	0	LY 229	Clady	0.0 (0.1)	0
KY 109	Owenascaul	0.0 (0.0)	0	LY 240	Lackagh	0.0 (0.0)	0
KY 111	Milltown	0.0 (0.0)	0	LY 248	Leannan	0.0 (0.0)	0
KY 112	Feoghanagh	0.0 (0.0)	0	LY 249	Swilly	0.0 (0.1)	0
KY 117	TraleeLee	0.0 (0.0)	0	LY 253	Crana	0.0 (0.1)	0
LK 119	Feale	0.9 (0.6)	3	-	Northern Ireland	0.0 (0.2)	0
LK 120	Galey	0.0 (0.1)	0	-	Aqaugen	0.0 (0.0)	0
LK 126	Maigue	0.0 (0.0)	0	-	Fanad	0.2 (0.3)	1
LK 128	Mulcair	1.2 (1.0)	5	-	UK/France/Spain		10

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

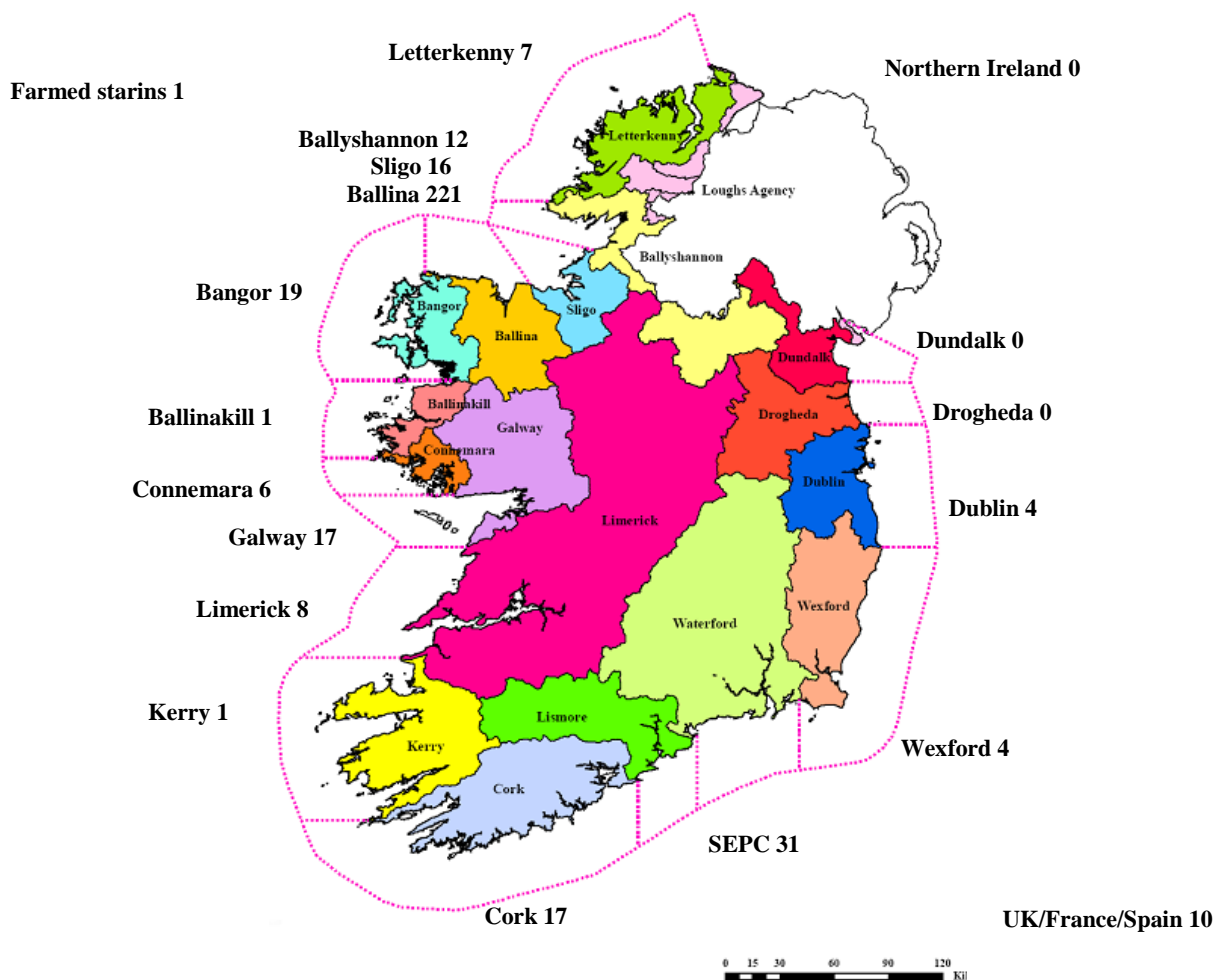
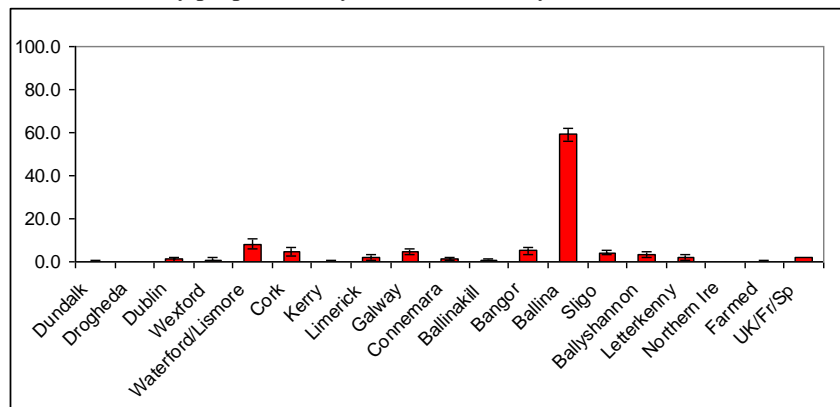
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.1 (0.3)	0
Drogheda	0.0 (0.1)	0
Dublin	1.0 (1.2)	4
Wexford	1.0 (1.0)	4
Waterford/Lismore	8.3 (2.2)	31
Cork	4.6 (1.7)	17
Kerry	0.2 (0.4)	1
Limerick	2.2 (1.2)	8
Galway	4.5 (1.3)	17
Connemara	1.5 (0.7)	6
Ballinakill	0.4 (0.8)	1
Bangor	5.0 (1.5)	19
Ballina	59.2 (3.1)	221
Sligo	4.2 (1.1)	16
Ballyshannon	3.3 (1.3)	12
Letterkenny	2.0 (1.3)	7
Northern Ireland	0.0 (0.2)	0
Farmed Strains	0.2 (0.3)	1
UK/France/Spain		10

Killalla Bay drift nets 2006 (n = 375)

Estimated fishery proportions by district or country



Tullaghan Bay draft nets 2006

Number screened = 126

Number of fish identified as being from UK/France/Spain = 0

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 109

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 90.4% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.1)	0	GY 145	Kilcogan	0.0 (0.1)	0
DK 4	Fane	0.0 (0.1)	0	GY 147	Corrib	0.1 (0.2)	0
DK 5	Glyde	0.0 (0.1)	0	GY 149	Owenboliska	0.0 (0.1)	0
DK 6	Dee	0.0 (0.1)	0	CN 152	Cashla	0.0 (0.1)	0
DR 8	Boyne	0.0 (0.2)	0	CN 155	Screebe	0.0 (0.1)	0
DB 15	Liffey	0.0 (0.1)	0	CN 161	Owenmore	0.0 (0.1)	0
DB 18	Dargle	0.0 (0.1)	0	BK 166	Dawros	0.0 (0.1)	0
DB 21	Vartry	0.0 (0.1)	0	BK 167	Culfin	0.0 (0.1)	0
WX 26	Avoca	0.0 (0.1)	0	BK 168	Erriff	0.0 (0.1)	0
WX 31	Slaney	0.0 (0.1)	0	BK 169	Bundorragha	0.0 (0.2)	0
WD/LS*	SEPC	0.2 (0.5)	0	BK 172	Bunowen	0.0 (0.1)	0
CK 66	Lee	0.0 (0.1)	0	BG 178	Newport	0.0 (0.3)	0
CK 69	Bandon	0.9 (1.6)	1	BG 179	Srahmore	1.1 (1.1)	1
CK 72	Ilen	0.0 (0.1)	0	BG 185	Owenduff	14.1 (3.9)	15
CK 78	Owvane	0.0 (0.1)	0	BG 186	Owenmore	76.3 (5.0)	83
CK 80	Glengariff	0.0 (0.1)	0	BA 194	Cloonaghmore	0.0 (0.1)	0
CK 81	Adrigole	0.0 (0.1)	0	BA 195	Moy	0.3 (0.9)	0
KY 84	Croanshagh	0.0 (0.1)	0	BA 196	Brusna	0.0 (0.2)	0
KY 85	Owenshagh	0.0 (0.1)	0	BA 200	Easkey	0.0 (0.1)	0
KY 86	Cloonee	0.0 (0.1)	0	SO 202	Ballysadare	0.0 (0.1)	0
KY 87	Sheen	0.0 (0.1)	0	SO 203	Garvogue	0.0 (0.1)	0
KY 88	Roughty	0.0 (0.1)	0	BS 208	Duff	0.0 (0.1)	0
KY 89	Finnihiy	0.0 (0.1)	0	BS 209	Drowes	0.0 (0.1)	0
KY 90	KerryBlackwater	0.0 (0.1)	0	BS 210	Erne	0.0 (0.1)	0
KY 92	Sneem	0.1 (0.5)	0	BS 211	Abbey	0.0 (0.1)	0
KY 93	Owreagh	0.0 (0.1)	0	BS 213	Laghy	0.1 (0.3)	0
KY 97	Currane	0.0 (0.1)	0	BS 214	Eske	0.0 (0.1)	0
KY 98	Inny	1.3 (2.3)	1	BS 215	Eany	0.4 (1.3)	0
KY 102	Ferta	2.5 (2.6)	3	BS 219	Glen	0.0 (0.3)	0
KY 103	Behy	0.0 (0.1)	0	BS 220	Owenwee	0.0 (0.1)	0
KY 104	Caragh	0.0 (0.1)	0	LY 223	Owenea	0.0 (0.1)	0
KY 106	Laune	0.1 (0.5)	0	LY 225	Gweebarra	0.0 (0.1)	0
KY 107	Maine	0.0 (0.2)	0	LY 228	Gweedore	0.0 (0.1)	0
KY 108	Emlagh	0.0 (0.1)	0	LY 229	Clady	0.0 (0.2)	0
KY 109	Owenascaul	0.0 (0.1)	0	LY 240	Lackagh	0.0 (0.1)	0
KY 111	Milltown	0.0 (0.1)	0	LY 248	Leannan	0.0 (0.1)	0
KY 112	Feoghanagh	0.0 (0.1)	0	LY 249	Swilly	0.9 (2.8)	1
KY 117	TraleeLee	0.7 (1.6)	1	LY 253	Crana	0.0 (0.1)	0
LK 119	Feale	0.0 (0.1)	0	-	Northern Ireland	0.0 (0.2)	0
LK 120	Galey	0.0 (0.1)	0	-	Aqaugen	0.0 (0.1)	0
LK 126	Maigue	0.0 (0.1)	0	-	Fanad	0.0 (0.1)	0
LK 128	Mulcair	0.0 (0.1)	0	-	UK/France/Spain		0

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

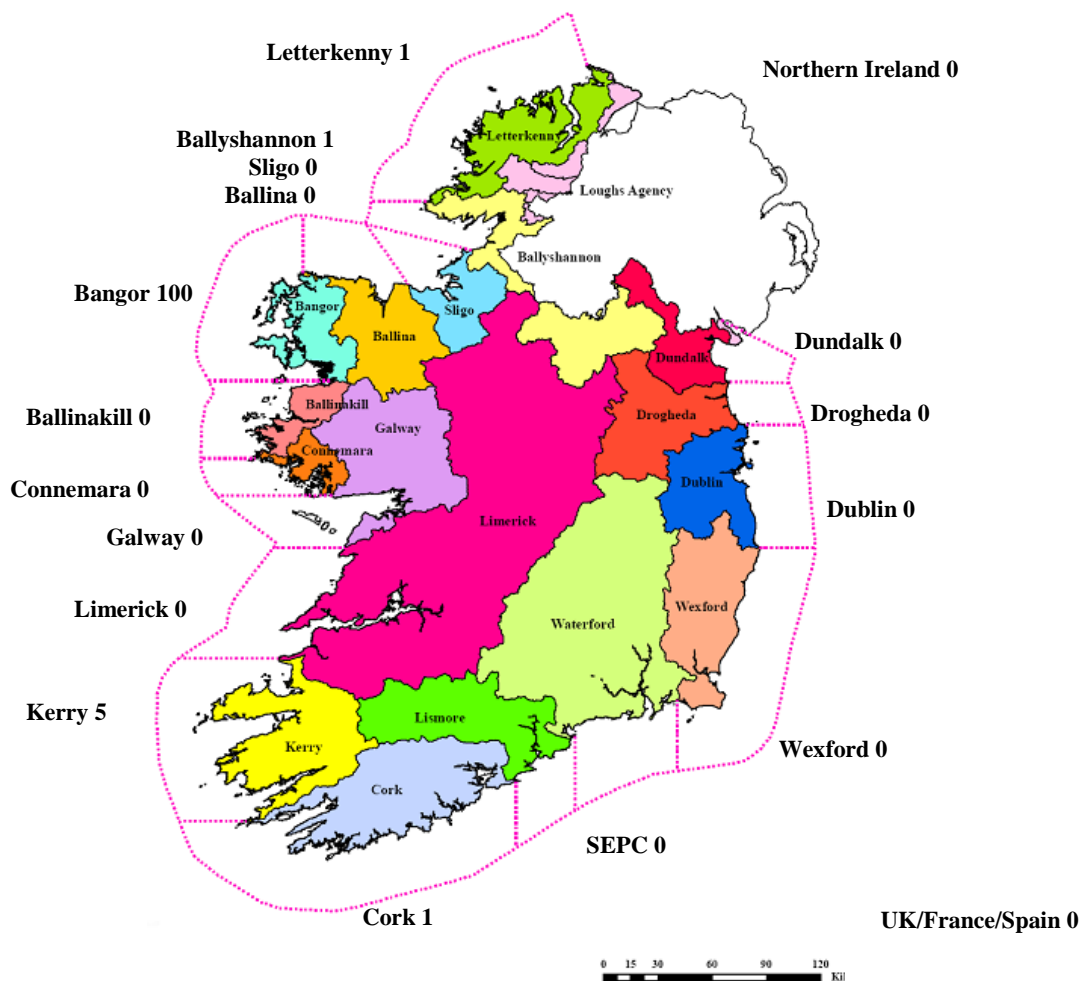
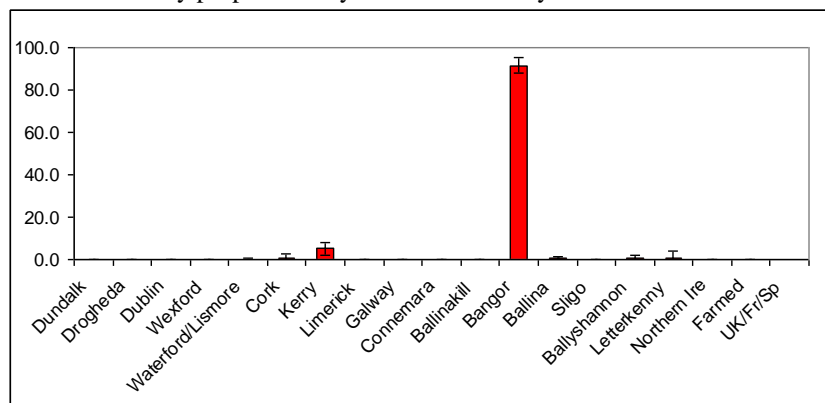
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.0 (0.2)	0
Drogheda	0.0 (0.2)	0
Dublin	0.0 (0.1)	0
Wexford	0.0 (0.1)	0
Waterford/Lismore	0.2 (0.5)	0
Cork	0.9 (1.6)	1
Kerry	5.0 (3.0)	5
Limerick	0.1 (0.2)	0
Galway	0.1 (0.2)	0
Connemara	0.0 (0.2)	0
Ballinakill	0.1 (0.3)	0
Bangor	91.6 (3.7)	100
Ballina	0.4 (0.9)	0
Sligo	0.0 (0.1)	0
Ballyshannon	0.5 (1.3)	1
Letterkenny	1.0 (2.8)	1
Northern Ireland	0.0 (0.2)	0
Farmed Strains	0.0 (0.1)	0
UK/France/Spain		0

Tullaghan Bay draft nets 2006 (n = 109)

Estimated fishery proportions by district or country



Outer Killary drift nets 2006

Number screened = 39

Number of fish identified as being from UK/France/Spain = 1

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 35

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 71.3% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.2)	0	GY 145	Kilcogan	0.0 (0.2)	0
DK 4	Fane	2.3 (3.8)	1	GY 147	Corrib	0.1 (0.6)	0
DK 5	Glyde	0.0 (0.3)	0	GY 149	Owenboliska	0.0 (0.2)	0
DK 6	Dee	0.0 (0.3)	0	CN 152	Cashla	0.0 (0.2)	0
DR 8	Boyne	0.1 (0.7)	0	CN 155	Screebe	0.0 (0.2)	0
DB 15	Liffey	0.0 (0.2)	0	CN 161	Owenmore	0.1 (0.5)	0
DB 18	Dargle	0.0 (0.2)	0	BK 166	Dawros	2.0 (4.2)	1
DB 21	Vartry	0.0 (0.2)	0	BK 167	Culfin	0.1 (0.7)	0
WX 26	Avoca	0.0 (0.3)	0	BK 168	Erriff	52.9 (15.7)	19
WX 31	Slaney	1.0 (2.9)	0	BK 169	Bundorragha	18.4 (12.7)	7
WD/LS*	SEPC	3.4 (4.8)	1	BK 172	Bunowen	0.0 (0.3)	0
CK 66	Lee	0.1 (0.4)	0	BG 178	Newport	0.3 (1.6)	0
CK 69	Bandon	1.4 (3.0)	0	BG 179	Srahmore	8.6 (4.7)	3
CK 72	Ilen	0.0 (0.2)	0	BG 185	Owenduff	0.0 (0.3)	0
CK 78	Owvane	0.0 (0.2)	0	BG 186	Owenmore	0.2 (1.1)	0
CK 80	Glengariff	0.0 (0.2)	0	BA 194	Cloonaghmore	0.0 (0.2)	0
CK 81	Adrigole	0.0 (0.2)	0	BA 195	Moy	0.3 (1.1)	0
KY 84	Croanshagh	0.0 (0.3)	0	BA 196	Brusna	0.0 (0.3)	0
KY 85	Owenshagh	0.0 (0.3)	0	BA 200	Easkey	0.0 (0.3)	0
KY 86	Cloonee	0.0 (0.2)	0	SO 202	Ballysadare	0.1 (0.4)	0
KY 87	Sheen	0.0 (0.2)	0	SO 203	Garvogue	0.0 (0.2)	0
KY 88	Roughty	0.1 (0.5)	0	BS 208	Duff	0.0 (0.3)	0
KY 89	Finnihiy	0.0 (0.2)	0	BS 209	Drowes	0.0 (0.3)	0
KY 90	KerryBlackwater	0.0 (0.3)	0	BS 210	Erne	0.0 (0.3)	0
KY 92	Sneem	0.0 (0.2)	0	BS 211	Abbey	0.0 (0.2)	0
KY 93	Owreagh	0.0 (0.2)	0	BS 213	Laghy	0.0 (0.2)	0
KY 97	Currane	0.2 (1.0)	0	BS 214	Eske	0.0 (0.2)	0
KY 98	Inny	0.4 (1.9)	0	BS 215	Eany	0.0 (0.2)	0
KY 102	Ferta	0.0 (0.2)	0	BS 219	Glen	0.0 (0.2)	0
KY 103	Behy	0.0 (0.2)	0	BS 220	Owenwee	0.0 (0.2)	0
KY 104	Caragh	0.0 (0.3)	0	LY 223	Owenea	0.1 (0.6)	0
KY 106	Laune	0.2 (0.8)	0	LY 225	Gweebarra	0.0 (0.2)	0
KY 107	Maine	0.2 (0.9)	0	LY 228	Gweedore	0.0 (0.2)	0
KY 108	Emlagh	0.0 (0.2)	0	LY 229	Clady	0.0 (0.2)	0
KY 109	Owenascaul	0.0 (0.2)	0	LY 240	Lackagh	1.3 (3.1)	0
KY 111	Milltown	0.1 (0.5)	0	LY 248	Leannan	0.8 (1.9)	0
KY 112	Feoghanagh	0.0 (0.3)	0	LY 249	Swilly	0.0 (0.2)	0
KY 117	TraleeLee	0.0 (0.3)	0	LY 253	Crana	0.8 (2.5)	0
LK 119	Feale	0.1 (0.5)	0	-	Northern Ireland	0.4 (1.3)	0
LK 120	Galey	0.0 (0.3)	0	-	Aqaugen	0.0 (0.3)	0
LK 126	Maigue	0.0 (0.2)	0	-	Fanad	0.1 (0.6)	0
LK 128	Mulcair	0.0 (0.3)	0	-	UK/France/Spain		1

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

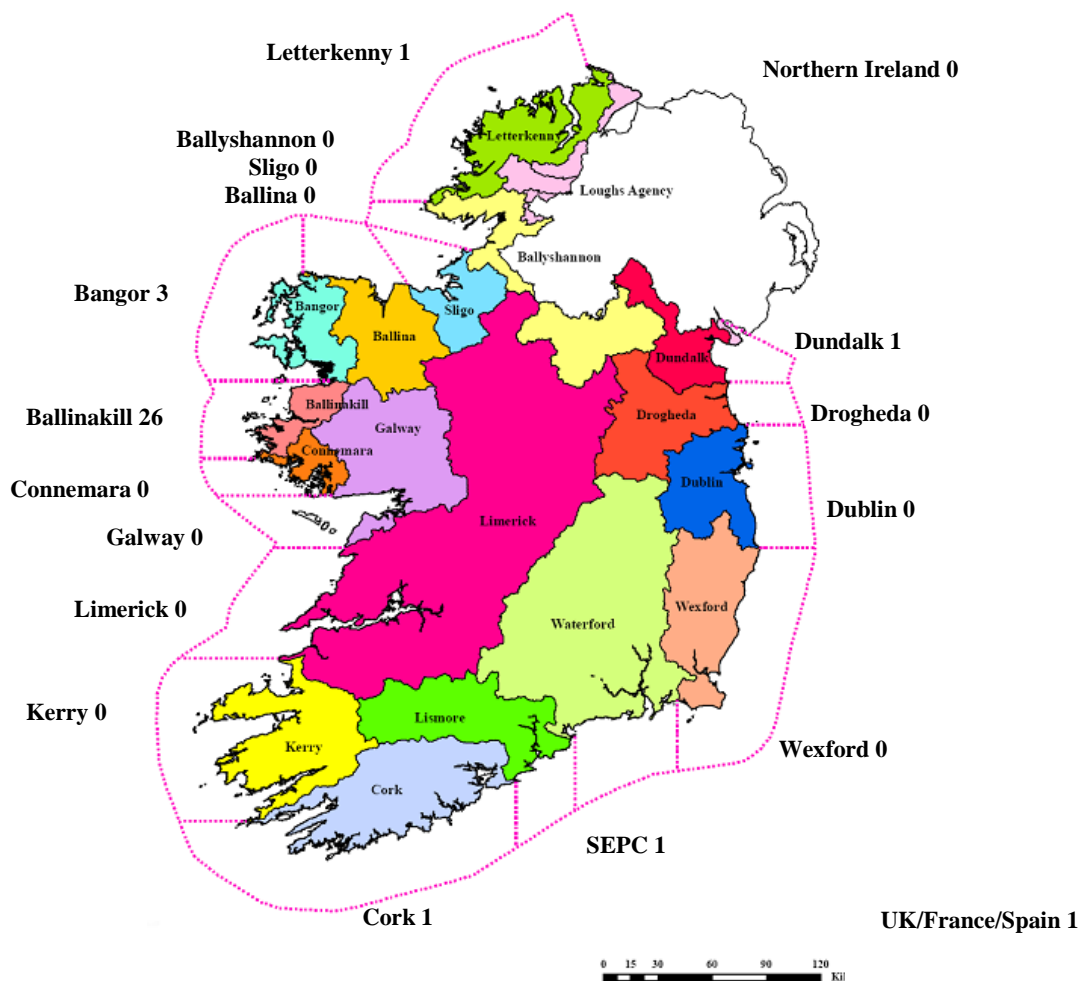
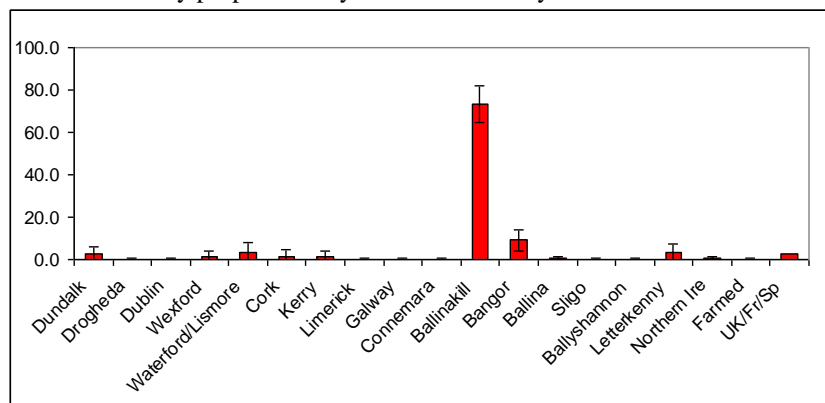
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	2.4 (3.8)	1
Drogheda	0.1 (0.7)	0
Dublin	0.1 (0.4)	0
Wexford	1.0 (2.9)	0
Waterford/Lismore	3.5 (4.8)	1
Cork	1.5 (3.1)	1
Kerry	1.4 (2.7)	0
Limerick	0.2 (0.7)	0
Galway	0.2 (0.7)	0
Connemara	0.1 (0.5)	0
Ballinakill	73.5 (8.7)	26
Bangor	9.2 (5.0)	3
Ballina	0.3 (1.2)	0
Sligo	0.1 (0.4)	0
Ballyshannon	0.2 (0.7)	0
Letterkenny	3.0 (4.3)	1
Northern Ireland	0.4 (1.3)	0
Farmed Strains	0.1 (0.7)	0
UK/France/Spain		1

Outer Killary drift nets 2006 (n = 36)

Estimated fishery proportions by district or country



Inner Killary draft nets 2006

Number screened = 116

Number of fish identified as being from UK/France/Spain = 0

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 286

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 91.8% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.1)	0	GY 145	Kilcogan	0.0 (0.1)	0
DK 4	Fane	0.0 (0.2)	0	GY 147	Corrib	0.1 (0.2)	0
DK 5	Glyde	0.0 (0.1)	0	GY 149	Owenboliska	0.0 (0.3)	0
DK 6	Dee	0.0 (0.1)	0	CN 152	Cashla	0.1 (0.4)	0
DR 8	Boyne	1.6 (1.7)	2	CN 155	Screebe	0.1 (0.5)	0
DB 15	Liffey	0.0 (0.1)	0	CN 161	Owenmore	0.0 (0.2)	0
DB 18	Dargle	0.0 (0.1)	0	BK 166	Dawros	0.0 (0.2)	0
DB 21	Vartry	0.1 (0.4)	0	BK 167	Culfin	0.0 (0.2)	0
WX 26	Avoca	0.3 (0.8)	0	BK 168	Erriff	47.2 (6.4)	45
WX 31	Slaney	0.0 (0.2)	0	BK 169	Bundorragha	13.0 (4.2)	12
WD/LS*	SEPC	3.2 (3.7)	3	BK 172	Bunowen	0.2 (1.1)	0
CK 66	Lee	0.0 (0.1)	0	BG 178	Newport	0.0 (0.1)	0
CK 69	Bandon	0.0 (0.2)	0	BG 179	Srahmore	31.6 (4.9)	30
CK 72	Ilen	0.0 (0.2)	0	BG 185	Owenduff	0.0 (0.2)	0
CK 78	Owvane	0.0 (0.1)	0	BG 186	Owenmore	0.1 (0.3)	0
CK 80	Glengariff	0.0 (0.1)	0	BA 194	Cloonaghmore	0.0 (0.1)	0
CK 81	Adrigole	0.0 (0.1)	0	BA 195	Moy	0.1 (0.6)	0
KY 84	Croanshagh	0.0 (0.1)	0	BA 196	Brusna	0.0 (0.1)	0
KY 85	Owenshagh	0.0 (0.1)	0	BA 200	Easkey	0.0 (0.1)	0
KY 86	Cloonee	0.0 (0.1)	0	SO 202	Ballysadare	0.0 (0.2)	0
KY 87	Sheen	0.0 (0.1)	0	SO 203	Garvogue	0.0 (0.1)	0
KY 88	Roughty	0.0 (0.1)	0	BS 208	Duff	0.0 (0.2)	0
KY 89	Finnihiy	0.0 (0.1)	0	BS 209	Drowes	0.3 (0.8)	0
KY 90	KerryBlackwater	0.0 (0.1)	0	BS 210	Erne	0.0 (0.2)	0
KY 92	Sneem	0.1 (0.4)	0	BS 211	Abbey	0.0 (0.1)	0
KY 93	Owreagh	0.0 (0.1)	0	BS 213	Laghy	0.0 (0.1)	0
KY 97	Currane	0.0 (0.3)	0	BS 214	Eske	0.0 (0.1)	0
KY 98	Inny	0.0 (0.1)	0	BS 215	Eany	0.0 (0.1)	0
KY 102	Ferta	0.1 (0.5)	0	BS 219	Glen	0.0 (0.1)	0
KY 103	Behy	0.0 (0.1)	0	BS 220	Owenwee	0.0 (0.1)	0
KY 104	Caragh	0.0 (0.2)	0	LY 223	Owenea	0.2 (1.0)	0
KY 106	Laune	0.1 (0.5)	0	LY 225	Gweebarra	0.0 (0.1)	0
KY 107	Maine	0.0 (0.2)	0	LY 228	Gweedore	0.0 (0.1)	0
KY 108	Emlagh	0.0 (0.1)	0	LY 229	Clady	0.0 (0.1)	0
KY 109	Owenascaul	0.0 (0.1)	0	LY 240	Lackagh	0.0 (0.2)	0
KY 111	Milltown	0.0 (0.1)	0	LY 248	Leannan	0.0 (0.1)	0
KY 112	Feoghanagh	0.0 (0.1)	0	LY 249	Swilly	0.0 (0.1)	0
KY 117	TraleeLee	0.0 (0.1)	0	LY 253	Crana	0.0 (0.2)	0
LK 119	Feale	0.0 (0.2)	0	-	Northern Ireland	0.5 (1.0)	0
LK 120	Galey	0.0 (0.1)	0	-	Aqaugen	0.0 (0.1)	0
LK 126	Maigue	0.0 (0.1)	0	-	Fanad	0.0 (0.1)	0
LK 128	Mulcair	0.1 (0.3)	0	-	UK/France/Spain		0

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

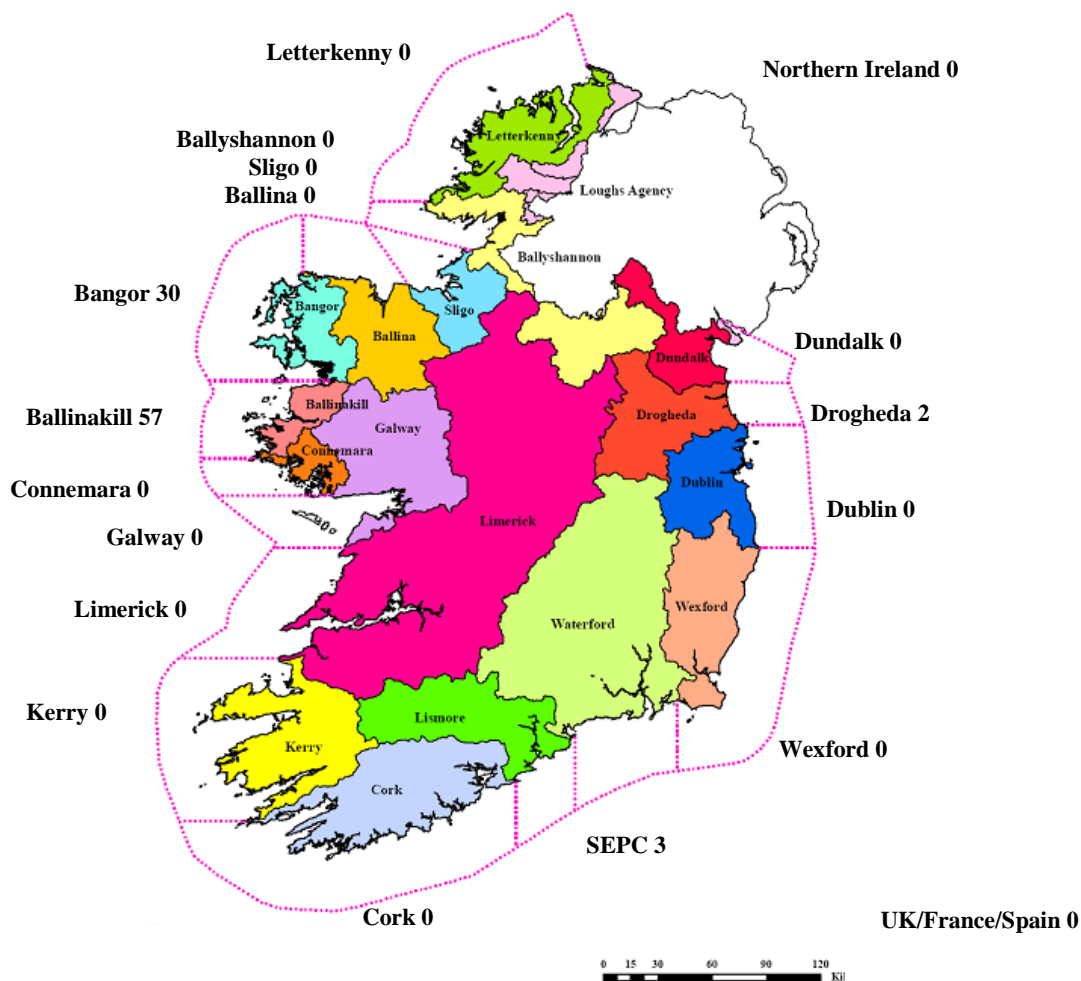
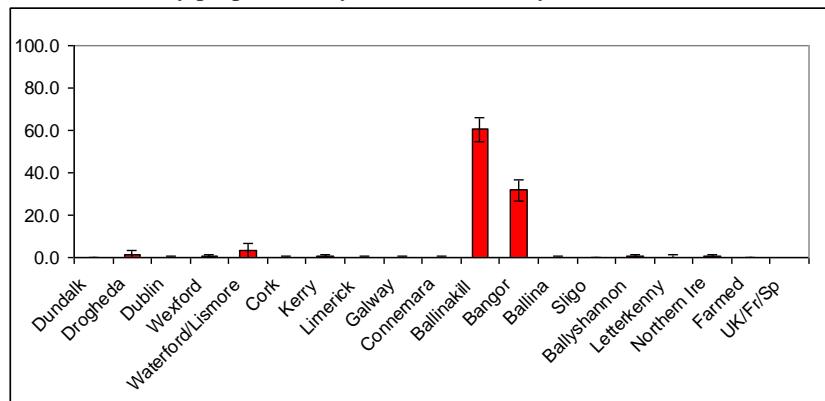
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.1 (0.3)	0
Drogheda	1.6 (1.7)	2
Dublin	0.1 (0.4)	0
Wexford	0.4 (0.8)	0
Waterford/Lismore	3.2 (3.7)	3
Cork	0.1 (0.4)	0
Kerry	0.5 (0.9)	0
Limerick	0.1 (0.4)	0
Galway	0.1 (0.4)	0
Connemara	0.2 (0.7)	0
Ballinakill	60.5 (5.6)	57
Bangor	31.7 (4.9)	30
Ballina	0.2 (0.6)	0
Sligo	0.0 (0.2)	0
Ballyshannon	0.4 (0.9)	0
Letterkenny	0.3 (1.1)	0
Northern Ireland	0.5 (1.0)	0
Farmed Strains	0.0 (0.1)	0
UK/France/Spain		0

Inner Killary draft nets 2006 (n = 95)

Estimated fishery proportions by district or country



Galway Bay drift nets 2006

Number screened = 303

Number of fish identified as being from UK/France/Spain = 2

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 220

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 91.0% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.0)	0	GY 145	Kilcogan	3.4 (1.6)	8
DK 4	Fane	0.1 (0.3)	0	GY 147	Corrib	15.8 (5.4)	35
DK 5	Glyde	0.0 (0.0)	0	GY 149	Owenboliska	0.3 (0.6)	1
DK 6	Dee	0.0 (0.1)	0	CN 152	Cashla	7.8 (2.5)	17
DR 8	Boyne	0.0 (0.1)	0	CN 155	Screebe	20.6 (2.9)	46
DB 15	Liffey	0.0 (0.1)	0	CN 161	Owenmore	3.3 (1.5)	7
DB 18	Dargle	0.0 (0.1)	0	BK 166	Dawros	0.0 (0.2)	0
DB 21	Vartry	0.0 (0.1)	0	BK 167	Culfin	0.0 (0.0)	0
WX 26	Avoca	0.3 (0.9)	1	BK 168	Erriff	3.2 (4.2)	7
WX 31	Slaney	0.0 (0.2)	0	BK 169	Bundorragha	0.0 (0.1)	0
WD/LS*	SEPC	9.0 (3.2)	20	BK 172	Bunowen	0.0 (0.1)	0
CK 66	Lee	1.5 (1.4)	3	BG 178	Newport	0.0 (0.0)	0
CK 69	Bandon	0.0 (0.2)	0	BG 179	Srahmore	0.4 (0.6)	1
CK 72	Ilen	0.0 (0.2)	0	BG 185	Owenduff	0.0 (0.2)	0
CK 78	Owvane	0.0 (0.1)	0	BG 186	Owenmore	2.6 (2.5)	6
CK 80	Glengariff	0.0 (0.1)	0	BA 194	Cloonaghmore	0.0 (0.0)	0
CK 81	Adrigole	0.1 (0.4)	0	BA 195	Moy	0.1 (0.2)	0
KY 84	Croanshagh	0.0 (0.1)	0	BA 196	Brusna	0.0 (0.1)	0
KY 85	Owenshagh	0.0 (0.1)	0	BA 200	Easkey	0.0 (0.1)	0
KY 86	Cloonee	0.0 (0.0)	0	SO 202	Ballysadare	0.0 (0.1)	0
KY 87	Sheen	0.0 (0.0)	0	SO 203	Garvogue	0.0 (0.1)	0
KY 88	Roughty	0.0 (0.1)	0	BS 208	Duff	0.0 (0.1)	0
KY 89	Finnihey	0.0 (0.0)	0	BS 209	Drowes	0.0 (0.2)	0
KY 90	KerryBlackwater	0.0 (0.1)	0	BS 210	Erne	0.0 (0.0)	0
KY 92	Sneem	0.0 (0.0)	0	BS 211	Abbey	0.0 (0.1)	0
KY 93	Owreagh	0.0 (0.0)	0	BS 213	Laghy	0.0 (0.0)	0
KY 97	Currane	0.2 (0.5)	0	BS 214	Eske	0.0 (0.0)	0
KY 98	Inny	0.0 (0.1)	0	BS 215	Eany	0.0 (0.1)	0
KY 102	Ferta	0.1 (0.4)	0	BS 219	Glen	0.0 (0.1)	0
KY 103	Behy	0.0 (0.0)	0	BS 220	Owenwee	0.0 (0.0)	0
KY 104	Caragh	0.0 (0.1)	0	LY 223	Owenea	2.9 (3.3)	6
KY 106	Laune	2.8 (1.7)	6	LY 225	Gweebarra	0.0 (0.1)	0
KY 107	Maine	0.2 (0.6)	1	LY 228	Gweedore	0.0 (0.0)	0
KY 108	Emlagh	0.0 (0.1)	0	LY 229	Clady	0.0 (0.1)	0
KY 109	Owenascaul	0.0 (0.2)	0	LY 240	Lackagh	0.2 (0.6)	0
KY 111	Milltown	0.0 (0.1)	0	LY 248	Leannan	0.0 (0.1)	0
KY 112	Feoghanagh	0.0 (0.0)	0	LY 249	Swilly	0.0 (0.1)	0
KY 117	TraleeLee	0.0 (0.0)	0	LY 253	Crana	0.0 (0.1)	0
LK 119	Feale	0.0 (0.1)	0	-	Northern Ireland	0.0 (0.2)	0
LK 120	Galey	0.0 (0.0)	0	-	Aqaugen	0.0 (0.0)	0
LK 126	Maigue	0.0 (0.1)	0	-	Fanad	0.2 (0.3)	0
LK 128	Mulcair	23.5 (6.5)	52	-	UK/France/Spain		2

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

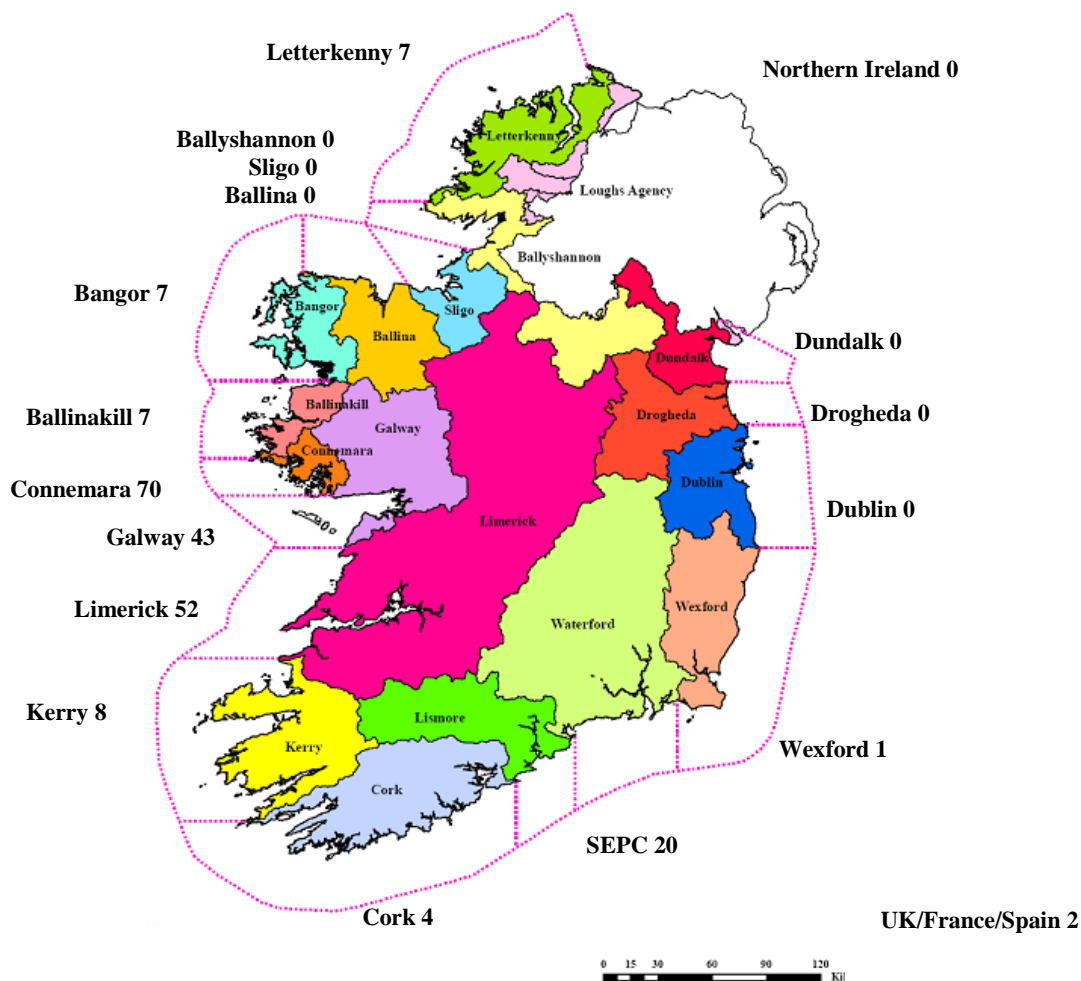
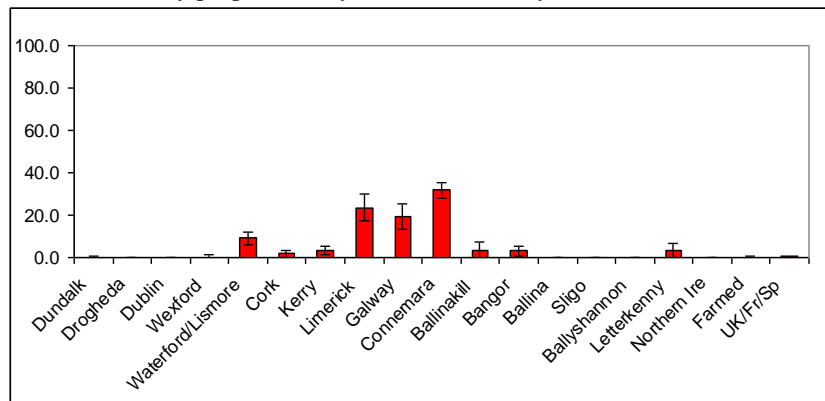
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.1 (0.4)	0
Drogheda	0.0 (0.1)	0
Dublin	0.0 (0.2)	0
Wexford	0.3 (0.9)	1
Waterford/Lismore	9.0 (3.2)	20
Cork	1.7 (1.4)	4
Kerry	3.5 (1.9)	8
Limerick	23.5 (6.5)	52
Galway	19.5 (6.0)	43
Connemara	31.8 (3.8)	70
Ballinakill	3.2 (4.2)	7
Bangor	3.1 (2.5)	7
Ballina	0.1 (0.2)	0
Sligo	0.0 (0.1)	0
Ballyshannon	0.1 (0.2)	0
Letterkenny	3.2 (3.4)	7
Northern Ireland	0.0 (0.2)	0
Farmed Strains	0.2 (0.3)	0
UK/France/Spain		2

Galway Bay drift nets 2006 (n = 221)

Estimated fishery proportions by district or country



Outer Shannon drift nets 2006

Number screened = 79

Number of fish identified as being from UK/France/Spain = 3

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 68

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 93.2% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.1)	0	GY 145	Kilcogan	0.0 (0.1)	0
DK 4	Fane	0.0 (0.1)	0	GY 147	Corrib	0.4 (1.2)	0
DK 5	Glyde	0.0 (0.1)	0	GY 149	Owenboliska	0.0 (0.1)	0
DK 6	Dee	0.0 (0.1)	0	CN 152	Cashla	0.0 (0.1)	0
DR 8	Boyne	0.0 (0.2)	0	CN 155	Screebe	0.0 (0.1)	0
DB 15	Liffey	0.0 (0.1)	0	CN 161	Owenmore	0.0 (0.2)	0
DB 18	Dargle	0.0 (0.1)	0	BK 166	Dawros	0.0 (0.1)	0
DB 21	Vartry	0.0 (0.1)	0	BK 167	Culfin	0.0 (0.1)	0
WX 26	Avoca	0.0 (0.1)	0	BK 168	Erriff	0.0 (0.2)	0
WX 31	Slaney	0.0 (0.3)	0	BK 169	Bundorragha	0.0 (0.1)	0
WD/LS*	SEPC	4.4 (2.9)	3	BK 172	Bunowen	0.0 (0.2)	0
CK 66	Lee	0.0 (0.2)	0	BG 178	Newport	0.0 (0.3)	0
CK 69	Bandon	0.0 (0.2)	0	BG 179	Srahmore	0.0 (0.1)	0
CK 72	Ilen	0.0 (0.1)	0	BG 185	Owenduff	0.0 (0.1)	0
CK 78	Owvane	0.0 (0.1)	0	BG 186	Owenmore	0.1 (0.4)	0
CK 80	Glengariff	0.0 (0.2)	0	BA 194	Cloonaghmore	0.0 (0.1)	0
CK 81	Adrigole	0.0 (0.1)	0	BA 195	Moy	0.2 (0.6)	0
KY 84	Croanshagh	0.0 (0.1)	0	BA 196	Brusna	0.0 (0.2)	0
KY 85	Owenshagh	0.0 (0.1)	0	BA 200	Easkey	0.0 (0.1)	0
KY 86	Cloonee	0.0 (0.1)	0	SO 202	Ballysadare	0.0 (0.2)	0
KY 87	Sheen	0.0 (0.1)	0	SO 203	Garvogue	0.0 (0.1)	0
KY 88	Roughty	0.0 (0.2)	0	BS 208	Duff	0.0 (0.2)	0
KY 89	Finnihey	0.0 (0.1)	0	BS 209	Drowes	0.0 (0.1)	0
KY 90	KerryBlackwater	0.0 (0.1)	0	BS 210	Erne	0.0 (0.1)	0
KY 92	Sneem	0.0 (0.1)	0	BS 211	Abbey	0.0 (0.1)	0
KY 93	Owreagh	0.0 (0.1)	0	BS 213	Laghy	0.0 (0.1)	0
KY 97	Currane	0.0 (0.2)	0	BS 214	Eske	0.0 (0.1)	0
KY 98	Inny	0.0 (0.2)	0	BS 215	Eany	0.0 (0.2)	0
KY 102	Ferta	0.0 (0.2)	0	BS 219	Glen	0.0 (0.3)	0
KY 103	Behy	0.0 (0.1)	0	BS 220	Owenwee	0.0 (0.1)	0
KY 104	Caragh	0.0 (0.2)	0	LY 223	Owenea	0.0 (0.1)	0
KY 106	Laune	0.1 (0.5)	0	LY 225	Gweebarra	0.0 (0.2)	0
KY 107	Maine	0.0 (0.2)	0	LY 228	Gweedore	0.0 (0.1)	0
KY 108	Emlagh	0.0 (0.1)	0	LY 229	Clady	0.0 (0.1)	0
KY 109	Owenascaul	0.0 (0.1)	0	LY 240	Lackagh	0.0 (0.1)	0
KY 111	Milltown	0.0 (0.3)	0	LY 248	Leannan	0.0 (0.3)	0
KY 112	Feoghanagh	0.0 (0.3)	0	LY 249	Swilly	0.0 (0.1)	0
KY 117	TraleeLee	0.0 (0.1)	0	LY 253	Crana	0.0 (0.2)	0
LK 119	Feale	6.4 (3.2)	5	-	Northern Ireland	0.0 (0.2)	0
LK 120	Galey	1.4 (2.3)	1	-	Aqaugen	0.0 (0.1)	0
LK 126	Maigue	3.3 (4.5)	2	-	Fanad	0.0 (0.2)	0
LK 128	Mulcair	78.6 (6.4)	56	-	UK/France/Spain		3

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

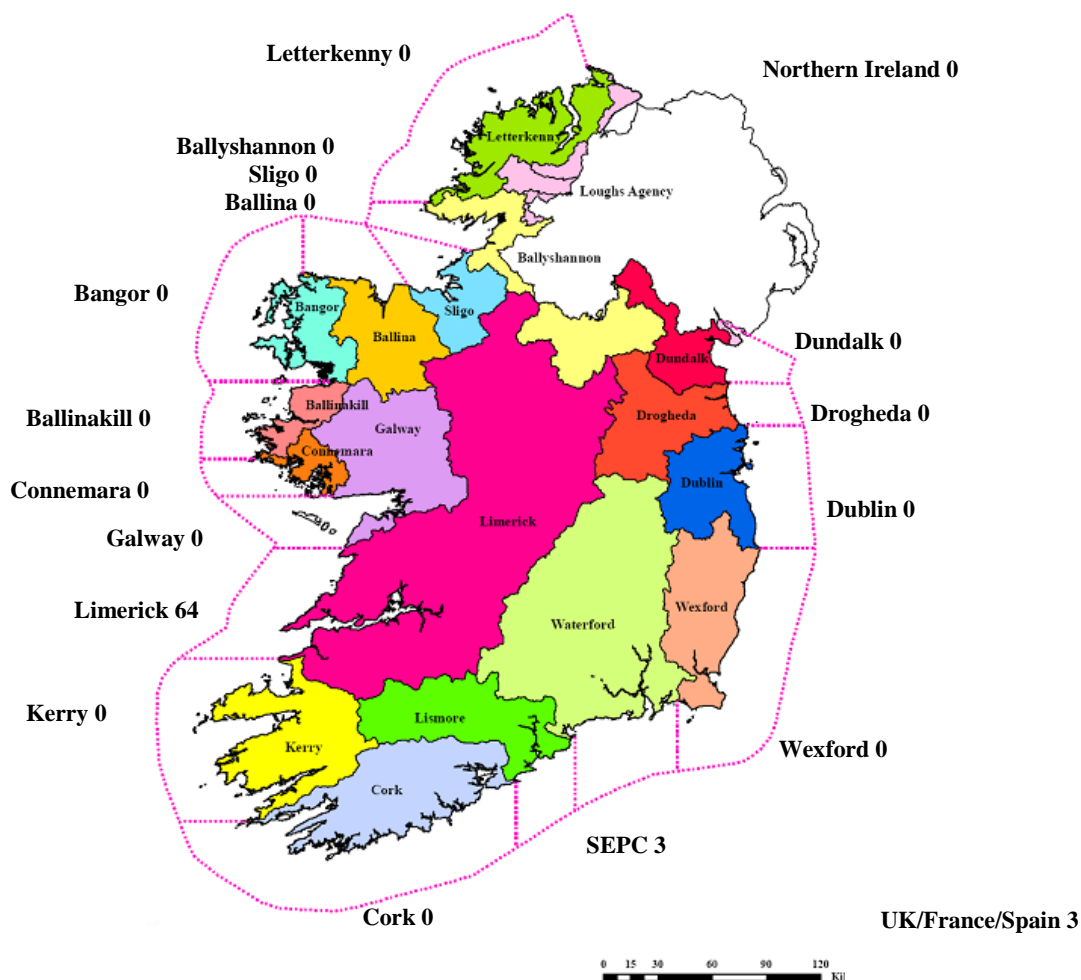
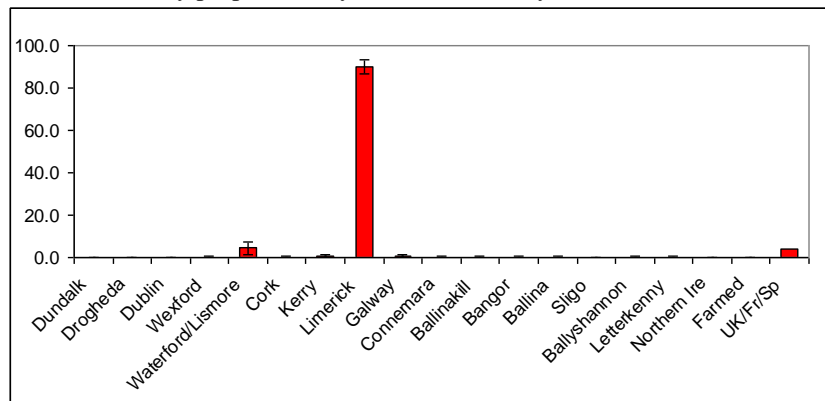
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.0 (0.2)	0
Drogheda	0.0 (0.2)	0
Dublin	0.0 (0.2)	0
Wexford	0.1 (0.3)	0
Waterford/Lismore	4.4 (2.9)	3
Cork	0.1 (0.4)	0
Kerry	0.4 (0.9)	0
Limerick	89.9 (3.4)	64
Galway	0.4 (1.2)	0
Connemara	0.1 (0.3)	0
Ballinakill	0.1 (0.3)	0
Bangor	0.1 (0.5)	0
Ballina	0.2 (0.7)	0
Sligo	0.0 (0.2)	0
Ballyshannon	0.1 (0.5)	0
Letterkenny	0.1 (0.5)	0
Northern Ireland	0.0 (0.2)	0
Farmed Strains	0.0 (0.2)	0
UK/France/Spain		3

Outer Shannon drift nets 2006 (n = 71)

Estimated fishery proportions by district or country



Inner Shannon draft nets 2006

Number screened = 71

Number of fish identified as being from UK/France/Spain = 0

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 64

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 94.1% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.1)	0	GY 145	Kilcogan	0.0 (0.1)	0
DK 4	Fane	0.0 (0.2)	0	GY 147	Corrib	0.1 (0.6)	0
DK 5	Glyde	0.0 (0.1)	0	GY 149	Owenboliska	0.0 (0.1)	0
DK 6	Dee	0.0 (0.1)	0	CN 152	Cashla	0.0 (0.1)	0
DR 8	Boyne	0.2 (0.8)	0	CN 155	Screebe	0.0 (0.1)	0
DB 15	Liffey	0.0 (0.1)	0	CN 161	Owenmore	0.0 (0.3)	0
DB 18	Dargle	0.0 (0.3)	0	BK 166	Dawros	0.0 (0.2)	0
DB 21	Vartry	0.0 (0.1)	0	BK 167	Culfin	0.0 (0.2)	0
WX 26	Avoca	6.1 (5.8)	4	BK 168	Erriff	0.0 (0.2)	0
WX 31	Slaney	0.3 (1.0)	0	BK 169	Bundorragha	0.0 (0.1)	0
WD/LS*	SEPC	2.3 (3.9)	1	BK 172	Bunowen	0.0 (0.3)	0
CK 66	Lee	0.0 (0.3)	0	BG 178	Newport	0.0 (0.1)	0
CK 69	Bandon	0.0 (0.3)	0	BG 179	Srahmore	0.0 (0.1)	0
CK 72	Ilen	0.0 (0.1)	0	BG 185	Owenduff	0.0 (0.2)	0
CK 78	Owvane	0.0 (0.2)	0	BG 186	Owenmore	0.3 (0.9)	0
CK 80	Glengariff	0.0 (0.2)	0	BA 194	Cloonaghmore	0.0 (0.2)	0
CK 81	Adrigole	0.0 (0.1)	0	BA 195	Moy	0.1 (0.5)	0
KY 84	Croanshagh	0.0 (0.1)	0	BA 196	Brusna	0.0 (0.1)	0
KY 85	Owenshagh	0.0 (0.2)	0	BA 200	Easkey	0.0 (0.1)	0
KY 86	Cloonee	0.0 (0.1)	0	SO 202	Ballysadare	0.6 (1.2)	0
KY 87	Sheen	0.2 (0.7)	0	SO 203	Garvogue	0.0 (0.1)	0
KY 88	Roughty	0.0 (0.2)	0	BS 208	Duff	0.0 (0.2)	0
KY 89	Finnihiy	0.0 (0.2)	0	BS 209	Drowes	0.0 (0.1)	0
KY 90	KerryBlackwater	0.0 (0.2)	0	BS 210	Erne	0.0 (0.2)	0
KY 92	Sneem	0.0 (0.1)	0	BS 211	Abbey	0.0 (0.1)	0
KY 93	Owreagh	0.0 (0.1)	0	BS 213	Laghy	0.1 (0.4)	0
KY 97	Currane	0.1 (0.4)	0	BS 214	Eske	0.0 (0.1)	0
KY 98	Inny	0.0 (0.1)	0	BS 215	Eany	0.0 (0.1)	0
KY 102	Ferta	0.1 (0.6)	0	BS 219	Glen	0.0 (0.2)	0
KY 103	Behy	0.0 (0.1)	0	BS 220	Owenwee	0.0 (0.1)	0
KY 104	Caragh	0.1 (0.5)	0	LY 223	Owenea	0.0 (0.2)	0
KY 106	Laune	0.2 (0.6)	0	LY 225	Gweebarra	0.0 (0.1)	0
KY 107	Maine	0.2 (0.7)	0	LY 228	Gweedore	0.0 (0.1)	0
KY 108	Emlagh	0.0 (0.1)	0	LY 229	Clady	0.0 (0.1)	0
KY 109	Owenascaul	0.0 (0.1)	0	LY 240	Lackagh	0.0 (0.1)	0
KY 111	Milltown	0.0 (0.2)	0	LY 248	Leannan	0.0 (0.2)	0
KY 112	Feoghanagh	0.0 (0.1)	0	LY 249	Swilly	0.0 (0.2)	0
KY 117	TraleeLee	0.0 (0.3)	0	LY 253	Crana	0.0 (0.1)	0
LK 119	Feale	0.0 (0.2)	0	-	Northern Ireland	0.1 (0.3)	0
LK 120	Galey	0.0 (0.2)	0	-	Aqaugen	0.0 (0.2)	0
LK 126	Maigue	9.5 (4.4)	6	-	Fanad	0.1 (0.5)	0
LK 128	Mulcair	78.5 (7.6)	50	-	UK/France/Spain		0

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

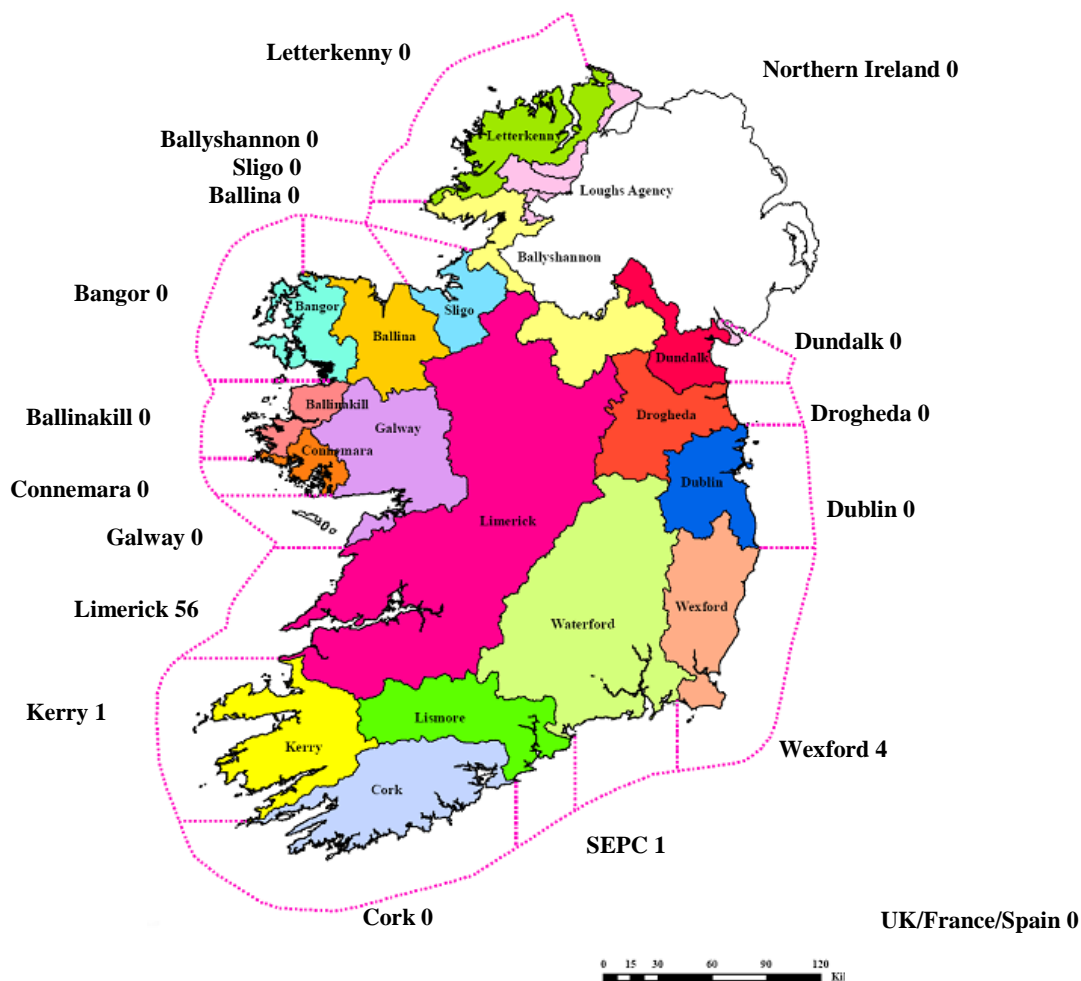
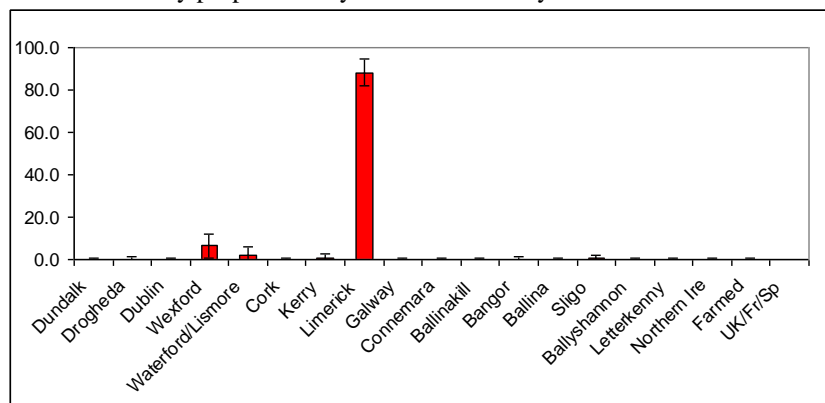
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.1 (0.3)	0
Drogheda	0.2 (0.8)	0
Dublin	0.1 (0.4)	0
Wexford	6.4 (5.9)	4
Waterford/Lismore	2.3 (3.9)	1
Cork	0.1 (0.5)	0
Kerry	0.9 (1.6)	1
Limerick	88.2 (6.3)	56
Galway	0.1 (0.6)	0
Connemara	0.1 (0.3)	0
Ballinakill	0.1 (0.4)	0
Bangor	0.3 (1.0)	0
Ballina	0.1 (0.5)	0
Sligo	0.6 (1.2)	0
Ballyshannon	0.2 (0.5)	0
Letterkenny	0.1 (0.5)	0
Northern Ireland	0.1 (0.3)	0
Farmed Strains	0.1 (0.5)	0
UK/France/Spain		0

Inner Shannon draft nets 2006 (n = 64)

Estimated fishery proportions by district or country



Maharees drift nets 2006

Number screened = 284

Number of fish identified as being from UK/France/Spain = 15

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 261

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 91.8% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.1)	0	GY 145	Kilcogan	0.0 (0.0)	0
DK 4	Fane	0.0 (0.1)	0	GY 147	Corrib	0.0 (0.1)	0
DK 5	Glyde	0.0 (0.1)	0	GY 149	Owenboliska	0.0 (0.0)	0
DK 6	Dee	0.0 (0.1)	0	CN 152	Cashla	0.0 (0.1)	0
DR 8	Boyne	0.0 (0.2)	0	CN 155	Screebe	0.0 (0.2)	0
DB 15	Liffey	0.0 (0.0)	0	CN 161	Owenmore	0.1 (0.2)	0
DB 18	Dargle	0.1 (0.4)	0	BK 166	Dawros	0.4 (0.4)	1
DB 21	Vartry	0.0 (0.1)	0	BK 167	Culfin	0.0 (0.1)	0
WX 26	Avoca	4.9 (2.0)	14	BK 168	Erriff	0.2 (0.6)	1
WX 31	Slaney	0.1 (0.3)	0	BK 169	Bundorragha	0.0 (0.1)	0
WD/LS*	SEPC	41.7 (4.1)	115	BK 172	Bunowen	1.1 (1.2)	3
CK 66	Lee	1.7 (1.4)	5	BG 178	Newport	0.0 (0.1)	0
CK 69	Bandon	1.7 (2.3)	5	BG 179	Srahmore	2.0 (0.9)	5
CK 72	Ilen	1.0 (1.4)	3	BG 185	Owenduff	0.8 (0.6)	2
CK 78	Owvane	0.0 (0.1)	0	BG 186	Owenmore	0.1 (0.3)	0
CK 80	Glengariff	0.0 (0.1)	0	BA 194	Cloonaghmore	0.0 (0.0)	0
CK 81	Adrigole	0.0 (0.0)	0	BA 195	Moy	0.5 (0.8)	1
KY 84	Croanshagh	0.2 (0.4)	0	BA 196	Brusna	0.0 (0.1)	0
KY 85	Owenshagh	0.0 (0.0)	0	BA 200	Easkey	0.0 (0.1)	0
KY 86	Cloonee	0.0 (0.1)	0	SO 202	Ballysadare	0.0 (0.0)	0
KY 87	Sheen	6.8 (2.0)	19	SO 203	Garvogue	0.1 (0.2)	0
KY 88	Roughy	1.2 (1.1)	3	BS 208	Duff	0.0 (0.1)	0
KY 89	Finnihy	0.0 (0.0)	0	BS 209	Drowes	0.0 (0.1)	0
KY 90	KerryBlackwater	0.0 (0.1)	0	BS 210	Erne	0.0 (0.0)	0
KY 92	Sneem	0.5 (0.6)	1	BS 211	Abbey	0.0 (0.0)	0
KY 93	Owreagh	0.0 (0.0)	0	BS 213	Laghy	0.0 (0.0)	0
KY 97	Currane	2.6 (1.1)	7	BS 214	Eske	0.0 (0.0)	0
KY 98	Inny	0.3 (0.7)	1	BS 215	Eany	0.0 (0.0)	0
KY 102	Ferta	0.0 (0.0)	0	BS 219	Glen	0.0 (0.0)	0
KY 103	Behy	0.0 (0.0)	0	BS 220	Owenwee	0.0 (0.0)	0
KY 104	Caragh	4.7 (1.7)	13	LY 223	Owenea	2.6 (1.4)	7
KY 106	Laune	16.0 (3.5)	44	LY 225	Gweebarra	0.0 (0.0)	0
KY 107	Maine	0.5 (1.0)	1	LY 228	Gweedore	0.0 (0.0)	0
KY 108	Emlagh	0.0 (0.0)	0	LY 229	Clady	0.0 (0.0)	0
KY 109	Owenascaul	0.0 (0.1)	0	LY 240	Lackagh	0.0 (0.1)	0
KY 111	Milltown	0.1 (0.2)	0	LY 248	Leannan	0.0 (0.1)	0
KY 112	Feoghanagh	0.0 (0.1)	0	LY 249	Swilly	0.0 (0.1)	0
KY 117	TraleeLee	0.0 (0.0)	0	LY 253	Crana	0.0 (0.1)	0
LK 119	Feale	0.7 (0.9)	2	-	Northern Ireland	0.3 (0.5)	1
LK 120	Galey	0.0 (0.1)	0	-	Aqaugen	0.0 (0.0)	0
LK 126	Maigue	0.0 (0.1)	0	-	Fanad	0.0 (0.1)	0
LK 128	Mulcair	1.5 (0.9)	4	-	UK/France/Spain		15

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

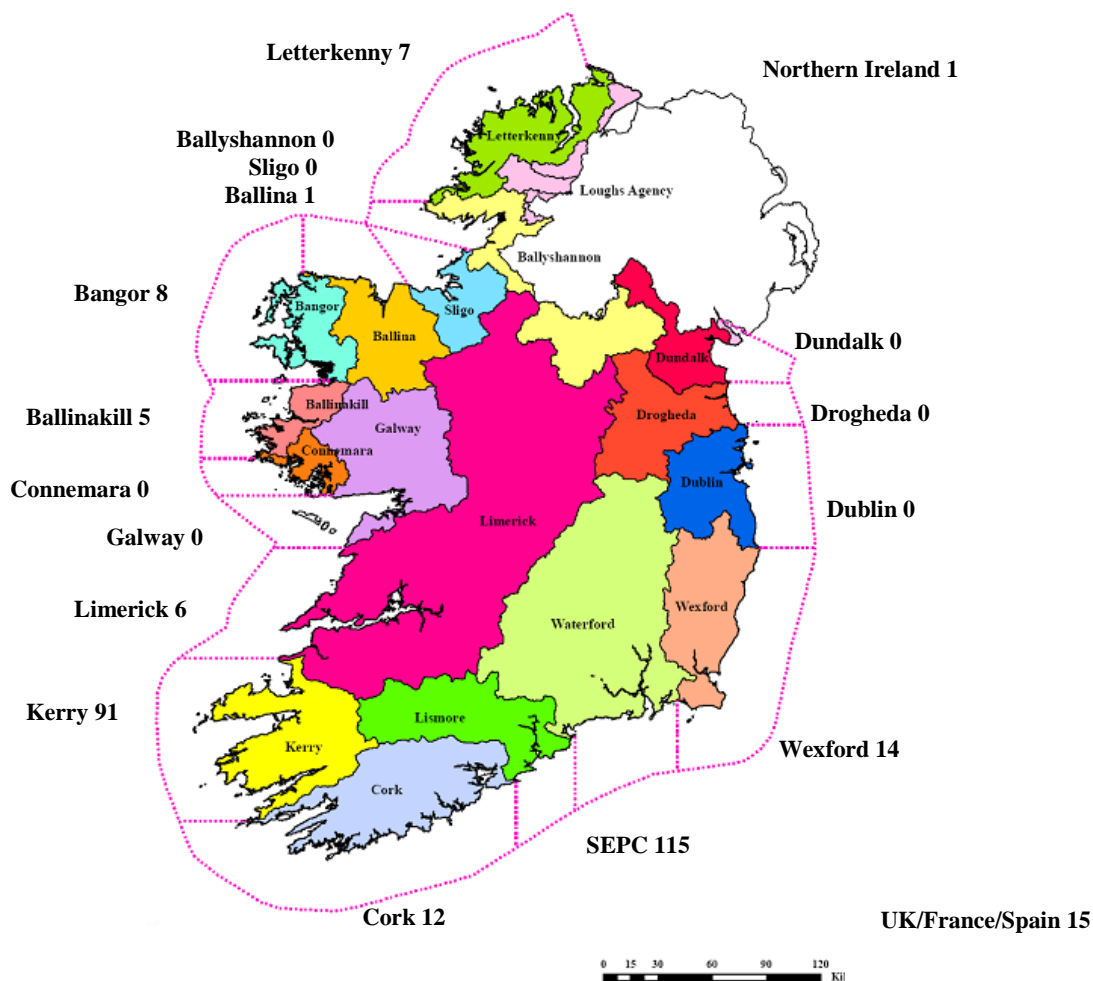
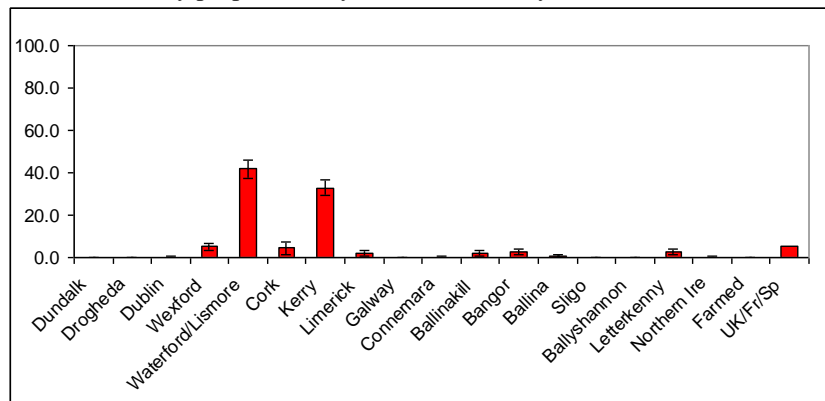
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.0 (0.1)	0
Drogheda	0.0 (0.2)	0
Dublin	0.1 (0.4)	0
Wexford	5.0 (2.0)	14
Waterford/Lismore	41.7 (4.1)	115
Cork	4.4 (2.8)	12
Kerry	32.9 (3.8)	91
Limerick	2.1 (1.2)	6
Galway	0.0 (0.1)	0
Connemara	0.2 (0.3)	0
Ballinakill	1.8 (1.4)	5
Bangor	2.8 (1.2)	8
Ballina	0.5 (0.8)	1
Sligo	0.1 (0.2)	0
Ballyshannon	0.1 (0.2)	0
Letterkenny	2.6 (1.4)	7
Northern Ireland	0.3 (0.5)	1
Farmed Strains	0.0 (0.1)	0
UK/France/Spain		15

Maharees drift nets 2006 (n = 276)

Estimated fishery proportions by district or country



Dingle Bay drift nets 2006

Number screened = 241

Number of fish identified as being from UK/France/Spain = 3

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 222

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 95.3% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.1)	0	GY 145	Kilcogan	0.0 (0.0)	0
DK 4	Fane	0.0 (0.0)	0	GY 147	Corrib	0.0 (0.1)	0
DK 5	Glyde	0.1 (0.3)	0	GY 149	Owenboliska	0.0 (0.0)	0
DK 6	Dee	0.0 (0.1)	0	CN 152	Cashla	0.0 (0.0)	0
DR 8	Boyne	0.0 (0.1)	0	CN 155	Screebe	0.0 (0.0)	0
DB 15	Liffey	0.0 (0.1)	0	CN 161	Owenmore	0.0 (0.1)	0
DB 18	Dargle	0.1 (0.6)	0	BK 166	Dawros	0.0 (0.0)	0
DB 21	Vartry	0.0 (0.0)	0	BK 167	Culfin	0.0 (0.1)	0
WX 26	Avoca	0.0 (0.1)	0	BK 168	Erriff	0.3 (0.7)	1
WX 31	Slaney	0.0 (0.1)	0	BK 169	Bundorragha	0.0 (0.1)	0
WD/LS*	SEPC	27.2 (4.3)	61	BK 172	Bunowen	0.3 (0.8)	1
CK 66	Lee	9.6 (3.9)	22	BG 178	Newport	0.0 (0.0)	0
CK 69	Bandon	12.4 (3.1)	28	BG 179	Srahmore	2.6 (1.2)	6
CK 72	Ilen	4.1 (2.0)	9	BG 185	Owenduff	0.0 (0.1)	0
CK 78	Owvane	0.7 (1.1)	1	BG 186	Owenmore	0.0 (0.1)	0
CK 80	Glengariff	0.0 (0.0)	0	BA 194	Cloonaghmore	0.0 (0.1)	0
CK 81	Adrigole	0.0 (0.0)	0	BA 195	Moy	0.0 (0.1)	0
KY 84	Croanshagh	3.0 (1.3)	7	BA 196	Brusna	0.0 (0.1)	0
KY 85	Owenshagh	0.0 (0.2)	0	BA 200	Easkey	0.0 (0.1)	0
KY 86	Cloonee	0.1 (0.3)	0	SO 202	Ballysadare	0.0 (0.1)	0
KY 87	Sheen	14.1 (3.3)	32	SO 203	Garvogue	0.0 (0.0)	0
KY 88	Roughty	4.0 (1.6)	9	BS 208	Duff	0.1 (0.3)	0
KY 89	Finnihiy	0.0 (0.0)	0	BS 209	Drowes	0.0 (0.0)	0
KY 90	KerryBlackwater	0.0 (0.0)	0	BS 210	Erne	0.0 (0.1)	0
KY 92	Sneem	0.0 (0.2)	0	BS 211	Abbey	0.0 (0.0)	0
KY 93	Owreagh	0.0 (0.0)	0	BS 213	Laghy	0.0 (0.0)	0
KY 97	Currane	2.9 (1.3)	6	BS 214	Eske	0.0 (0.0)	0
KY 98	Inny	5.7 (3.0)	13	BS 215	Eany	0.0 (0.1)	0
KY 102	Ferta	1.7 (2.3)	4	BS 219	Glen	0.0 (0.1)	0
KY 103	Behy	0.0 (0.0)	0	BS 220	Owenwee	0.0 (0.1)	0
KY 104	Caragh	3.0 (1.3)	7	LY 223	Owenea	0.0 (0.1)	0
KY 106	Laune	3.6 (2.3)	8	LY 225	Gweebarra	0.0 (0.0)	0
KY 107	Maine	1.9 (1.3)	4	LY 228	Gweedore	0.0 (0.0)	0
KY 108	Emlagh	0.0 (0.2)	0	LY 229	Clady	0.0 (0.0)	0
KY 109	Owenascaul	0.6 (0.8)	1	LY 240	Lackagh	0.0 (0.1)	0
KY 111	Milltown	0.0 (0.1)	0	LY 248	Leannan	0.0 (0.1)	0
KY 112	Feoghanagh	0.0 (0.1)	0	LY 249	Swilly	0.0 (0.0)	0
KY 117	TraleeLee	0.0 (0.1)	0	LY 253	Crana	0.0 (0.0)	0
LK 119	Feale	0.0 (0.1)	0	-	Northern Ireland	0.0 (0.2)	0
LK 120	Galey	0.0 (0.0)	0	-	Aqaugen	0.0 (0.0)	0
LK 126	Maigue	0.0 (0.0)	0	-	Fanad	0.0 (0.1)	0
LK 128	Mulcair	0.0 (0.1)	0	-	UK/France/Spain		3

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

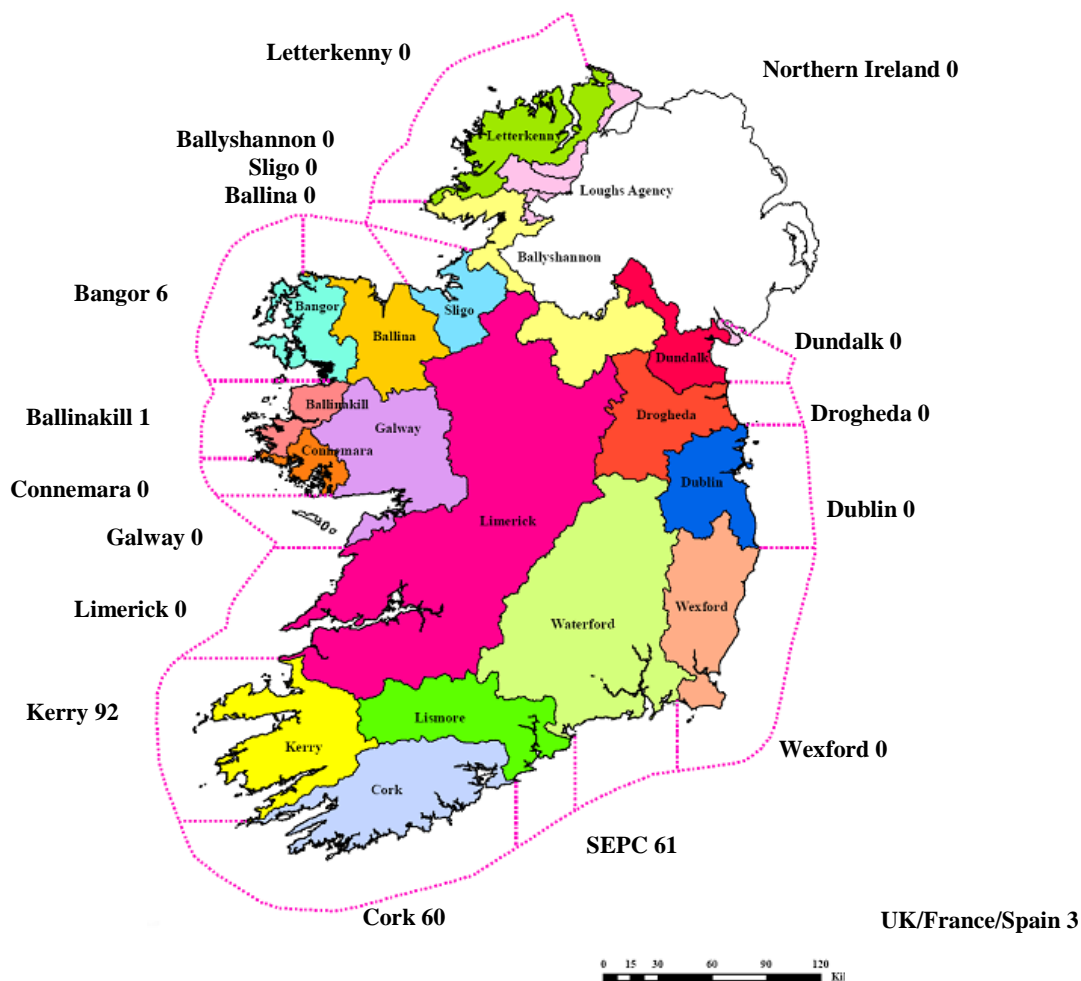
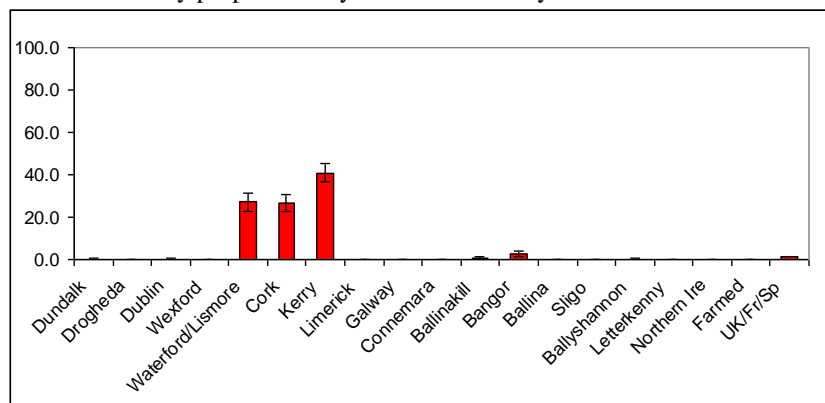
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.1 (0.3)	0
Drogheda	0.0 (0.1)	0
Dublin	0.2 (0.6)	0
Wexford	0.0 (0.2)	0
Waterford/Lismore	27.2 (4.3)	61
Cork	26.8 (4.1)	60
Kerry	40.9 (4.4)	92
Limerick	0.0 (0.1)	0
Galway	0.0 (0.1)	0
Connemara	0.0 (0.1)	0
Ballinakill	0.5 (1.0)	1
Bangor	2.6 (1.2)	6
Ballina	0.1 (0.2)	0
Sligo	0.0 (0.1)	0
Ballyshannon	0.2 (0.3)	0
Letterkenny	0.0 (0.1)	0
Northern Ireland	0.0 (0.2)	0
Farmed Strains	0.0 (0.1)	0
UK/France/Spain		3

Dingle Bay drift nets 2006 (n = 225)

Estimated fishery proportions by district or country



Castlemaine draft nets 2006

Number screened = 233

Number of fish identified as being from UK/France/Spain = 0

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 224

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 97.7% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.1)	0	GY 145	Kilcogan	0.0 (0.0)	0
DK 4	Fane	0.0 (0.0)	0	GY 147	Corrib	0.0 (0.2)	0
DK 5	Glyde	0.0 (0.0)	0	GY 149	Owenboliska	0.0 (0.0)	0
DK 6	Dee	0.0 (0.1)	0	CN 152	Cashla	0.0 (0.0)	0
DR 8	Boyne	0.1 (0.4)	0	CN 155	Screebe	0.0 (0.1)	0
DB 15	Liffey	0.0 (0.0)	0	CN 161	Owenmore	0.0 (0.1)	0
DB 18	Dargle	0.0 (0.1)	0	BK 166	Dawros	0.0 (0.0)	0
DB 21	Vartry	0.0 (0.0)	0	BK 167	Culfin	0.0 (0.1)	0
WX 26	Avoca	0.0 (0.1)	0	BK 168	Erriff	0.1 (0.4)	0
WX 31	Slaney	0.0 (0.1)	0	BK 169	Bundorragha	0.0 (0.1)	0
WD/LS*	SEPC	3.9 (1.9)	9	BK 172	Bunowen	0.0 (0.0)	0
CK 66	Lee	0.0 (0.2)	0	BG 178	Newport	0.0 (0.0)	0
CK 69	Bandon	0.0 (0.2)	0	BG 179	Srahmore	0.0 (0.1)	0
CK 72	Ilen	0.0 (0.1)	0	BG 185	Owenduff	0.0 (0.1)	0
CK 78	Owvane	0.0 (0.1)	0	BG 186	Owenmore	0.0 (0.1)	0
CK 80	Glengariff	0.0 (0.0)	0	BA 194	Cloonaghmore	0.0 (0.0)	0
CK 81	Adrigole	0.0 (0.1)	0	BA 195	Moy	0.1 (0.3)	0
KY 84	Croanshagh	0.0 (0.0)	0	BA 196	Brusna	0.0 (0.1)	0
KY 85	Owenshagh	0.0 (0.0)	0	BA 200	Easkey	0.0 (0.0)	0
KY 86	Cloonee	0.0 (0.1)	0	SO 202	Ballysadare	0.0 (0.1)	0
KY 87	Sheen	0.1 (0.3)	0	SO 203	Garvogue	0.0 (0.0)	0
KY 88	Roughty	0.0 (0.1)	0	BS 208	Duff	0.0 (0.1)	0
KY 89	Finnihey	0.0 (0.0)	0	BS 209	Drowes	0.0 (0.0)	0
KY 90	KerryBlackwater	0.0 (0.0)	0	BS 210	Erne	0.1 (0.2)	0
KY 92	Sneem	0.0 (0.0)	0	BS 211	Abbey	0.0 (0.0)	0
KY 93	Owreagh	0.0 (0.0)	0	BS 213	Laghy	0.0 (0.0)	0
KY 97	Currane	0.7 (0.7)	2	BS 214	Eske	0.0 (0.0)	0
KY 98	Inny	0.0 (0.1)	0	BS 215	Eany	0.0 (0.0)	0
KY 102	Ferta	0.0 (0.1)	0	BS 219	Glen	0.0 (0.0)	0
KY 103	Behy	0.0 (0.0)	0	BS 220	Owenwee	0.0 (0.0)	0
KY 104	Caragh	15.4 (2.8)	35	LY 223	Owenea	0.0 (0.1)	0
KY 106	Laune	78.4 (3.3)	176	LY 225	Gweebarra	0.0 (0.0)	0
KY 107	Maine	0.2 (0.6)	1	LY 228	Gweedore	0.0 (0.0)	0
KY 108	Emlagh	0.0 (0.0)	0	LY 229	Clady	0.0 (0.0)	0
KY 109	Owenascaul	0.0 (0.0)	0	LY 240	Lackagh	0.0 (0.0)	0
KY 111	Milltown	0.0 (0.1)	0	LY 248	Leannan	0.0 (0.1)	0
KY 112	Feoghanagh	0.0 (0.0)	0	LY 249	Swilly	0.0 (0.1)	0
KY 117	TraleeLee	0.0 (0.1)	0	LY 253	Crana	0.0 (0.1)	0
LK 119	Feale	0.0 (0.1)	0	-	Northern Ireland	0.2 (0.6)	0
LK 120	Galey	0.0 (0.0)	0	-	Aqaugen	0.0 (0.0)	0
LK 126	Maigue	0.0 (0.0)	0	-	Fanad	0.0 (0.0)	0
LK 128	Mulcair	0.1 (0.6)	0	-	UK/France/Spain		0

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

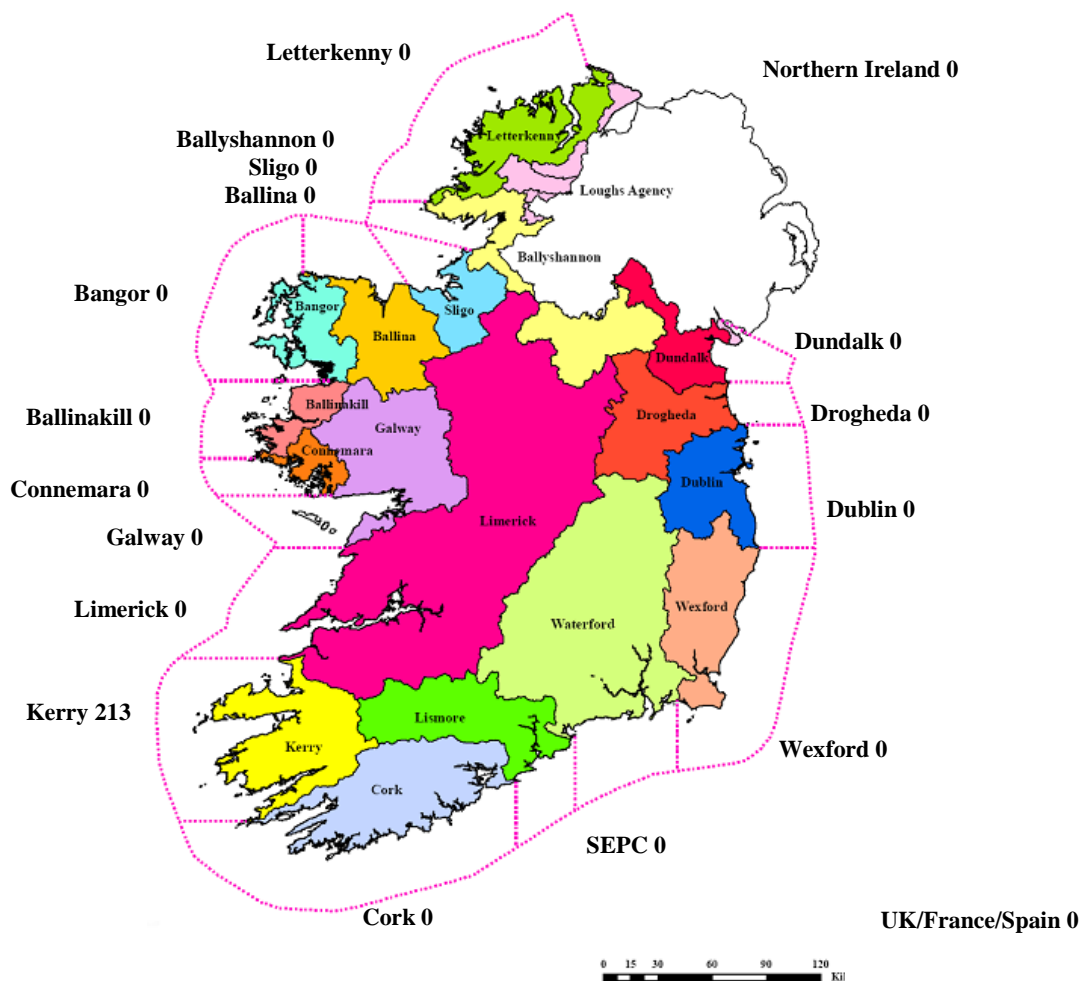
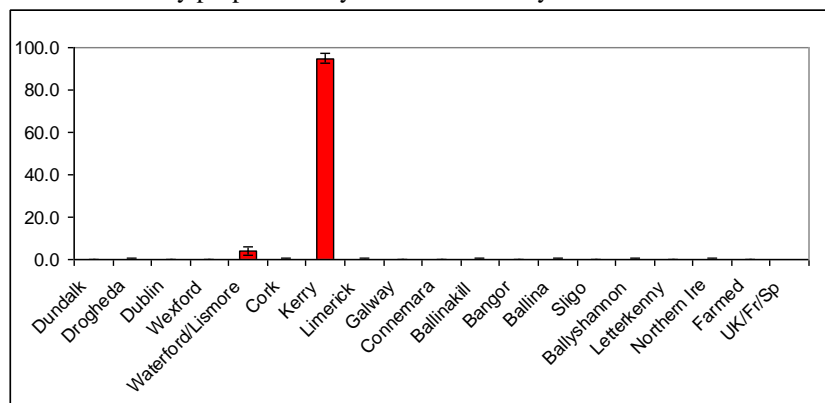
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.0 (0.1)	0
Drogheda	0.1 (0.4)	0
Dublin	0.0 (0.1)	0
Wexford	0.0 (0.1)	0
Waterford/Lismore	3.9 (1.9)	9
Cork	0.1 (0.4)	0
Kerry	94.9 (2.1)	213
Limerick	0.2 (0.6)	0
Galway	0.1 (0.2)	0
Connemara	0.0 (0.1)	0
Ballinakill	0.1 (0.4)	0
Bangor	0.1 (0.2)	0
Ballina	0.1 (0.3)	0
Sligo	0.0 (0.1)	0
Ballyshannon	0.1 (0.2)	0
Letterkenny	0.0 (0.2)	0
Northern Ireland	0.2 (0.6)	0
Farmed Strains	0.0 (0.1)	0
UK/France/Spain		0

Castlemaine draft nets 2006 (n = 224)

Estimated fishery proportions by district or country



Kenmare Lambs Head fixed bag nets 2006

Number screened = 86

Number of fish identified as being from UK/France/Spain = 1

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 76

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 91.0% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.1)	0	GY 145	Kilcogan	0.0 (0.1)	0
DK 4	Fane	0.0 (0.2)	0	GY 147	Corrib	1.3 (1.8)	1
DK 5	Glyde	0.0 (0.1)	0	GY 149	Owenboliska	0.0 (0.1)	0
DK 6	Dee	0.0 (0.4)	0	CN 152	Cashla	0.0 (0.1)	0
DR 8	Boyne	0.1 (0.3)	0	CN 155	Screebe	0.0 (0.1)	0
DB 15	Liffey	0.0 (0.1)	0	CN 161	Owenmore	0.0 (0.3)	0
DB 18	Dargle	0.0 (0.1)	0	BK 166	Dawros	0.1 (0.5)	0
DB 21	Vartry	0.3 (1.2)	0	BK 167	Culfin	0.0 (0.1)	0
WX 26	Avoca	0.0 (0.1)	0	BK 168	Erriff	0.0 (0.3)	0
WX 31	Slaney	0.1 (0.5)	0	BK 169	Bundorragha	0.0 (0.1)	0
WD/LS*	SEPC	9.8 (4.9)	8	BK 172	Bunowen	0.0 (0.1)	0
CK 66	Lee	0.5 (1.4)	0	BG 178	Newport	0.0 (0.1)	0
CK 69	Bandon	10.6 (4.9)	8	BG 179	Srahmore	4.5 (2.4)	3
CK 72	Ilen	1.0 (2.3)	1	BG 185	Owenduff	0.0 (0.1)	0
CK 78	Owvane	0.1 (0.4)	0	BG 186	Owenmore	0.0 (0.2)	0
CK 80	Glengariff	0.0 (0.1)	0	BA 194	Cloonaghmore	0.0 (0.2)	0
CK 81	Adrigole	0.0 (0.2)	0	BA 195	Moy	0.1 (0.3)	0
KY 84	Croanshagh	0.0 (0.1)	0	BA 196	Brusna	0.0 (0.2)	0
KY 85	Owenshagh	0.0 (0.2)	0	BA 200	Easkey	0.0 (0.3)	0
KY 86	Cloonee	0.0 (0.1)	0	SO 202	Ballysadare	0.0 (0.2)	0
KY 87	Sheen	10.3 (4.2)	8	SO 203	Garvogue	0.0 (0.2)	0
KY 88	Roughty	3.9 (2.5)	3	BS 208	Duff	0.1 (0.3)	0
KY 89	Finnihiy	0.0 (0.1)	0	BS 209	Drowes	0.0 (0.1)	0
KY 90	KerryBlackwater	0.0 (0.2)	0	BS 210	Erne	0.0 (0.3)	0
KY 92	Sneem	9.6 (3.9)	7	BS 211	Abbey	0.0 (0.1)	0
KY 93	Owreagh	0.0 (0.1)	0	BS 213	Laghy	0.0 (0.2)	0
KY 97	Currane	10.5 (4.0)	8	BS 214	Eske	0.0 (0.1)	0
KY 98	Inny	21.3 (5.6)	16	BS 215	Eany	0.4 (1.0)	0
KY 102	Ferta	4.8 (3.2)	4	BS 219	Glen	0.0 (0.2)	0
KY 103	Behy	0.0 (0.1)	0	BS 220	Owenwee	0.1 (0.4)	0
KY 104	Caragh	0.0 (0.2)	0	LY 223	Owenea	0.1 (0.4)	0
KY 106	Laune	4.6 (3.5)	4	LY 225	Gweebarra	0.0 (0.1)	0
KY 107	Maine	0.5 (1.6)	0	LY 228	Gweedore	0.0 (0.1)	0
KY 108	Emlagh	0.0 (0.1)	0	LY 229	Clady	0.0 (0.1)	0
KY 109	Owenascaul	0.1 (0.4)	0	LY 240	Lackagh	0.3 (0.9)	0
KY 111	Milltown	0.8 (1.8)	1	LY 248	Leannan	0.0 (0.1)	0
KY 112	Feoghanagh	0.0 (0.2)	0	LY 249	Swilly	0.0 (0.1)	0
KY 117	TraleeLee	0.0 (0.1)	0	LY 253	Crana	0.0 (0.1)	0
LK 119	Feale	0.2 (0.7)	0	-	Northern Ireland	1.9 (2.1)	1
LK 120	Galey	0.0 (0.1)	0	-	Aqaugen	0.0 (0.1)	0
LK 126	Maigue	0.0 (0.1)	0	-	Fanad	0.2 (0.7)	0
LK 128	Mulcair	0.0 (0.2)	0	-	UK/France/Spain		1

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

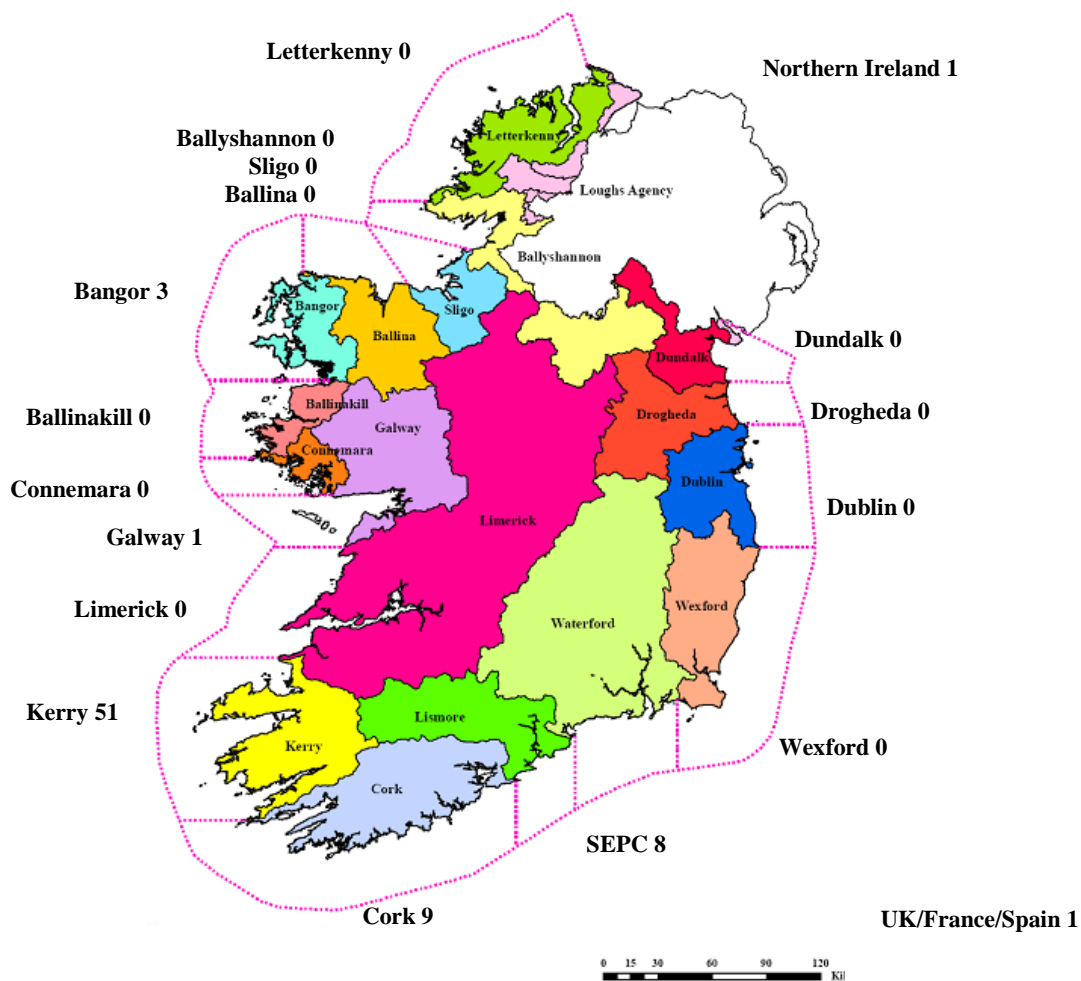
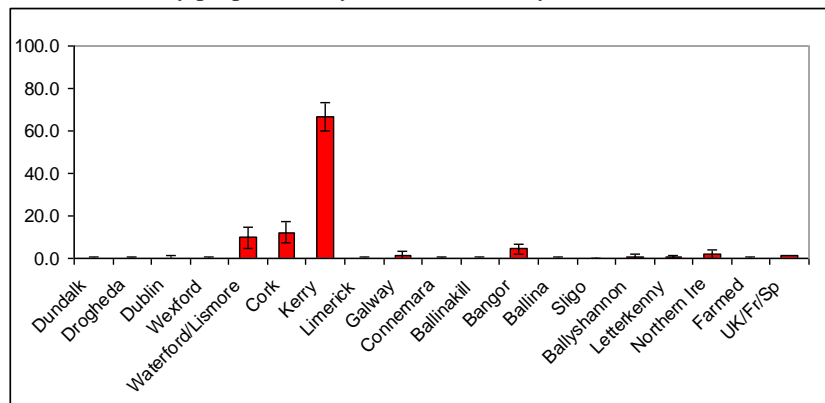
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.1 (0.4)	0
Drogheda	0.1 (0.3)	0
Dublin	0.3 (1.2)	0
Wexford	0.1 (0.5)	0
Waterford/Lismore	9.8 (4.9)	8
Cork	12.3 (5.2)	9
Kerry	66.7 (6.8)	51
Limerick	0.2 (0.7)	0
Galway	1.3 (1.8)	1
Connemara	0.1 (0.3)	0
Ballinakill	0.2 (0.6)	0
Bangor	4.5 (2.4)	3
Ballina	0.1 (0.5)	0
Sligo	0.0 (0.2)	0
Ballyshannon	0.6 (1.2)	0
Letterkenny	0.4 (1.1)	0
Northern Ireland	1.9 (2.1)	1
Farmed Strains	0.2 (0.7)	0
UK/France/Spain		1

Kenmare Lambs Head fixed bag 2006 (n =77)

Estimated fishery proportions by district or country



Kenmare sanctuary drift nets 2006

Number screened = 71

Number of fish identified as being from UK/France/Spain = 2

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 60

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 91.8% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.1 (0.5)	0	GY 145	Kilcogan	0.0 (0.1)	0
DK 4	Fane	0.0 (0.2)	0	GY 147	Corrib	0.1 (0.3)	0
DK 5	Glyde	0.0 (0.2)	0	GY 149	Owenboliska	0.0 (0.1)	0
DK 6	Dee	0.0 (0.2)	0	CN 152	Cashla	0.0 (0.1)	0
DR 8	Boyne	0.1 (0.5)	0	CN 155	Screebe	0.0 (0.1)	0
DB 15	Liffey	0.0 (0.1)	0	CN 161	Owenmore	0.0 (0.2)	0
DB 18	Dargle	0.0 (0.2)	0	BK 166	Dawros	0.0 (0.1)	0
DB 21	Vartry	0.0 (0.1)	0	BK 167	Culfin	0.0 (0.1)	0
WX 26	Avoca	0.1 (0.4)	0	BK 168	Erriff	0.0 (0.3)	0
WX 31	Slaney	0.0 (0.3)	0	BK 169	Bundorragha	0.0 (0.2)	0
WD/LS*	SEPC	1.0 (1.9)	1	BK 172	Bunowen	0.1 (0.6)	0
CK 66	Lee	9.7 (4.5)	6	BG 178	Newport	0.0 (0.1)	0
CK 69	Bandon	1.5 (2.6)	1	BG 179	Srahmore	0.0 (0.1)	0
CK 72	Ilen	0.0 (0.2)	0	BG 185	Owenduff	0.0 (0.2)	0
CK 78	Owvane	6.1 (3.4)	4	BG 186	Owenmore	0.0 (0.3)	0
CK 80	Glengariff	0.0 (0.2)	0	BA 194	Cloonaghmore	0.0 (0.1)	0
CK 81	Adrigole	0.0 (0.2)	0	BA 195	Moy	0.1 (0.3)	0
KY 84	Croanshagh	4.0 (2.8)	2	BA 196	Brusna	0.0 (0.2)	0
KY 85	Owenshagh	0.0 (0.1)	0	BA 200	Easkey	0.0 (0.2)	0
KY 86	Cloonee	2.5 (2.5)	2	SO 202	Ballysadare	0.0 (0.2)	0
KY 87	Sheen	29.0 (6.5)	18	SO 203	Garvogue	0.0 (0.1)	0
KY 88	Roughy	4.3 (3.4)	3	BS 208	Duff	0.0 (0.2)	0
KY 89	Finnihiy	0.0 (0.1)	0	BS 209	Drowes	0.0 (0.2)	0
KY 90	KerryBlackwater	0.0 (0.2)	0	BS 210	Erne	0.0 (0.2)	0
KY 92	Sneem	12.6 (4.6)	8	BS 211	Abbey	0.0 (0.2)	0
KY 93	Owreagh	0.0 (0.1)	0	BS 213	Laghy	0.0 (0.1)	0
KY 97	Currane	0.0 (0.2)	0	BS 214	Eske	0.0 (0.1)	0
KY 98	Inny	12.7 (5.2)	8	BS 215	Eany	0.0 (0.1)	0
KY 102	Ferta	1.4 (2.4)	1	BS 219	Glen	0.0 (0.1)	0
KY 103	Behy	0.0 (0.2)	0	BS 220	Owenwee	0.0 (0.1)	0
KY 104	Caragh	0.1 (0.3)	0	LY 223	Owenea	0.0 (0.2)	0
KY 106	Laune	10.6 (4.8)	7	LY 225	Gweebarra	0.0 (0.3)	0
KY 107	Maine	0.1 (0.6)	0	LY 228	Gweedore	0.0 (0.1)	0
KY 108	Emlagh	0.0 (0.1)	0	LY 229	Clady	0.0 (0.1)	0
KY 109	Owenascaul	0.0 (0.2)	0	LY 240	Lackagh	0.0 (0.2)	0
KY 111	Milltown	0.0 (0.2)	0	LY 248	Leannan	0.0 (0.2)	0
KY 112	Feoghanagh	0.0 (0.4)	0	LY 249	Swilly	0.0 (0.1)	0
KY 117	TraleeLee	0.0 (0.1)	0	LY 253	Crana	0.0 (0.1)	0
LK 119	Feale	0.0 (0.2)	0	-	Northern Ireland	0.1 (0.3)	0
LK 120	Galey	0.0 (0.3)	0	-	Aqaugen	0.0 (0.1)	0
LK 126	Maigue	0.0 (0.2)	0	-	Fanad	0.0 (0.2)	0
LK 128	Mulcair	0.0 (0.2)	0	-	UK/France/Spain		2

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

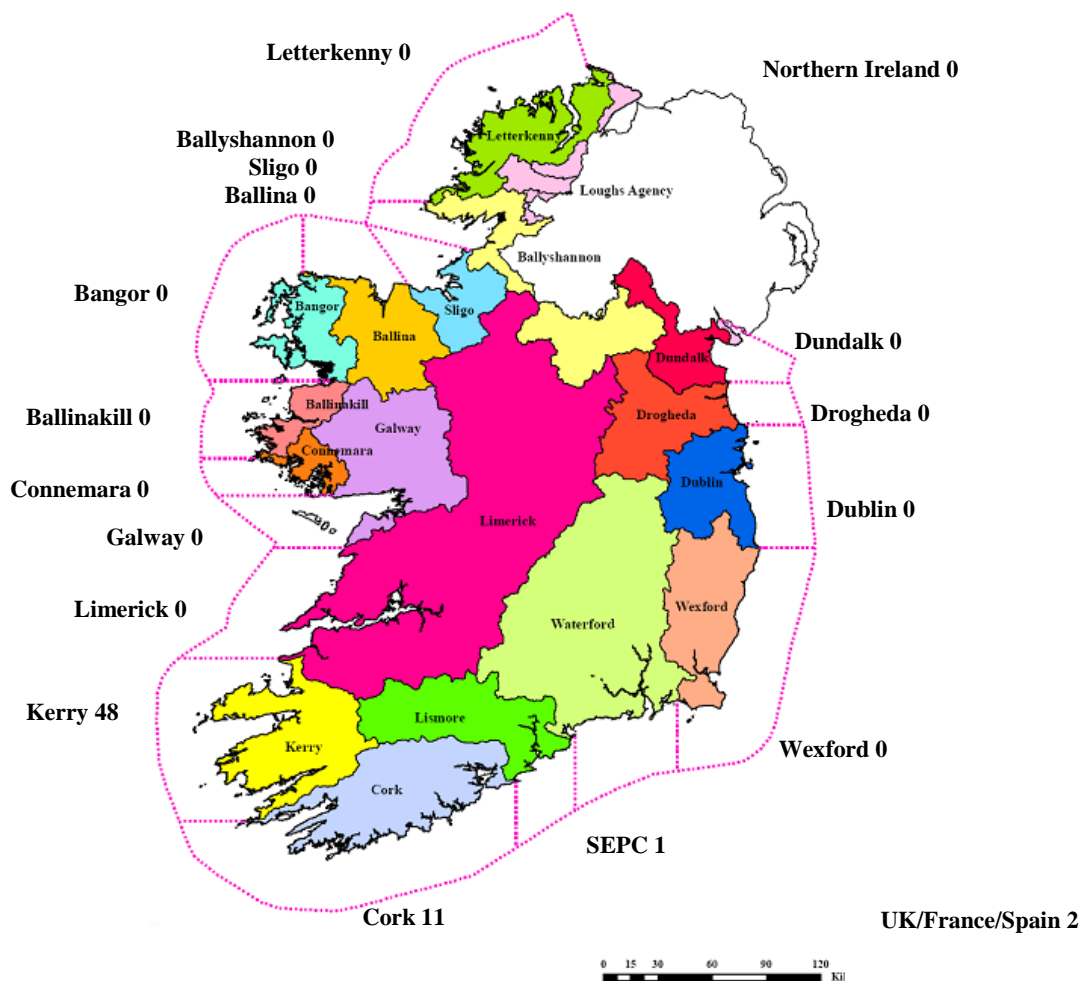
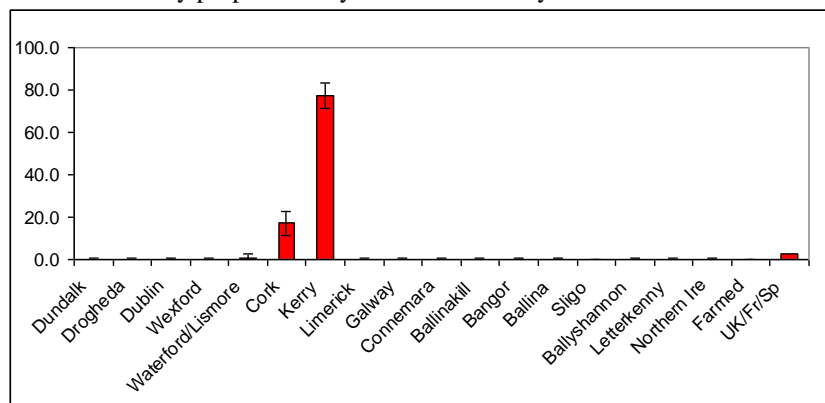
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.1 (0.6)	0
Drogheda	0.1 (0.5)	0
Dublin	0.0 (0.3)	0
Wexford	0.1 (0.5)	0
Waterford/Lismore	1.0 (1.9)	1
Cork	17.3 (5.7)	11
Kerry	77.6 (6.0)	48
Limerick	0.1 (0.5)	0
Galway	0.1 (0.3)	0
Connemara	0.1 (0.3)	0
Ballinakill	0.2 (0.7)	0
Bangor	0.1 (0.4)	0
Ballina	0.1 (0.4)	0
Sligo	0.0 (0.2)	0
Ballyshannon	0.1 (0.4)	0
Letterkenny	0.1 (0.5)	0
Northern Ireland	0.1 (0.3)	0
Farmed Strains	0.0 (0.2)	0
UK/France/Spain		2

Kenmare sanctuary drift nets 2006 (n = 62)

Estimated fishery proportions by district or country



Bantry Bay drift nets 2006

Number screened = 45

Number of fish identified as being from UK/France/Spain = 0

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 43

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 84.5% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.2)	0	GY 145	Kilcogan	0.0 (0.2)	0
DK 4	Fane	0.0 (0.1)	0	GY 147	Corrib	2.9 (2.8)	1
DK 5	Glyde	0.0 (0.2)	0	GY 149	Owenboliska	0.0 (0.2)	0
DK 6	Dee	0.1 (1.0)	0	CN 152	Cashla	0.0 (0.2)	0
DR 8	Boyne	0.3 (1.2)	0	CN 155	Screebe	0.0 (0.3)	0
DB 15	Liffey	0.0 (0.2)	0	CN 161	Owenmore	0.1 (0.4)	0
DB 18	Dargle	0.0 (0.2)	0	BK 166	Dawros	0.0 (0.2)	0
DB 21	Vartry	0.2 (0.8)	0	BK 167	Culfin	0.0 (0.2)	0
WX 26	Avoca	0.4 (1.6)	0	BK 168	Erriff	0.0 (0.3)	0
WX 31	Slaney	0.5 (1.4)	0	BK 169	Bundorragha	0.1 (0.4)	0
WD/LS*	SEPC	45.8 (10.1)	20	BK 172	Bunowen	0.1 (0.5)	0
CK 66	Lee	2.5 (3.3)	1	BG 178	Newport	0.0 (0.2)	0
CK 69	Bandon	1.4 (3.7)	1	BG 179	Srahmore	0.0 (0.2)	0
CK 72	Ilen	9.9 (5.3)	4	BG 185	Owenduff	0.1 (0.4)	0
CK 78	Owvane	0.0 (0.2)	0	BG 186	Owenmore	0.2 (0.9)	0
CK 80	Glengariff	0.0 (0.3)	0	BA 194	Cloonaghmore	0.0 (0.2)	0
CK 81	Adrigole	0.0 (0.2)	0	BA 195	Moy	0.3 (1.2)	0
KY 84	Croanshagh	0.0 (0.2)	0	BA 196	Brusna	0.0 (0.4)	0
KY 85	Owenshagh	0.0 (0.3)	0	BA 200	Easkey	0.1 (0.6)	0
KY 86	Cloonee	0.0 (0.3)	0	SO 202	Ballysadare	0.0 (0.3)	0
KY 87	Sheen	0.3 (1.4)	0	SO 203	Garvogue	0.0 (0.2)	0
KY 88	Roughty	8.7 (4.3)	4	BS 208	Duff	0.0 (0.3)	0
KY 89	Finnihy	0.0 (0.2)	0	BS 209	Drowes	0.0 (0.2)	0
KY 90	KerryBlackwater	0.0 (0.3)	0	BS 210	Erne	0.0 (0.3)	0
KY 92	Sneem	0.0 (0.1)	0	BS 211	Abbey	0.0 (0.2)	0
KY 93	Owreagh	0.0 (0.2)	0	BS 213	Laghy	0.0 (0.2)	0
KY 97	Currane	3.0 (3.0)	1	BS 214	Eske	0.0 (0.2)	0
KY 98	Inny	0.0 (0.4)	0	BS 215	Eany	0.1 (0.6)	0
KY 102	Ferta	0.6 (2.3)	0	BS 219	Glen	0.0 (0.2)	0
KY 103	Behy	0.0 (0.2)	0	BS 220	Owenwee	0.0 (0.2)	0
KY 104	Caragh	0.6 (1.8)	0	LY 223	Owenea	0.5 (1.9)	0
KY 106	Laune	9.2 (8.1)	4	LY 225	Gweebarra	0.0 (0.2)	0
KY 107	Maine	2.0 (4.2)	1	LY 228	Gweedore	0.0 (0.1)	0
KY 108	Emlagh	0.1 (0.7)	0	LY 229	Clady	0.0 (0.4)	0
KY 109	Owenascaul	0.1 (0.6)	0	LY 240	Lackagh	0.0 (0.3)	0
KY 111	Milltown	0.3 (1.8)	0	LY 248	Leannan	0.0 (0.3)	0
KY 112	Feoghanagh	0.1 (0.4)	0	LY 249	Swilly	0.1 (0.4)	0
KY 117	TraleeLee	0.0 (0.2)	0	LY 253	Crana	0.1 (0.6)	0
LK 119	Feale	0.0 (0.3)	0	-	Northern Ireland	0.6 (1.9)	0
LK 120	Galey	0.0 (0.3)	0	-	Aqaugen	0.0 (0.3)	0
LK 126	Maigue	0.0 (0.2)	0	-	Fanad	0.0 (0.2)	0
LK 128	Mulcair	8.0 (5.4)	3	-	UK/France/Spain		0

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

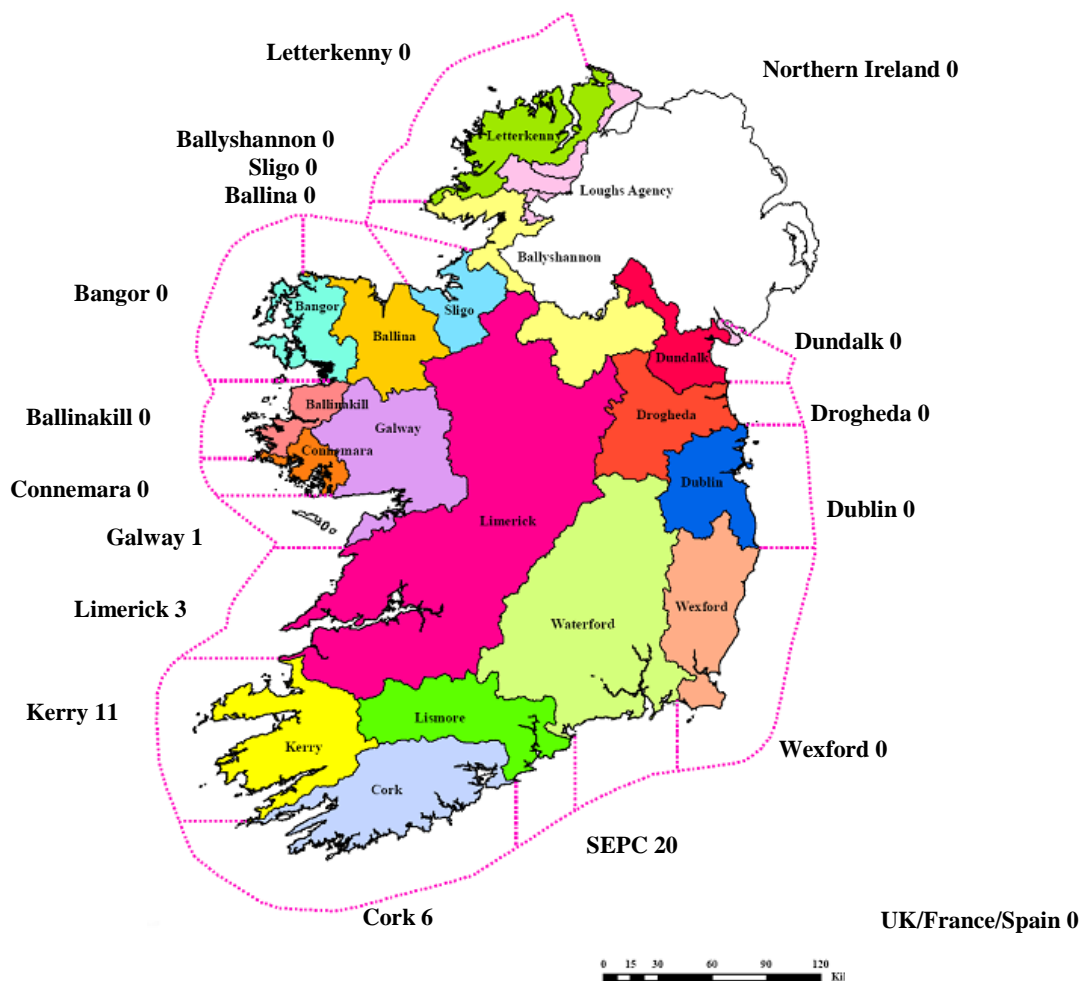
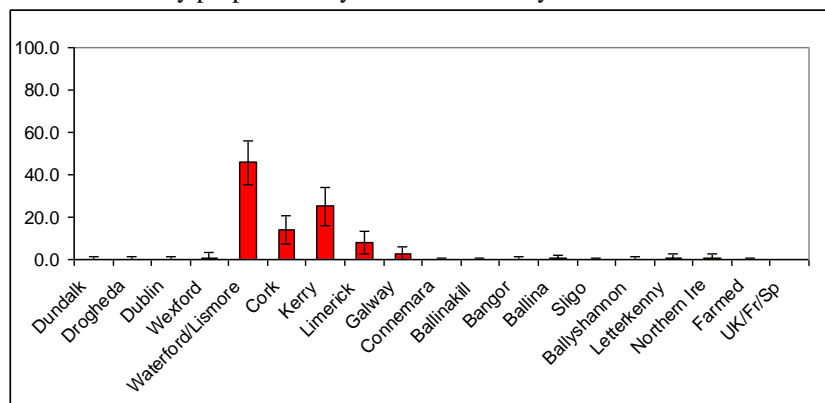
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.2 (1.0)	0
Drogheda	0.3 (1.2)	0
Dublin	0.2 (0.8)	0
Wexford	0.9 (2.1)	0
Waterford/Lismore	45.8 (10.1)	20
Cork	13.8 (6.5)	6
Kerry	25.1 (8.8)	11
Limerick	8.1 (5.5)	3
Galway	3.0 (2.8)	1
Connemara	0.1 (0.5)	0
Ballinakill	0.2 (0.8)	0
Bangor	0.2 (1.1)	0
Ballina	0.5 (1.4)	0
Sligo	0.1 (0.3)	0
Ballyshannon	0.2 (0.8)	0
Letterkenny	0.8 (2.1)	0
Northern Ireland	0.6 (1.9)	0
Farmed Strains	0.0 (0.3)	0
UK/France/Spain		0

Bantry Bay drift nets 2006 (n = 43)

Estimated fishery proportions by district or country



Cork Harbour fixed bag nets 2006

Number screened = 32

Number of fish identified as being from UK/France/Spain = 0

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 32

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 90.0% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.2)	0	GY 145	Kilcogan	0.0 (0.2)	0
DK 4	Fane	0.0 (0.2)	0	GY 147	Corrib	0.9 (2.1)	0
DK 5	Glyde	0.0 (0.3)	0	GY 149	Owenboliska	0.0 (0.3)	0
DK 6	Dee	0.0 (0.2)	0	CN 152	Cashla	0.0 (0.3)	0
DR 8	Boyne	0.1 (0.5)	0	CN 155	Screebe	0.1 (0.6)	0
DB 15	Liffey	0.0 (0.3)	0	CN 161	Owenmore	0.1 (0.6)	0
DB 18	Dargle	0.0 (0.3)	0	BK 166	Dawros	0.0 (0.4)	0
DB 21	Vartry	0.0 (0.2)	0	BK 167	Culfin	0.0 (0.3)	0
WX 26	Avoca	0.2 (1.1)	0	BK 168	Erriff	0.1 (0.4)	0
WX 31	Slaney	1.9 (4.1)	1	BK 169	Bundorragha	0.0 (0.2)	0
WD/LS*	SEPC	7.6 (7.4)	2	BK 172	Bunowen	0.0 (0.2)	0
CK 66	Lee	82.2 (8.0)	26	BG 178	Newport	0.0 (0.2)	0
CK 69	Bandon	1.1 (2.8)	0	BG 179	Srahmore	0.0 (0.2)	0
CK 72	Ilen	0.0 (0.2)	0	BG 185	Owenduff	0.0 (0.3)	0
CK 78	Owvane	0.0 (0.2)	0	BG 186	Owenmore	0.3 (1.3)	0
CK 80	Glengariff	0.0 (0.3)	0	BA 194	Cloonaghmore	0.0 (0.2)	0
CK 81	Adrigole	0.0 (0.4)	0	BA 195	Moy	0.2 (0.9)	0
KY 84	Croanshagh	0.0 (0.2)	0	BA 196	Brusna	0.0 (0.3)	0
KY 85	Owenshagh	0.0 (0.3)	0	BA 200	Easkey	0.0 (0.2)	0
KY 86	Cloonee	0.0 (0.3)	0	SO 202	Ballysadare	0.0 (0.3)	0
KY 87	Sheen	0.0 (0.2)	0	SO 203	Garvogue	0.0 (0.2)	0
KY 88	Roughty	0.1 (0.4)	0	BS 208	Duff	0.0 (0.3)	0
KY 89	Finnihey	0.0 (0.3)	0	BS 209	Drowes	0.0 (0.2)	0
KY 90	KerryBlackwater	0.0 (0.3)	0	BS 210	Erne	0.1 (0.7)	0
KY 92	Sneem	0.0 (0.2)	0	BS 211	Abbey	0.0 (0.2)	0
KY 93	Owreagh	0.0 (0.2)	0	BS 213	Laghy	0.0 (0.3)	0
KY 97	Currane	0.1 (0.6)	0	BS 214	Eske	0.0 (0.2)	0
KY 98	Inny	0.0 (0.3)	0	BS 215	Eany	0.0 (0.2)	0
KY 102	Ferta	0.0 (0.3)	0	BS 219	Glen	0.0 (0.2)	0
KY 103	Behy	0.0 (0.2)	0	BS 220	Owenwee	0.1 (0.5)	0
KY 104	Caragh	0.1 (0.6)	0	LY 223	Owenea	0.0 (0.3)	0
KY 106	Laune	0.4 (1.6)	0	LY 225	Gweebarra	0.0 (0.2)	0
KY 107	Maine	0.0 (0.3)	0	LY 228	Gweedore	0.0 (0.3)	0
KY 108	Emlagh	0.0 (0.3)	0	LY 229	Clady	0.0 (0.2)	0
KY 109	Owenascaul	0.0 (0.4)	0	LY 240	Lackagh	0.0 (0.4)	0
KY 111	Milltown	0.0 (0.2)	0	LY 248	Leannan	0.0 (0.3)	0
KY 112	Feoghanagh	0.0 (0.3)	0	LY 249	Swilly	0.0 (0.4)	0
KY 117	TraleeLee	0.0 (0.3)	0	LY 253	Crana	0.0 (0.3)	0
LK 119	Feale	0.1 (0.5)	0	-	Northern Ireland	0.1 (0.4)	0
LK 120	Galey	0.0 (0.2)	0	-	Aqaugen	0.0 (0.2)	0
LK 126	Maigue	0.5 (1.7)	0	-	Fanad	2.3 (2.9)	1
LK 128	Mulcair	0.1 (0.7)	0	-	UK/France/Spain		0

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

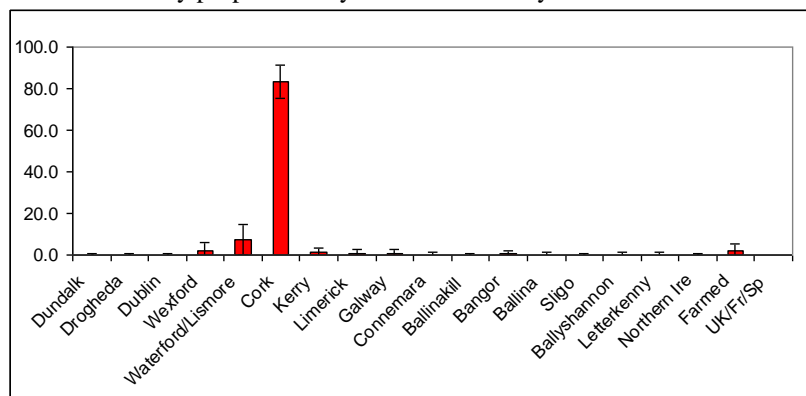
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

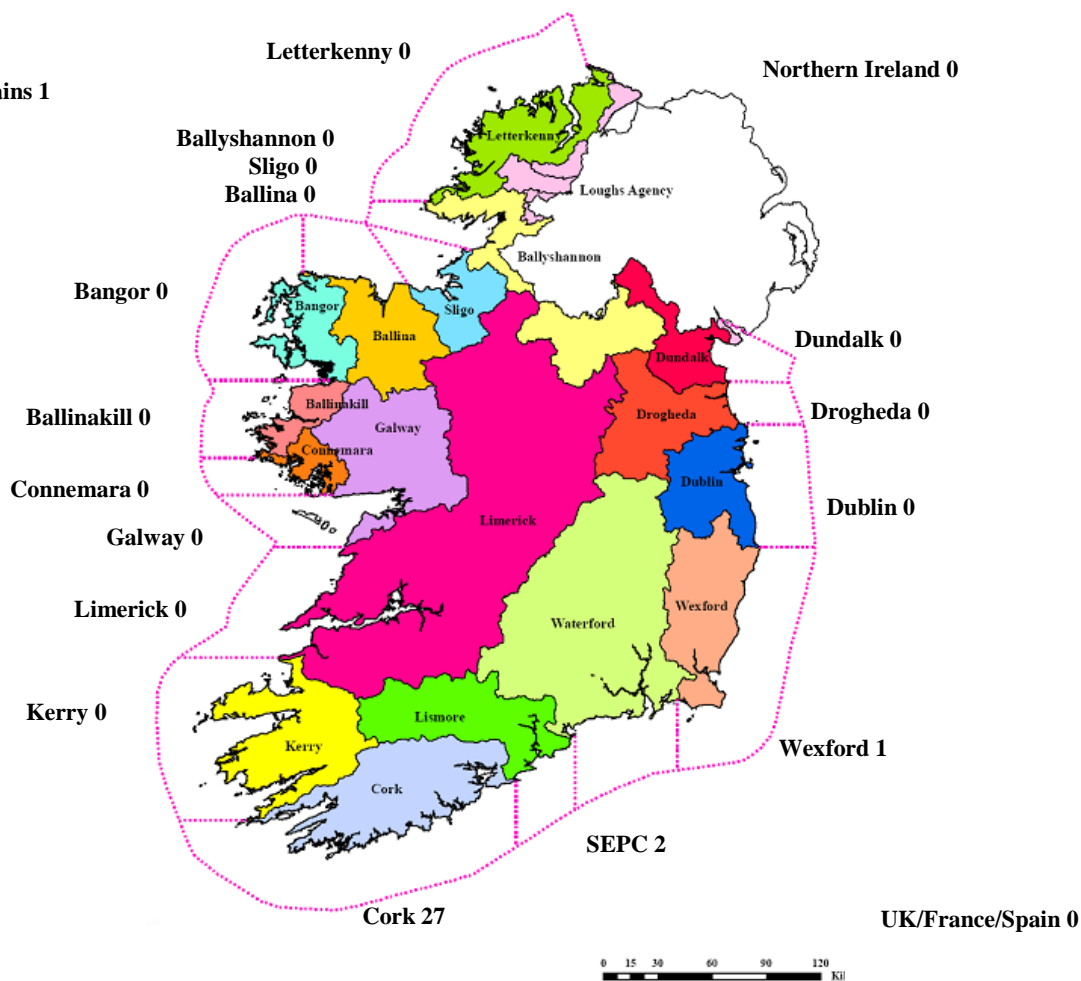
District	MSA (SD)	#
Dundalk	0.1 (0.5)	0
Drogheda	0.1 (0.5)	0
Dublin	0.1 (0.4)	0
Wexford	2.1 (4.2)	1
Waterford/Lismore	7.6 (7.4)	2
Cork	83.4 (8.1)	27
Kerry	1.0 (2.1)	0
Limerick	0.7 (1.9)	0
Galway	0.9 (2.1)	0
Connemara	0.2 (0.9)	0
Ballinakill	0.2 (0.7)	0
Bangor	0.3 (1.4)	0
Ballina	0.3 (1.0)	0
Sligo	0.1 (0.4)	0
Ballyshannon	0.3 (1.1)	0
Letterkenny	0.2 (0.9)	0
Northern Ireland	0.1 (0.4)	0
Farmed Strains	2.3 (2.9)	1
UK/France/Spain		0

Cork Harbour fixed bag nets 2006 (n = 32)

Estimated fishery proportions by district or country



Farmed Strains 1



Cork Harbour draft nets 2006

Number screened = 28

Number of fish identified as being from UK/France/Spain = 0

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 28

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 88.4% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.2)	0	GY 145	Kilcogan	0.0 (0.3)	0
DK 4	Fane	0.4 (1.8)	0	GY 147	Corrib	0.2 (0.7)	0
DK 5	Glyde	0.0 (0.2)	0	GY 149	Owenboliska	0.0 (0.4)	0
DK 6	Dee	0.0 (0.3)	0	CN 152	Cashla	0.0 (0.2)	0
DR 8	Boyne	0.1 (0.6)	0	CN 155	Screebe	0.0 (0.2)	0
DB 15	Liffey	0.0 (0.3)	0	CN 161	Owenmore	0.2 (1.0)	0
DB 18	Dargle	0.0 (0.2)	0	BK 166	Dawros	0.0 (0.3)	0
DB 21	Vartry	0.0 (0.2)	0	BK 167	Culfin	0.0 (0.3)	0
WX 26	Avoca	0.0 (0.3)	0	BK 168	Erriff	0.1 (0.3)	0
WX 31	Slaney	0.1 (0.6)	0	BK 169	Bundorragha	0.0 (0.2)	0
WD/LS*	SEPC	7.5 (7.5)	2	BK 172	Bunowen	0.0 (0.3)	0
CK 66	Lee	88.4 (8.2)	25	BG 178	Newport	0.2 (1.1)	0
CK 69	Bandon	0.1 (0.4)	0	BG 179	Srahmore	0.0 (0.2)	0
CK 72	Ilen	0.0 (0.2)	0	BG 185	Owenduff	0.0 (0.3)	0
CK 78	Owvane	0.0 (0.2)	0	BG 186	Owenmore	0.1 (0.7)	0
CK 80	Glengariff	0.0 (0.2)	0	BA 194	Cloonaghmore	0.0 (0.3)	0
CK 81	Adrigole	0.0 (0.3)	0	BA 195	Moy	0.2 (0.7)	0
KY 84	Croanshagh	0.0 (0.4)	0	BA 196	Brusna	0.0 (0.2)	0
KY 85	Owenshagh	0.1 (0.8)	0	BA 200	Easkey	0.0 (0.3)	0
KY 86	Cloonee	0.0 (0.2)	0	SO 202	Ballysadare	0.1 (0.4)	0
KY 87	Sheen	0.0 (0.2)	0	SO 203	Garvogue	0.0 (0.2)	0
KY 88	Roughty	0.0 (0.3)	0	BS 208	Duff	0.1 (0.5)	0
KY 89	Finnihiy	0.0 (0.2)	0	BS 209	Drowes	0.0 (0.3)	0
KY 90	KerryBlackwater	0.0 (0.3)	0	BS 210	Erne	0.0 (0.3)	0
KY 92	Sneem	0.0 (0.1)	0	BS 211	Abbey	0.0 (0.3)	0
KY 93	Owreagh	0.0 (0.2)	0	BS 213	Laghy	0.0 (0.3)	0
KY 97	Currane	0.1 (0.4)	0	BS 214	Eske	0.0 (0.2)	0
KY 98	Inny	0.0 (0.3)	0	BS 215	Eany	0.0 (0.3)	0
KY 102	Ferta	0.0 (0.3)	0	BS 219	Glen	0.0 (0.2)	0
KY 103	Behy	0.0 (0.4)	0	BS 220	Owenwee	0.0 (0.2)	0
KY 104	Caragh	0.1 (0.5)	0	LY 223	Owenea	0.0 (0.2)	0
KY 106	Laune	0.4 (1.3)	0	LY 225	Gweebarra	0.0 (0.3)	0
KY 107	Maine	0.1 (0.4)	0	LY 228	Gweedore	0.0 (0.2)	0
KY 108	Emlagh	0.0 (0.2)	0	LY 229	Clady	0.0 (0.2)	0
KY 109	Owenascaul	0.0 (0.2)	0	LY 240	Lackagh	0.0 (0.2)	0
KY 111	Milltown	0.0 (0.3)	0	LY 248	Leannan	0.0 (0.3)	0
KY 112	Feoghanagh	0.0 (0.3)	0	LY 249	Swilly	0.0 (0.2)	0
KY 117	TraleeLee	0.0 (0.3)	0	LY 253	Crana	0.0 (0.2)	0
LK 119	Feale	0.1 (0.4)	0	-	Northern Ireland	0.1 (0.5)	0
LK 120	Galey	0.0 (0.2)	0	-	Aqaugen	0.0 (0.2)	0
LK 126	Maigue	0.0 (0.3)	0	-	Fanad	0.0 (0.3)	0
LK 128	Mulcair	0.1 (0.8)	0	-	UK/France/Spain		0

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

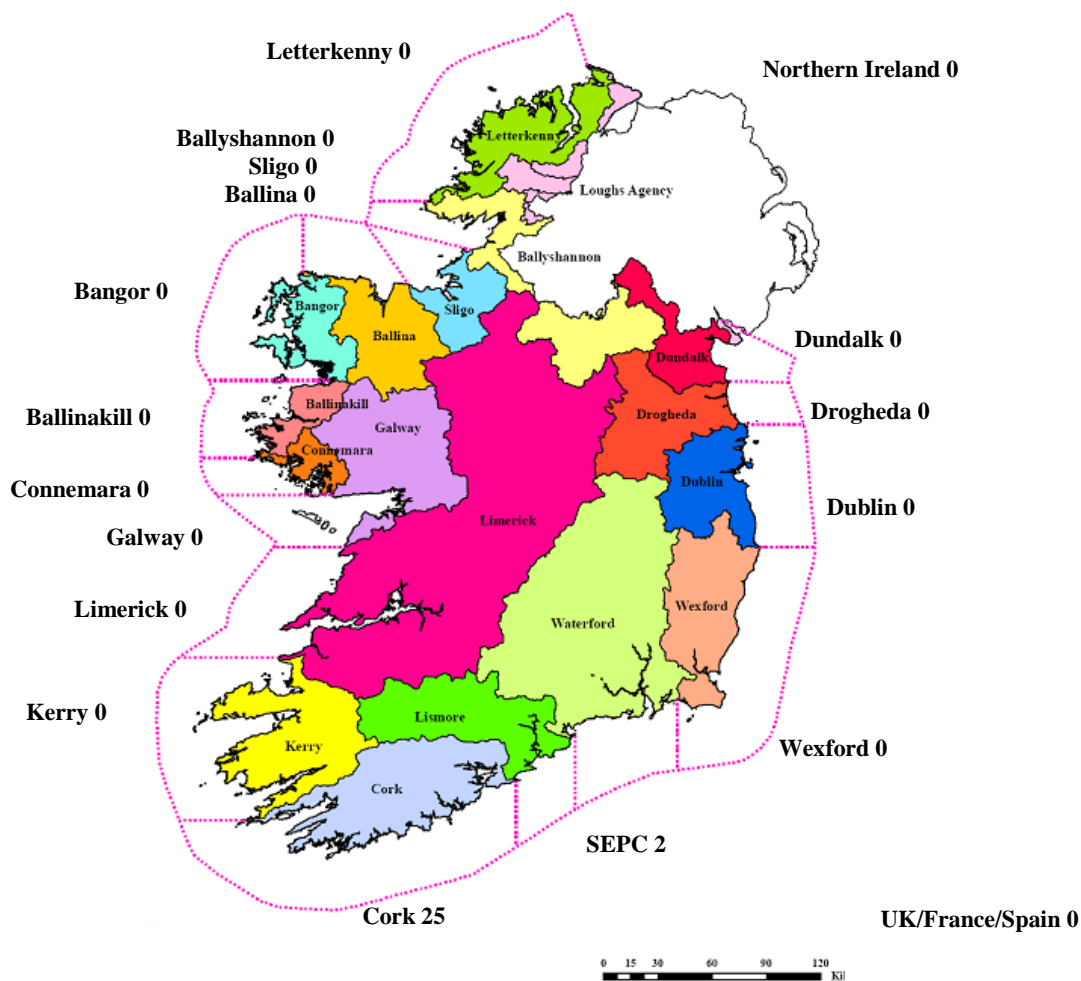
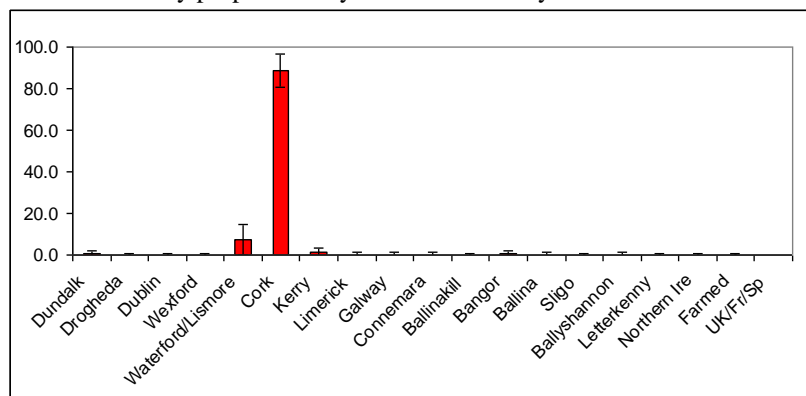
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.5 (1.8)	0
Drogheda	0.1 (0.6)	0
Dublin	0.1 (0.4)	0
Wexford	0.1 (0.6)	0
Waterford/Lismore	7.5 (7.5)	2
Cork	88.7 (8.2)	25
Kerry	1.0 (2.0)	0
Limerick	0.2 (1.0)	0
Galway	0.2 (0.9)	0
Connemara	0.2 (1.0)	0
Ballinakill	0.2 (0.7)	0
Bangor	0.3 (1.4)	0
Ballina	0.2 (0.9)	0
Sligo	0.1 (0.5)	0
Ballyshannon	0.2 (0.9)	0
Letterkenny	0.2 (0.6)	0
Northern Ireland	0.1 (0.5)	0
Farmed Strains	0.0 (0.4)	0
UK/France/Spain		0

Cork Harbour draft nets 2006 (n = 28)

Estimated fishery proportions by district or country



Youghal drift nets 2006

Number screened = 115

Number of fish identified as being from UK/France/Spain = 0

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 105

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 95.0% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.2)	0	GY 145	Kilcogan	0.0 (0.1)	0
DK 4	Fane	0.0 (0.1)	0	GY 147	Corrib	0.4 (1.1)	0
DK 5	Glyde	0.0 (0.1)	0	GY 149	Owenboliska	0.0 (0.1)	0
DK 6	Dee	0.0 (0.1)	0	CN 152	Cashla	0.0 (0.1)	0
DR 8	Boyne	0.1 (0.4)	0	CN 155	Screebe	0.0 (0.1)	0
DB 15	Liffey	0.0 (0.1)	0	CN 161	Owenmore	0.0 (0.3)	0
DB 18	Dargle	0.0 (0.1)	0	BK 166	Dawros	0.0 (0.1)	0
DB 21	Vartry	0.0 (0.2)	0	BK 167	Culfin	0.0 (0.1)	0
WX 26	Avoca	0.0 (0.1)	0	BK 168	Erriff	0.1 (0.3)	0
WX 31	Slaney	0.1 (0.4)	0	BK 169	Bundorragha	0.0 (0.1)	0
WD/LS*	SEPC	88.7 (4.1)	93	BK 172	Bunowen	0.0 (0.1)	0
CK 66	Lee	6.3 (2.6)	7	BG 178	Newport	0.0 (0.1)	0
CK 69	Bandon	0.0 (0.2)	0	BG 179	Srahmore	0.0 (0.1)	0
CK 72	Ilen	0.0 (0.1)	0	BG 185	Owenduff	0.0 (0.1)	0
CK 78	Owvane	0.0 (0.2)	0	BG 186	Owenmore	0.1 (0.4)	0
CK 80	Glengariff	0.0 (0.1)	0	BA 194	Cloonaghmore	0.0 (0.1)	0
CK 81	Adrigole	0.0 (0.1)	0	BA 195	Moy	0.1 (0.4)	0
KY 84	Croanshagh	0.0 (0.1)	0	BA 196	Brusna	0.0 (0.1)	0
KY 85	Owenshagh	0.0 (0.1)	0	BA 200	Easkey	0.0 (0.1)	0
KY 86	Cloonee	0.0 (0.3)	0	SO 202	Ballysadare	0.0 (0.1)	0
KY 87	Sheen	0.0 (0.1)	0	SO 203	Garvogue	0.0 (0.1)	0
KY 88	Roughty	0.0 (0.1)	0	BS 208	Duff	0.0 (0.1)	0
KY 89	Finnihiy	0.0 (0.1)	0	BS 209	Drowes	0.0 (0.2)	0
KY 90	KerryBlackwater	0.0 (0.1)	0	BS 210	Erne	0.0 (0.2)	0
KY 92	Sneem	0.0 (0.1)	0	BS 211	Abbey	0.0 (0.1)	0
KY 93	Owreagh	0.0 (0.1)	0	BS 213	Laghy	0.0 (0.1)	0
KY 97	Currane	0.0 (0.1)	0	BS 214	Eske	0.0 (0.1)	0
KY 98	Inny	0.1 (0.4)	0	BS 215	Eany	0.0 (0.1)	0
KY 102	Ferta	0.0 (0.1)	0	BS 219	Glen	0.0 (0.1)	0
KY 103	Behy	0.0 (0.1)	0	BS 220	Owenwee	0.0 (0.1)	0
KY 104	Caragh	0.0 (0.1)	0	LY 223	Owenea	0.0 (0.2)	0
KY 106	Laune	2.3 (2.9)	2	LY 225	Gweebarra	0.0 (0.1)	0
KY 107	Maine	0.2 (0.8)	0	LY 228	Gweedore	0.0 (0.1)	0
KY 108	Emlagh	0.0 (0.1)	0	LY 229	Clady	0.0 (0.1)	0
KY 109	Owenascaul	0.0 (0.2)	0	LY 240	Lackagh	0.0 (0.1)	0
KY 111	Milltown	0.0 (0.2)	0	LY 248	Leannan	0.0 (0.1)	0
KY 112	Feoghanagh	0.0 (0.1)	0	LY 249	Swilly	0.0 (0.1)	0
KY 117	TraleeLee	0.0 (0.1)	0	LY 253	Crana	0.0 (0.1)	0
LK 119	Feale	0.0 (0.1)	0	-	Northern Ireland	0.0 (0.2)	0
LK 120	Galey	0.0 (0.1)	0	-	Aqaugen	0.0 (0.1)	0
LK 126	Maigue	0.0 (0.1)	0	-	Fanad	0.0 (0.1)	0
LK 128	Mulcair	0.6 (1.2)	1	-	UK/France/Spain		0

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

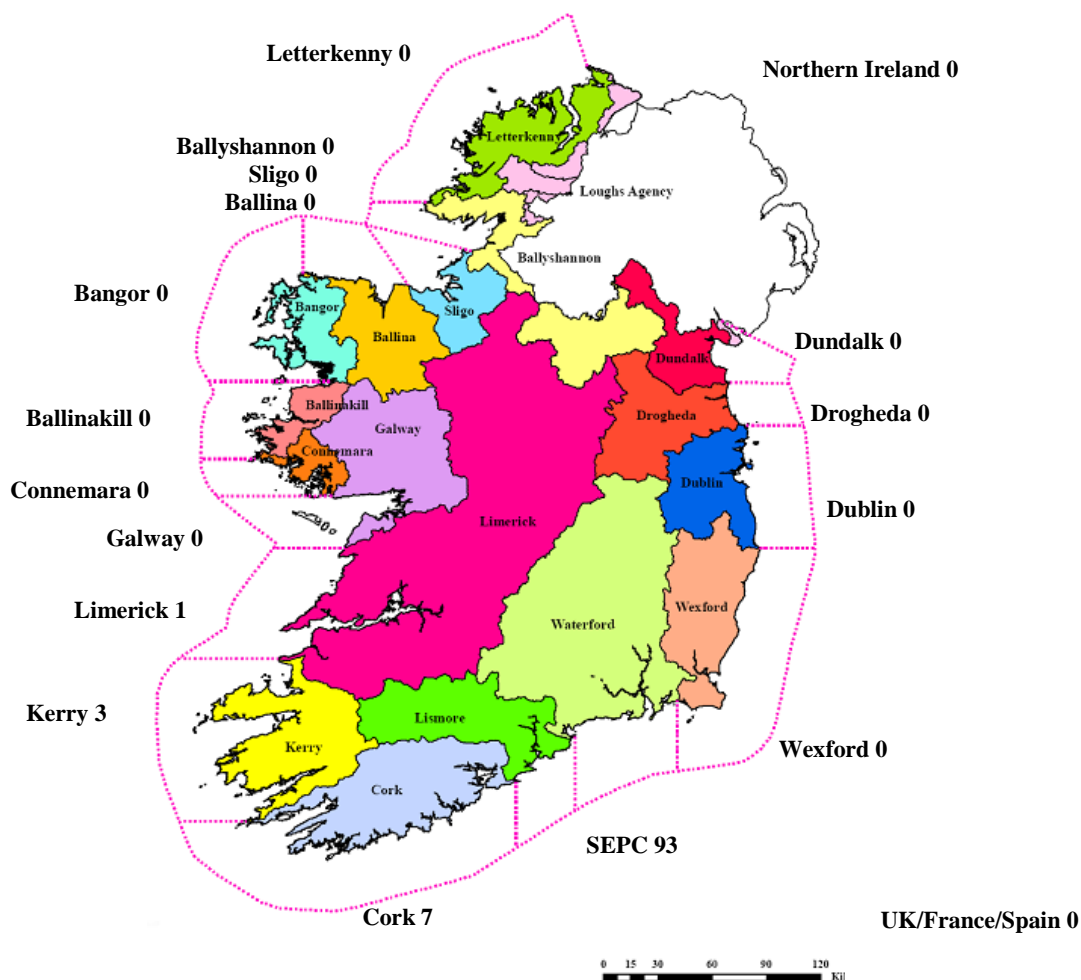
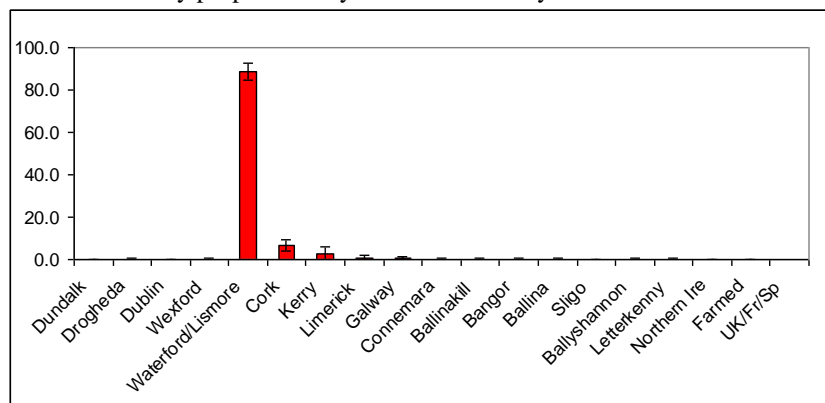
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.1 (0.3)	0
Drogheda	0.1 (0.4)	0
Dublin	0.0 (0.3)	0
Wexford	0.1 (0.4)	0
Waterford/Lismore	88.8 (4.1)	93
Cork	6.4 (2.6)	7
Kerry	2.8 (3.1)	3
Limerick	0.7 (1.2)	1
Galway	0.4 (1.1)	0
Connemara	0.1 (0.3)	0
Ballinakill	0.1 (0.4)	0
Bangor	0.1 (0.5)	0
Ballina	0.1 (0.4)	0
Sligo	0.0 (0.1)	0
Ballyshannon	0.1 (0.4)	0
Letterkenny	0.1 (0.3)	0
Northern Ireland	0.0 (0.2)	0
Farmed Strains	0.0 (0.1)	0
UK/France/Spain		0

Youghal drift nets 2006 (n = 105)

Estimated fishery proportions by district or country



Waterford drift nets 2006

Number screened = 140

Number of fish identified as being from UK/France/Spain = 6

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 129

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 94.8% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.2)	0	GY 145	Kilcogan	0.0 (0.1)	0
DK 4	Fane	0.0 (0.1)	0	GY 147	Corrib	0.4 (1.1)	1
DK 5	Glyde	0.0 (0.1)	0	GY 149	Owenboliska	0.0 (0.1)	0
DK 6	Dee	0.4 (0.9)	0	CN 152	Cashla	0.0 (0.1)	0
DR 8	Boyne	0.9 (1.3)	1	CN 155	Screebe	0.0 (0.0)	0
DB 15	Liffey	0.0 (0.2)	0	CN 161	Owenmore	0.0 (0.1)	0
DB 18	Dargle	0.0 (0.2)	0	BK 166	Dawros	0.0 (0.1)	0
DB 21	Vartry	0.0 (0.1)	0	BK 167	Culfin	0.0 (0.1)	0
WX 26	Avoca	0.0 (0.3)	0	BK 168	Erriff	0.0 (0.1)	0
WX 31	Slaney	0.9 (2.2)	1	BK 169	Bundorragha	0.0 (0.1)	0
WD/LS*	SEPC	82.2 (4.1)	111	BK 172	Bunowen	0.0 (0.1)	0
CK 66	Lee	1.0 (1.1)	1	BG 178	Newport	0.0 (0.1)	0
CK 69	Bandon	0.0 (0.2)	0	BG 179	Srahmore	8.3 (2.6)	11
CK 72	Ilen	0.0 (0.1)	0	BG 185	Owenduff	0.0 (0.2)	0
CK 78	Owvane	0.0 (0.1)	0	BG 186	Owenmore	0.0 (0.1)	0
CK 80	Glengariff	0.0 (0.1)	0	BA 194	Cloonaghmore	0.0 (0.1)	0
CK 81	Adrigole	0.0 (0.2)	0	BA 195	Moy	0.3 (0.6)	0
KY 84	Croanshagh	0.0 (0.1)	0	BA 196	Brusna	0.0 (0.1)	0
KY 85	Owenshagh	0.0 (0.1)	0	BA 200	Easkey	0.0 (0.1)	0
KY 86	Cloonee	0.0 (0.1)	0	SO 202	Ballysadare	0.0 (0.2)	0
KY 87	Sheen	0.0 (0.1)	0	SO 203	Garvogue	0.0 (0.1)	0
KY 88	Roughty	0.0 (0.1)	0	BS 208	Duff	0.0 (0.1)	0
KY 89	Finnihiy	0.0 (0.1)	0	BS 209	Drowes	0.0 (0.1)	0
KY 90	KerryBlackwater	0.0 (0.1)	0	BS 210	Erne	0.0 (0.1)	0
KY 92	Sneem	0.0 (0.1)	0	BS 211	Abbey	0.0 (0.1)	0
KY 93	Owreagh	0.0 (0.1)	0	BS 213	Laghy	0.0 (0.1)	0
KY 97	Currane	0.0 (0.1)	0	BS 214	Eske	0.0 (0.1)	0
KY 98	Inny	0.0 (0.2)	0	BS 215	Eany	0.0 (0.1)	0
KY 102	Ferta	0.0 (0.2)	0	BS 219	Glen	0.0 (0.1)	0
KY 103	Behy	0.0 (0.1)	0	BS 220	Owenwee	0.0 (0.1)	0
KY 104	Caragh	0.0 (0.1)	0	LY 223	Owenea	0.0 (0.1)	0
KY 106	Laune	0.1 (0.4)	0	LY 225	Gweebarra	0.0 (0.1)	0
KY 107	Maine	0.0 (0.3)	0	LY 228	Gweedore	0.0 (0.1)	0
KY 108	Emlagh	0.0 (0.1)	0	LY 229	Clady	0.0 (0.1)	0
KY 109	Owenascaul	0.0 (0.1)	0	LY 240	Lackagh	0.0 (0.1)	0
KY 111	Milltown	0.0 (0.3)	0	LY 248	Leannan	0.0 (0.1)	0
KY 112	Feoghanagh	0.0 (0.1)	0	LY 249	Swilly	0.0 (0.1)	0
KY 117	TraleeLee	0.0 (0.1)	0	LY 253	Crana	0.0 (0.1)	0
LK 119	Feale	0.0 (0.1)	0	-	Northern Ireland	0.0 (0.1)	0
LK 120	Galey	0.0 (0.1)	0	-	Aqaugen	0.0 (0.1)	0
LK 126	Maigue	0.0 (0.1)	0	-	Fanad	0.0 (0.1)	0
LK 128	Mulcair	0.3 (0.9)	0	-	UK/France/Spain		6

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

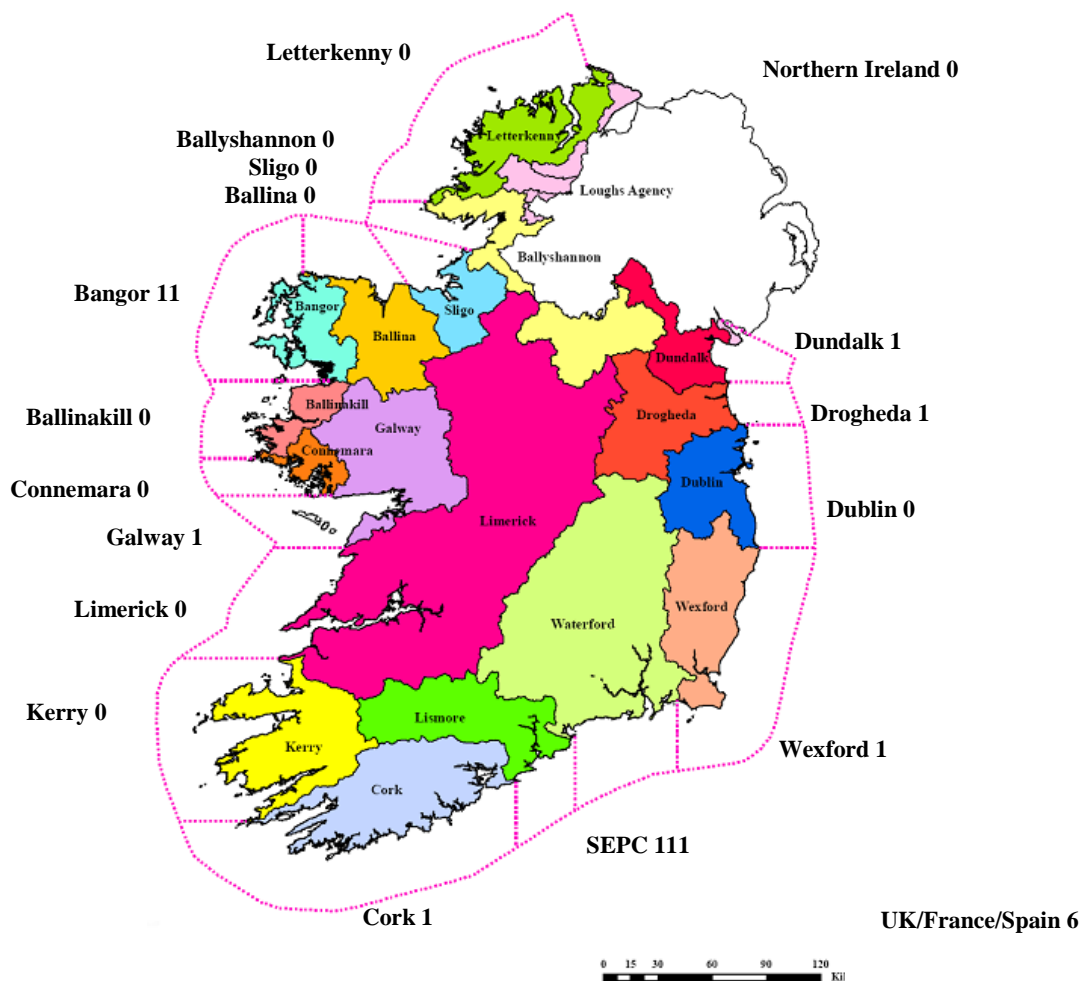
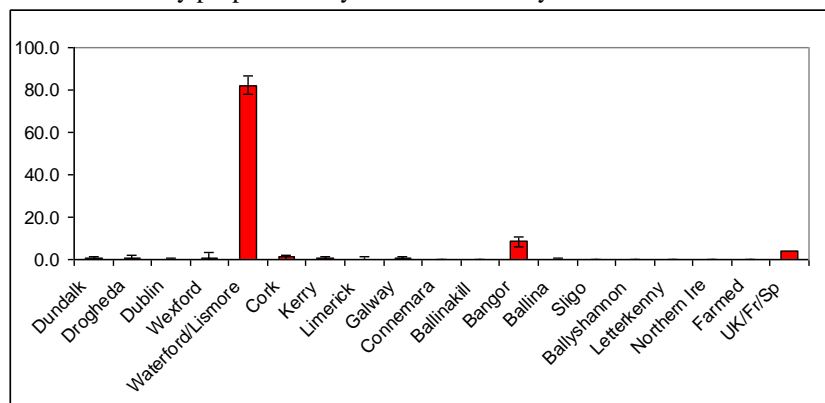
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.4 (0.9)	1
Drogheda	0.9 (1.3)	1
Dublin	0.1 (0.3)	0
Wexford	0.9 (2.2)	1
Waterford/Lismore	82.3 (4.1)	111
Cork	1.1 (1.1)	1
Kerry	0.3 (0.7)	0
Limerick	0.3 (0.9)	0
Galway	0.4 (1.1)	1
Connemara	0.0 (0.1)	0
Ballinakill	0.0 (0.2)	0
Bangor	8.4 (2.6)	11
Ballina	0.3 (0.6)	0
Sligo	0.0 (0.2)	0
Ballyshannon	0.1 (0.3)	0
Letterkenny	0.1 (0.2)	0
Northern Ireland	0.0 (0.1)	0
Farmed Strains	0.0 (0.1)	0
UK/France/Spain		6

Waterford drift nets 2006 (n = 135)

Estimated fishery proportions by district or country



Dundalk draft nets 2006

Number screened = 85

Number of fish identified as being from UK/France/Spain = 0

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 69

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 90.9% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.2)	0	GY 145	Kilcogan	0.0 (0.2)	0
DK 4	Fane	24.8 (6.4)	17	GY 147	Corrib	0.1 (0.3)	0
DK 5	Glyde	0.6 (2.1)	0	GY 149	Owenboliska	0.0 (0.1)	0
DK 6	Dee	15.7 (10.9)	11	CN 152	Cashla	0.0 (0.1)	0
DR 8	Boyne	46.2 (11.0)	32	CN 155	Screebe	0.0 (0.1)	0
DB 15	Liffey	0.7 (1.2)	0	CN 161	Owenmore	0.0 (0.2)	0
DB 18	Dargle	0.0 (0.2)	0	BK 166	Dawros	0.0 (0.1)	0
DB 21	Vartry	1.2 (2.3)	1	BK 167	Culfin	0.0 (0.1)	0
WX 26	Avoca	0.0 (0.3)	0	BK 168	Erriff	0.0 (0.2)	0
WX 31	Slaney	0.1 (0.7)	0	BK 169	Bundorragha	0.3 (1.1)	0
WD/LS*	SEPC	4.2 (3.2)	3	BK 172	Bunowen	0.1 (0.7)	0
CK 66	Lee	0.0 (0.2)	0	BG 178	Newport	0.0 (0.1)	0
CK 69	Bandon	0.0 (0.2)	0	BG 179	Srahmore	0.0 (0.1)	0
CK 72	Ilen	0.0 (0.1)	0	BG 185	Owenduff	0.0 (0.2)	0
CK 78	Owvane	0.0 (0.2)	0	BG 186	Owenmore	0.1 (0.4)	0
CK 80	Glengariff	0.0 (0.1)	0	BA 194	Cloonaghmore	0.0 (0.1)	0
CK 81	Adrigole	0.0 (0.3)	0	BA 195	Moy	0.3 (1.0)	0
KY 84	Croanshagh	0.0 (0.1)	0	BA 196	Brusna	0.3 (1.1)	0
KY 85	Owenshagh	0.0 (0.1)	0	BA 200	Easkey	0.0 (0.1)	0
KY 86	Cloonee	0.0 (0.1)	0	SO 202	Ballysadare	0.0 (0.2)	0
KY 87	Sheen	0.0 (0.1)	0	SO 203	Garvogue	0.0 (0.2)	0
KY 88	Roughty	0.0 (0.2)	0	BS 208	Duff	1.4 (1.5)	1
KY 89	Finnihiy	0.0 (0.1)	0	BS 209	Drowes	0.0 (0.1)	0
KY 90	KerryBlackwater	0.0 (0.2)	0	BS 210	Erne	0.0 (0.2)	0
KY 92	Sneem	0.0 (0.2)	0	BS 211	Abbey	1.0 (1.4)	1
KY 93	Owreagh	0.0 (0.1)	0	BS 213	Laghy	0.0 (0.1)	0
KY 97	Currane	0.0 (0.2)	0	BS 214	Eske	0.0 (0.1)	0
KY 98	Inny	0.0 (0.3)	0	BS 215	Eany	0.0 (0.1)	0
KY 102	Ferta	0.0 (0.1)	0	BS 219	Glen	0.0 (0.2)	0
KY 103	Behy	0.0 (0.1)	0	BS 220	Owenwee	0.0 (0.1)	0
KY 104	Caragh	0.0 (0.2)	0	LY 223	Owenea	0.0 (0.2)	0
KY 106	Laune	0.4 (1.0)	0	LY 225	Gweebarra	0.0 (0.1)	0
KY 107	Maine	0.1 (0.3)	0	LY 228	Gweedore	0.0 (0.1)	0
KY 108	Emlagh	0.0 (0.1)	0	LY 229	Clady	0.0 (0.2)	0
KY 109	Owenascaul	0.0 (0.1)	0	LY 240	Lackagh	0.0 (0.1)	0
KY 111	Milltown	0.0 (0.1)	0	LY 248	Leannan	0.0 (0.1)	0
KY 112	Feoghanagh	0.0 (0.2)	0	LY 249	Swilly	0.0 (0.1)	0
KY 117	TraleeLee	0.0 (0.1)	0	LY 253	Crana	0.0 (0.1)	0
LK 119	Feale	0.0 (0.1)	0	-	Northern Ireland	1.5 (1.5)	1
LK 120	Galey	0.0 (0.1)	0	-	Aqaugen	0.0 (0.1)	0
LK 126	Maigue	0.0 (0.1)	0	-	Fanad	0.0 (0.1)	0
LK 128	Mulcair	0.0 (0.3)	0	-	UK/France/Spain		0

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

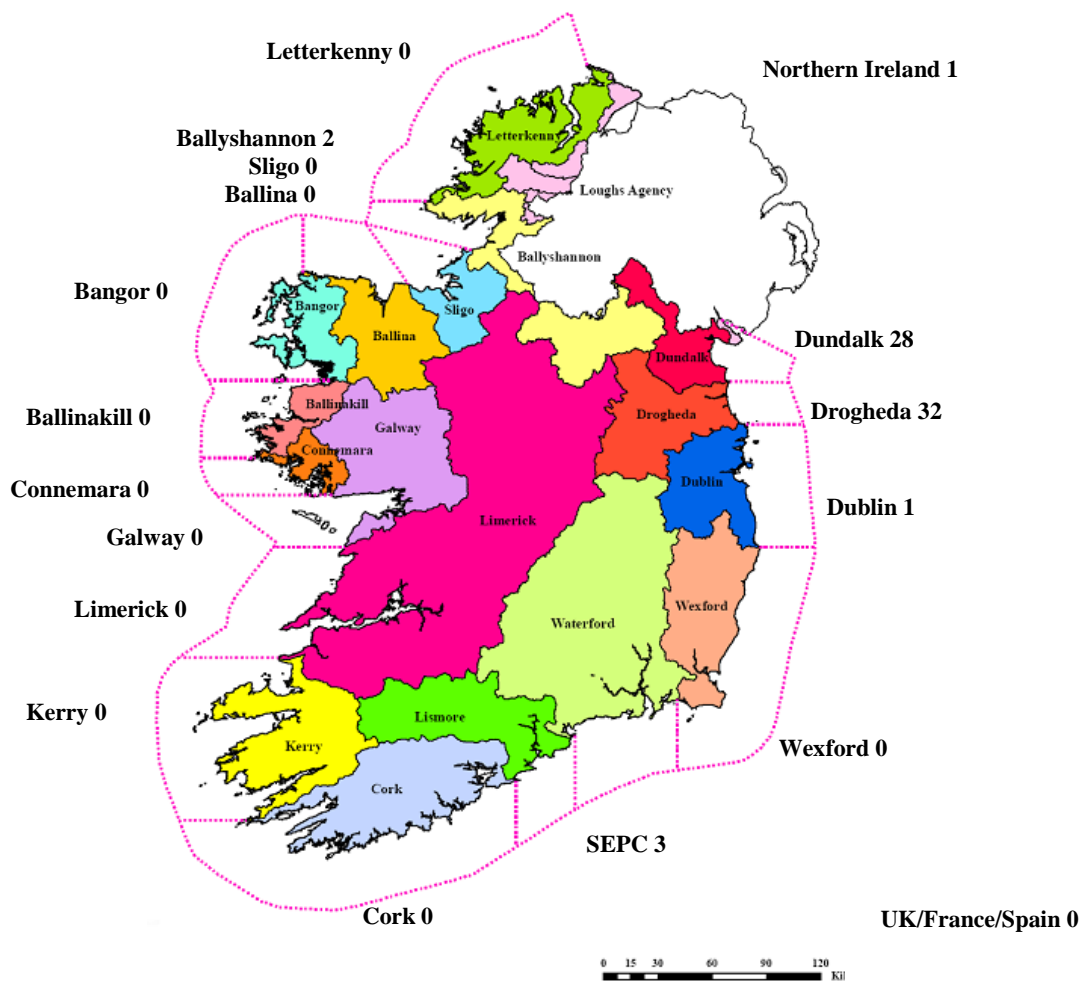
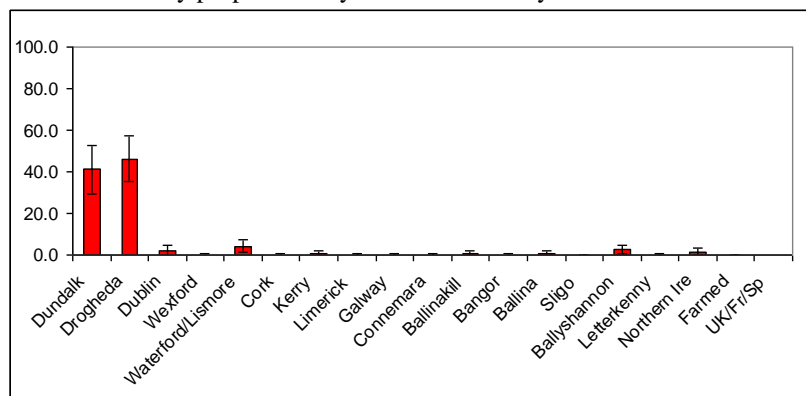
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	41.0 (11.5)	28
Drogheda	46.3 (11.0)	32
Dublin	2.0 (2.4)	1
Wexford	0.2 (0.7)	0
Waterford/Lismore	4.2 (3.2)	3
Cork	0.1 (0.5)	0
Kerry	0.7 (1.2)	0
Limerick	0.1 (0.4)	0
Galway	0.1 (0.4)	0
Connemara	0.1 (0.3)	0
Ballinakill	0.4 (1.3)	0
Bangor	0.1 (0.5)	0
Ballina	0.6 (1.7)	0
Sligo	0.0 (0.2)	0
Ballyshannon	2.5 (2.1)	2
Letterkenny	0.1 (0.4)	0
Northern Ireland	1.5 (1.5)	1
Farmed Strains	0.0 (0.2)	0
UK/France/Spain		0

Dundalk draft nets 2006 (n = 69)

Estimated fishery proportions by district or country



Foyle Fishery 2005

Number screened = 72

Number of fish identified as being from UK/France/Spain = 20

Number of fish analysed against Irish Baseline (minimum 10/15 loci scored) = 42

Estimated MSA proportions and numbers in the fishery by population group (proportions in bold considered to be the principal contributors (propn. >SD) = 87.9% of fishery samples).

FB code	River	MSA (SD)	#	FB code	River	MSA (SD)	#
DK 3	Castletown	0.0 (0.1)	0	GY 145	Kilcogan	0.0 (0.1)	0
DK 4	Fane	0.0 (0.2)	0	GY 147	Corrib	1.3 (2.1)	1
DK 5	Glyde	0.0 (0.2)	0	GY 149	Owenboliska	0.0 (0.1)	0
DK 6	Dee	0.0 (0.1)	0	CN 152	Cashla	1.6 (2.3)	1
DR 8	Boyne	0.1 (0.4)	0	CN 155	Screebe	0.0 (0.2)	0
DB 15	Liffey	0.0 (0.1)	0	CN 161	Owenmore	0.0 (0.3)	0
DB 18	Dargle	0.0 (0.4)	0	BK 166	Dawros	0.0 (0.2)	0
DB 21	Vartry	0.0 (0.2)	0	BK 167	Culfin	0.0 (0.1)	0
WX 26	Avoca	0.0 (0.3)	0	BK 168	Erriff	0.2 (1.0)	0
WX 31	Slaney	0.1 (0.6)	0	BK 169	Bundorragha	0.0 (0.3)	0
WD/LS*	SEPC	1.9 (2.6)	1	BK 172	Bunowen	0.0 (0.2)	0
CK 66	Lee	0.0 (0.2)	0	BG 178	Newport	0.0 (0.1)	0
CK 69	Bandon	0.6 (1.7)	0	BG 179	Srahmore	0.1 (0.4)	0
CK 72	Ilen	0.0 (0.3)	0	BG 185	Owenduff	0.3 (1.1)	0
CK 78	Owvane	0.0 (0.1)	0	BG 186	Owenmore	0.0 (0.3)	0
CK 80	Glengariff	0.1 (0.5)	0	BA 194	Cloonaghmore	0.0 (0.3)	0
CK 81	Adrigole	0.0 (0.2)	0	BA 195	Moy	6.0 (4.6)	3
KY 84	Croanshagh	0.0 (0.2)	0	BA 196	Brusna	0.1 (0.5)	0
KY 85	Owenshagh	0.0 (0.2)	0	BA 200	Easkey	0.1 (0.6)	0
KY 86	Cloonee	0.0 (0.1)	0	SO 202	Ballysadare	0.0 (0.1)	0
KY 87	Sheen	0.0 (0.1)	0	SO 203	Garvogue	0.0 (0.1)	0
KY 88	Roughty	0.0 (0.3)	0	BS 208	Duff	0.0 (0.2)	0
KY 89	Finnihiy	0.0 (0.1)	0	BS 209	Drowes	0.1 (0.6)	0
KY 90	KerryBlackwater	0.0 (0.1)	0	BS 210	Erne	0.0 (0.2)	0
KY 92	Sneem	0.0 (0.1)	0	BS 211	Abbey	2.3 (3.8)	1
KY 93	Owreagh	0.0 (0.1)	0	BS 213	Laghy	0.0 (0.1)	0
KY 97	Currane	0.0 (0.3)	0	BS 214	Eske	0.0 (0.1)	0
KY 98	Inny	0.0 (0.2)	0	BS 215	Eany	0.0 (0.2)	0
KY 102	Ferta	0.0 (0.1)	0	BS 219	Glen	0.1 (0.6)	0
KY 103	Behy	0.0 (0.1)	0	BS 220	Owenwee	0.0 (0.1)	0
KY 104	Caragh	0.0 (0.2)	0	LY 223	Owenea	0.0 (0.3)	0
KY 106	Laune	1.5 (2.6)	1	LY 225	Gweebarra	0.0 (0.2)	0
KY 107	Maine	0.2 (0.8)	0	LY 228	Gweedore	0.0 (0.1)	0
KY 108	Emlagh	0.0 (0.2)	0	LY 229	Clady	0.0 (0.1)	0
KY 109	Owenascaul	0.0 (0.2)	0	LY 240	Lackagh	0.0 (0.1)	0
KY 111	Milltown	0.1 (0.5)	0	LY 248	Leannan	0.0 (0.3)	0
KY 112	Feoghanagh	0.0 (0.2)	0	LY 249	Swilly	0.1 (0.6)	0
KY 117	TraleeLee	0.1 (0.4)	0	LY 253	Crana	0.0 (0.2)	0
LK 119	Feale	0.0 (0.2)	0	-	Northern Ireland	54.1 (5.5)	31
LK 120	Galey	0.0 (0.1)	0	-	Aqaugen	0.0 (0.1)	0
LK 126	Maigue	0.0 (0.2)	0	-	Fanad	0.0 (0.2)	0
LK 128	Mulcair	0.0 (0.3)	0	-	UK/France/Spain		20

FB codes were obtained from the Central Fisheries Board with district identifiers (DK-Dundalk, DR-Drogheda, DB-Dublin, WX-Wexford, WD/LS-Waterford & Lismore, CK-Cork, KY-Kerry, LK-Limerick, GY-Galway, CN-Connemara, BK-Ballinakill, BG-Bangor, SO-Sligo, BS-Ballyshannon, LY-Letterkenny).

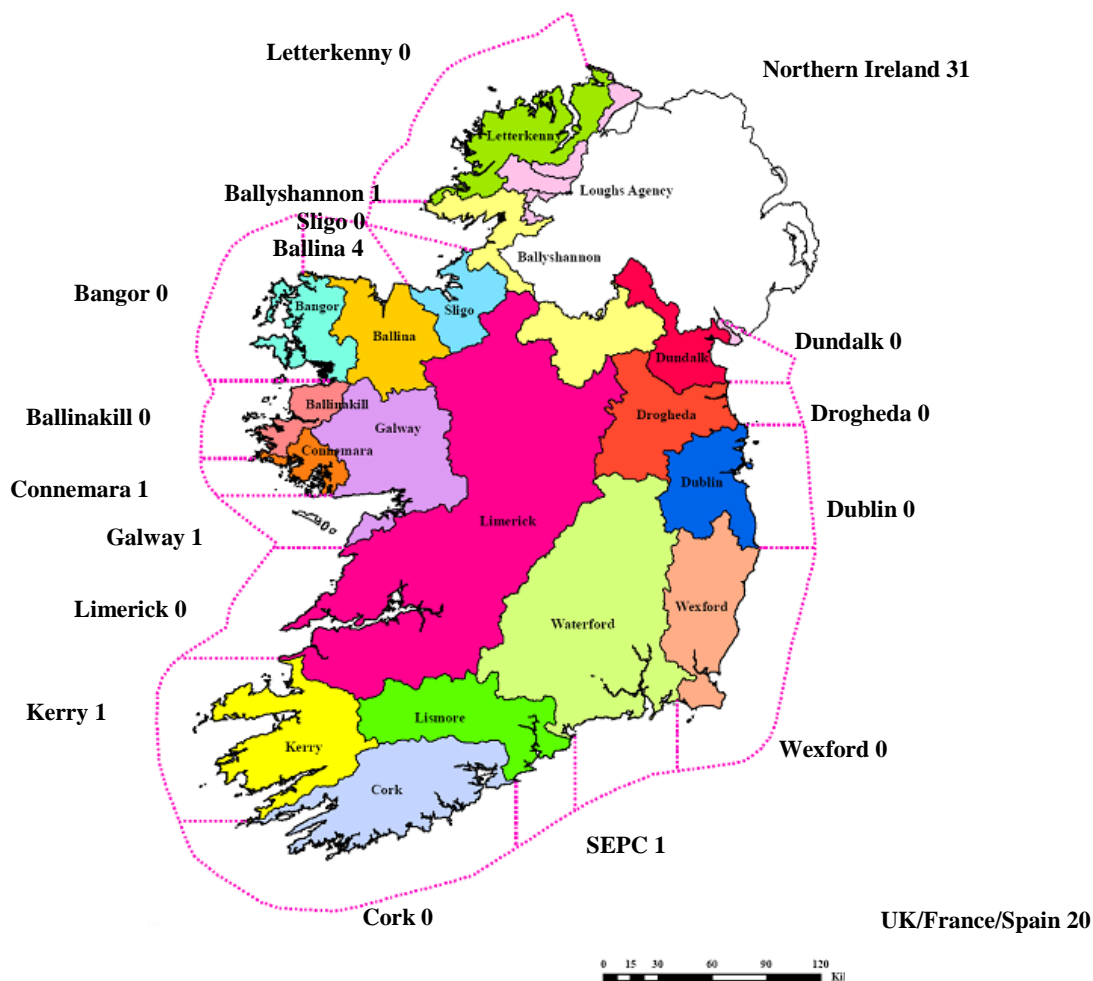
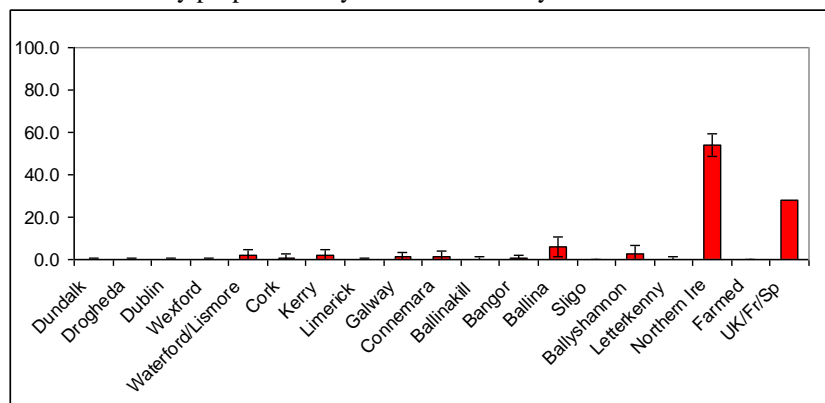
*Southeastern population complex (FB codes Barrow (WD 37), Nore (WD 38), Suir (WD 43), Blackwater (LS 59) and Bride (LS 60)).

Estimated proportions and numbers by district

District	MSA (SD)	#
Dundalk	0.1 (0.3)	0
Drogheda	0.1 (0.4)	0
Dublin	0.1 (0.5)	0
Wexford	0.2 (0.7)	0
Waterford/Lismore	1.9 (2.6)	1
Cork	0.8 (1.9)	0
Kerry	2.1 (2.8)	1
Limerick	0.1 (0.4)	0
Galway	1.4 (2.1)	1
Connemara	1.7 (2.3)	1
Ballinakill	0.3 (1.1)	0
Bangor	0.5 (1.2)	0
Ballina	6.2 (4.7)	4
Sligo	0.0 (0.2)	0
Ballyshannon	2.6 (3.9)	1
Letterkenny	0.2 (0.8)	0
Northern Ireland	54.1 (5.5)	31
Farmed Strains	0.0 (0.2)	0
UK/France/Spain		20

Foyle Fishery 2005 (n = 62)

Estimated fishery proportions by district or country



Appendix 1

Protocol for inventory of contemporary and historical spawning area distribution data by the seven Regional Fisheries Boards

Guidelines for Identification of Salmon Spawning Areas in Irish Rivers

Spawning areas for salmon are not distributed evenly throughout a river system but occur in readily identifiable spawning areas or zones. The distribution of these areas is related to river gradient and availability of gravels. Our primary interest here in this project is to identify these spawning areas, particularly those that are capable of accommodating significant numbers of spawning fish. Many studies have shown that these spawning areas are likely to be important in identifying distinct populations.

The objective of this project is to compile and map a national database of the spawning areas in all Irish salmon rivers. The first stage of this process will be to identify and map sections of river capable of functioning as spawning areas. Areas where salmon currently spawn and redd counts are undertaken and where salmon spawned historically also need to be recorded.

The sequence of marking individual rivers/tribs on the OS Discovery 1:50,000 scale maps is as follows:

- **Potential Spawning Zone (GREEN)**

Sections of rivers with significant potential spawning areas should be marked with a **green** highlighter marker. These areas can be identified as fairly continuous lengths (ranging from a few hundred metres to a number of kilometres) of river with typical gravel dominated riffle (spawning ford) and pool sequences. There is no necessity to distinguish or locate separately the spawning fords from the pools (these should all be considered as part of the spawning zone). These spawning areas or zones are typically low gradient, meandering channels with eroding banks and point bars. These areas are usually separated from each other by sections of river, which have high gradient consisting of mainly boulder or are long continuous, deep stretches of low gradient silt or sand dominated river.

- **Current Spawning Area (RED)**

Sections of river within the potential spawning area (Green above) where spawning is occurring currently should be marked with a **red** highlighter on the map on the Right Bank when facing downstream. Please indicate the number of redds that were observed within the section in 2006 (or most recent year, indicate year) along side this red mark.

- **Historical Spawning Area (BLUE)**

Sections of rivers within the potential spawning zone where salmon spawning has been known to occur in the past (prior to 2000) and is no longer evident should be marked in **blue** on the map on the Left Bank when facing downstream.

- **RFB Redd Count Survey Areas (Orange)**

Indicate in **orange** highlighter also on the Left Bank of the map the total length of river that is walked during the redd count surveys.

For further information contact P. Gargan (087-6468611) or W.Roche (087-6620479) Jan 2006

Appendix 2

Protocol for collection of juvenile freshwater samples by the seven Regional Fisheries Boards – see following 2 pages

CENTRAL FISHERIES BOARD

NATIONAL SALMON GENETICS PROGRAMME – 2006

System name:

Fishery Board Code No*:

* from wetted area report

Main channel: Y/N

Site Code No:

OR Trib name:

Date:

Operator:

Location section accessed at:

RFB assistance:

E/F time start:

E/F time finish:

E/F gear used:

Water levels (or gauge reading):

Conductivity (low water only):

μ S

Photographs: Y/N

GPS (u/s limit):

Known spawning location: Y/N/Do not know

GPS (d/s limit):

MSW spawning channel: Y/N

1 SW spawning channel: Y/N

Juvenile salmon forklengths (cm)	
Measured & Clipped	Measured BUT NOT Clipped
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
TOTALS	

Other fish species (State if Present (1-10), Common (11-50) or Abundant (>51)):				
BT:	Eel:	Stickleback:	Minnow:	Stoneloach:

Back of Salmon Genetics sampling sheet

OBSERVATIONS

Stocking information (give details of salmon stocking to include date, life stage, numbers, source (i.e. native or non-native) or if escapees are known to enter system:

Sampling site conditions:

Electrofishing observations (gear function etc):

Presence of precocious parr:

Other samples taken (MI etc)

Summary sampling protocol 2006

Sample target: Salmon fry (0+) and Salmon parr (1+ or older).

Sample size: 50 salmon fry (1/4 of body incl tail fin) and 50 adipose fin clips will be required from each known spawning area. **STORE IN SEPARATE BOTTLES.**

Sampling unit: Minimum sampling unit should be 500m.

Fish sampling method: Collect juvenile fish using electrofishing apparatus. Sharp scissors to be used to clip fish. Scissors must be cleaned (dip in alcohol and tissue wiped) before taking another fin clip.

Sample storage: For each site the fin clips are to be stored in one vessel with ethanol (95% concentration). The volume must be three times the fin clip mass volume and the vessel has to be parafilmed and screw capped tightly to ensure no drying out of the sample. The number of clips in each sample should be noted. Sample label should ideally be waterproof paper with details pencilled and put into the vessel. An adhesive label should also be put on the outside of the sample bottle.

Example of sample label:

Example of Site Code No. format IR06/173A. IR denotes Ireland, 04 denotes sampling year, 173 denotes Fishery Board River Code Number and individual sites will be denoted as A, B or C etc.

IR04/147B Grange 25/09/06

Appendix 3

Protocol for collection of fisheries scale samples

Please do not confuse Genetic scale sampling with Random Sample scale sampling.

- Random Sample scale sampling is taking scales from all salmon in a sample whether they are fin-clipped or not.
- Genetic scale sampling is taking scales from a pre-determined number of wild salmon only – those salmon with an adipose fin still attached.

A sampling protocol has been designed.

- It is important to use a clean (dry) hardback scalpel when taking samples of scales for the genetic study. Use a tissue wipe between each sample in order to remove scales and slime residue. This is to avoid cross contamination of DNA between samples.
- The genetic scale samples must be collected using the same protocol as collecting random samples, see Appendix 2 in Student Protocol 2006. The important difference between the two scale samples is that the salmon being sampled for the genetic study must be wild i.e. adipose fin is attached.
- Only wild salmon are scale sampled for the Genetic study. Wild salmon can be identified by the presence of an intact adipose fin.
- The information to be recorded on the scale envelope is:
 1. Carcass tag number
 2. Sampling location
 3. Recovery location
 4. Date
 5. Length (cms)
 6. Weight (kgs)
 7. Comments
- The Carcass Tag number **must** be recorded for the Genetic scale samples. Omission of the Carcass Tag number will make the Genetic scale sample useless.
- At end of each day the wild salmon scale samples should be held together with an elastic band and the top scale envelope labelled with sampling location and sample code (e.g. 06D for Burtonport).

- Please keep a note of the number of samples collected each week in your notebook. This information must be reported to Anne Cullen during the weekly update phone call.

Note: Please take any opportunity to take extra samples of wild salmon scales that come your way as long as this can be achieved without causing hassle or difficulties to the dealers.

Appendix 4

Standard operating procedures

1. Sample handling

1.1 Juveniles

1.2 Adults

2. DNA extraction

2.1 Ethanol preserved specimens

2.2 Scale envelope (dried) specimens

3. PCR

3.1 Sourcing and preparation of PCR reagents and supplies

3.1.1 ddH₂O

3.1.2 Primers

3.1.3 dNTPs

3.1.4 *Taq* polymerase, buffer and MgCl₂

3.1.5 Plastics and hardware

3.2 PCR of ethanol preserved specimens

3.3 PCR of dried specimens (scale envelopes)

4. Preparation of PCRs for electrophoresis

4.1 Dilution of PCR products

4.2 Standard allele ladders (cocktails)

5. Electrophoresis

5.1 Preparation of polyacrylamide gels

5.2 Setting up of sequencer

1. Sample handling

1.1 Juveniles (baseline)

1. Juvenile samples taken from freshwater by CFB personnel are received in 250ml containers containing absolute ethanol, and sealed with parafilm to ensure adequate storage conditions.
2. Each container typically contains 50 fin clips (in the case of 1+ parr) or 50 bodies (in the case of 0+ fry which are too small to fin clip), and a card listing details of where and when samples were taken, and who took the samples.
3. Upon opening the container, the date, location and name of collector are noted in a database.
4. A unique code is assigned to each set of samples to simplify later database entries. E.g. DK-1a-a (DK-Dundalk district, 1-fisheries board code 1, a-site a within that catchment, a-0+)
5. Samples are then removed and placed individually into 1.5ml screw topped (with an o-ring) tubes containing absolute ethanol.
6. Each tube is numbered, and 48 samples are placed in a sarstedt box which is clearly labelled with all details pertaining to that sample. These boxes of samples are then placed in storage at 4°C until genetic analysis is undertaken.
7. In cases where more than 48 individuals are found in a container, additional individuals are labelled and stored together in a similar manner, to potentially serve as part of a known mixed sample in the future for testing the baseline.

1.2 Adults (mixtures)

8. Adult samples generally arrive in the form of scale envelopes, consisting of a scraping of scales from the belly of the fish, placed in a small brown envelope, and sealed.
9. Each envelope also has details of where the sample came from, date of capture, length, weight, and a tag number (all adults are tagged upon capture) which allows any individual to be traced back to the fisherman who landed it.
10. These details are logged in a database and each individual is numbered for analysis in the laboratory.
11. Scale envelopes are stored in batches of 48 individuals in a cool, dry place until genetic analysis is to be carried out.
12. In some cases, adult samples have been made available to the project through fish processors. Instead of scale envelopes they provide the entire head of the fish carcass.

13. When samples arrive in the form of carcasses, a small piece of tissue (1x0.5x0.5cm) is taken from the gills or operculum of each individual and placed in a 1.5ml screw topped (with an o-ring) tube containing absolute ethanol.
14. These adult tissue samples are labelled appropriately (and tag numbers are recorded in the database) and stored in the same manner as juveniles.

2. DNA extraction

2.1 Ethanol preserved specimens

1. DNA extraction is generally carried out in batches of 48 individuals (typical number of samples taken per site).
2. 48 0.5ml eppendorf tubes are labelled (1-48), and 100µl of a 10% (w/v) chelex resin solution is added to each tube.
3. Sheets of blotting tissue are taken and folded over a number of times to make an absorbent surface on which to place samples.
4. Each individual is removed from the 1.5ml ethanol tube in which it was stored, and a small piece (1-2mm³) is cut off using a clean scalpel or scissors and placed to soak dry on the tissue paper.
5. The remaining material is returned to the ethanol tube for long term storage.
6. Once dry, the specimen is then rinsed in ddH₂O, dried again, and placed in the appropriate 0.5ml chelex containing tube.
7. When 48 individuals have been prepared in this manner, they are placed on a heating block at 99°C for 70 minutes.
8. Samples are removed from the heating block and centrifuged at high speed (14,000rpm) for five minutes, to gather solid matter at the bottom of the tubes.
9. 40-60µl of liquid supernatant is removed from each tube and placed in a well on an appropriately and clearly labelled 96 well (8x12) microtitre plate. (Generally 2 batches of 48 individuals are stored on a clearly labelled 96 well microtitre plate).
10. Microtitre plates containing DNA are stored at -20°C until needed for PCR.

2.2 Scale envelope (dried) specimens

1. As with ethanol preserved specimens, DNA extraction is generally carried out in batches of 48 individuals.
2. 48 0.5ml eppendorf tubes are labelled (1-48), and 100µl of a 10% (w/v) chelex resin solution is added to each tube.
3. 1-2 scales are removed from each envelope. These are cut in halves or thirds before being placed in the 0.5ml chelex containing tube (to assist tissue digestion).
4. When 48 individuals have been prepared in this manner, 5µl of proteinase K solution (20mg/ml) is added to each tube.
5. The tubes are then placed on a heating block at 56°C for 40 minutes.

6. The tubes are then vortexed for 5-10 seconds, before being placed back on the heating block at 99°C for 30 minutes.
7. The tubes are then again vortexed for 5-10 seconds, before being centrifuged at high speed (14,000rpm) for five minutes, to gather solid matter at the bottom of the tubes.
8. 40-60µl of liquid supernatant is removed from each tube and placed in a well on an appropriately and clearly labelled 96 well (8x12) microtitre plate. (Generally 2 batches of 48 individuals are stored on a clearly labelled 96 well microtitre plate).
9. Microtitre plates containing DNA are stored at -20°C until needed for PCR.

3. PCR

3.1 Sourcing and preparation of PCR reagents and supplies

3.1.1 ddH₂O

1. Distilled, deionised, autoclaved water is required for making up stock solutions and mastermixes for PCR.
2. 1.5ml aliquots are made up by taking 1.5ml of ddH₂O, placing it in a 1.5ml eppendorf, and placing this in a larger jar.
3. The jar is filled with eppendorfs, placed in an autoclave, and a sterilisation cycle is carried out.
4. This water is stored at room temperature until required for PCR

3.1.2 Primers

1. All primers are ordered from MWG biotech via <https://ecom.mwgdna.com>.
2. For each of the 15 pairs of primers, the forward primer is ordered with a 5' label (either IRD700 or IRD800) to facilitate later visualisation of PCR products on a Licor automated DNA sequencer. The only exception is *Ssa197* where the reverse primer is labelled. Primer sequences, and details of which labels are used, are given in Table I.
3. All primers are ordered at the 0.2μM scale with HPSF purification, which generally yields enough primer to carry out approximately 2000 PCRs.
4. Primers arrive lyophilised, and a delivery sheet indicates the amount of primer present, and the amount of ddH₂O required to make a 100μM solution.
5. Autoclaved ddH₂O is added to each primer to a concentration of 100μM, and they are allowed to resuspend at 4°C in the dark, overnight.
6. Once resuspended, primers are stored in a lightproof box at -20°C.

3.1.3 dNTPs

1. dNTPs are sourced from Promega (Cat no. U1410).
2. The four components (G, A, T & C) are supplied in separate tubes at a concentration of 100mM. The stock solution required for PCR is 1.25mM (of each nucleotide).
3. 12.5μl of each nucleotide solution is added to 950μl of autoclaved ddH₂O, and mixed thoroughly.
4. The resulting stock solutions are stored in 1ml aliquots at -20°C.

3.1.4 *Taq* polymerase, buffer and MgCl₂

1. *Taq* is sourced from Promega (Cat no. M3175/M3178).
2. The enzyme is supplied at a concentration of 5 units/μl, and is stored at -20°C.
3. This *Taq* is supplied with two PCR buffers, both at a concentration of 5X. The two buffers differ only in colour; white and green. A mixture of both is used in PCR.
4. The buffers also include MgCl₂ to a concentration of 1.5mM.
5. Because our PCR requires MgCl₂ to a concentration of 2.0mM, additional MgCl₂ is required.
6. This MgCl₂ is sourced from Promega (Cat no. A3513), and is supplied at a concentration of 25mM.
7. The MgCl₂ is divided in 1ml aliquots and stored at -20°C.

3.1.5 Plastics and hardware

1. PCRs are carried out on 96 well plates sourced from ABGENE.
2. 1.5ml eppendorf tubes are used for preparation of mastermixes.
3. 10μl, 250μl and 1000μl tips are sourced from Greiner bio-one.
4. Standard Gilson pipettes are used for aliquoting reagents.
5. Single dispensing 8 channel pipettes are used for aliquoting DNA for PCR, and for dilution of PCR products for electrophoresis.
6. Electronic multi-dispensing pipettes are used for aliquoting PCR mastermixes and formamide loading dye.

3.2 PCR of ethanol preserved specimens

1. DNA extracts from ethanol preserved specimens tend to be of higher quality than those from dried samples (scales), and are therefore amenable to multiplexing (amplification of more than one microsatellite locus in a single reaction).
2. 15 microsatellites are used in this project, which can be amplified in a total of 10 PCRs. Recipes for each reaction are given in Table II.
3. The microtitre plate containing DNA from the specimens of interest is removed from the freezer to allow DNA to thaw.
4. All PCR reagents (primers, reaction buffers, MgCl₂, dNTPs), except for *Taq* polymerase, are removed from the freezer to thaw.
5. Generally, 96 individuals (corresponding to two batches of 48) are amplified at a time, in order to use entire microtitre plates efficiently.

6. Ten microtitre plates (corresponding to the 10 reactions) are labelled with sample codes, and locus/loci to be amplified, and sample number 1 is clearly circled, to ensure orientation remains the same until genetic analysis is complete.
7. Ten 1.5ml eppendorfs are labelled with locus/loci to be amplified.
8. Sufficient PCR reagents to carry out the number of required reactions are added to the eppendorfs. An allowance of 10% error is generally allowed to ensure there is enough mastermix all specimens (e.g. for 96 individuals, $96 + 10\% = 106$ reaction volumes).
9. PCR reagents are added in the following order: 5X green buffer, 5X white buffer, $MgCl_2$, dNTPs, primers, *Taq* & ddH₂O.
10. The mastermix is mixed thoroughly by pipetting (30-40 times).
11. DNA is aliquoted into the microtitre plates using a multi-channel pipette (8 channels – reduces pipetting time by 8), and the plate containing is returned to -20°C, to be stored for repeating failed reactions and future projects.
12. Mastermixes are then aliquoted onto the microtitre plates (ensuring that the locus label on the tubes corresponds with that on the plate) using an electronic multi dispensing pipette.
13. Each reaction is overlaid with a drop of mineral oil (10-20µl).
14. Plates are spun down at low speed (800rpm) briefly to ensure that all liquid matter is collected at the bottom of the well, and that the oil lies on top of the reaction.
15. Plates are then placed in the thermocycler for amplification to be carried out. All loci/multiplexes are subjected to the same reaction conditions:

3 minutes @ 95°C x 1

30 seconds @ 95°C

30 seconds @ 56°C x 30

30 seconds @ 72°C

16. Once amplifications have been completed, plates are stored at 4°C in the dark until electrophoresis.

3.3 PCR of dried specimens (scale envelopes)

1. DNA extracts from dried samples (scales) tend to be of lower quality than those from ethanol preserved specimens, and are therefore not amenable to multiplexing and must be amplified in separate reactions.
2. 15 microsatellites are used in this project, and while these are amplified separately in the case of scales, they all follow the same recipe which is provided in Table III.
3. The microtitre plate containing DNA from the specimens of interest is removed from the freezer to allow DNA to thaw.
4. All PCR reagents (primers, reaction buffers, MgCl₂, dNTPs), except for Taq polymerase, are removed from the freezer to thaw.
5. Generally, 96 individuals (corresponding to two batches of 48) are amplified at a time, in order to use entire microtitre plates efficiently.
6. Fifteen microtitre plates (corresponding to the 15 reactions) are labelled with sample codes, and locus to be amplified, and sample number 1 is clearly circled, to ensure orientation remains the same until genetic analysis is complete.
7. Ten 1.5ml eppendorfs are labelled with locus to be amplified.
8. Sufficient PCR reagents to carry out the number of required reactions are added to the eppendorfs. An allowance of 10% error is generally allowed to ensure there is enough mastermix all specimens (e.g. for 96 individuals, $96 + 10\% = 106$ reaction volumes).
9. PCR reagents are added in the following order: 5X green buffer, 5X white buffer, MgCl₂, dNTPs, primers, *Taq* & ddH₂O.
10. The mastermix is mixed thoroughly by pipetting (30-40 times).
11. DNA is aliquoted into the microtitre plates using a multi-channel pipette (8 channels – reduces pipetting time by 8), and the plate containing is returned to -20°C, to be stored for repeating failed reactions and future projects
12. Mastermixes are then aliquoted onto the microtitre plates (ensuring that the locus label on the tube corresponds with that on the plate) using an electronic multi dispensing pipette.
13. Each reaction is overlaid with a drop of mineral oil (10-20µl).
14. Plates are spun down at low speed (800rpm) briefly to ensure that all liquid matter is collected at the bottom of the well, and that the oil lies on top of the reaction.

15. Plates are then placed in the thermocycler for amplification to be carried out. All loci/multiplexes are subjected to the same reaction conditions:

3 minutes @ 95°C x 1

30 seconds @ 95°C

30 seconds @ 56°C x 30

30 seconds @ 72°C

16. Once amplifications have been completed, plates are stored at 4°C in the dark until electrophoresis.

4. Preparation of PCRs for electrophoresis

4.1 Dilution of PCR products

1. PCR products are generally too concentrated for visualisation on the Licor DNA sequencer, therefore they are diluted accordingly.
2. Even where products have not been multiplexed by PCR, they can be combined for loading on the sequencer, and all 15 loci can be screened in 6 runs on the machine.
3. 202, 157 & 170 are combined and diluted 1:40
4. 2210, 2201 & MHC2 are combined and diluted 1:100
5. D71 & 2216 are combined and diluted 1:40
6. 197, 171 & 3016 are combined and diluted 1:100
7. D48 & 1605 are combined and diluted 1:40
8. MHC1 and 85 are combined and diluted 1:100
9. 48 individuals are loaded onto each run of the Licor.
10. To carry out dilutions, the plates containing the relevant loci are placed side by side.
11. Into another plate, the amount of water required for the dilution is aliquoted out 48 times.
12. Into another plate, 2µl of formamide loading dye is aliquoted out into 48 wells.
13. Using an 8 channel multipipette, 1µl of each product is taken, and added to the water (this means that pipetting is reduced by a factor of 8).
14. Once each of the 2/3 loci being screened has been added, the dilution is mixed by pipetting, and 1µl of the resulting mixture is added to the loading dye.
15. The plate containing the diluted PCR products in the loading dye is heated to 80°C for 1 minute, prior to loading on the gel.
16. 48 individuals are generally loaded on each run of the gel, leaving a gap every 8 individuals.
17. A set of standard alleles, corresponding to the loci being run, are loaded into these gaps, thus ensuring consistent scoring of genotypes across all gels.

4.2 Standard allele ladders (cocktails)

1. In order to ensure that genotypes are scored consistently between gels, a set of size standards are made for each locus.
2. A reference sample (the Moy) was chosen from a previous Atlantic salmon project from which to pick genotypes covering the entire size range of the loci.
3. Five individuals were chosen to represent each locus, this was a sufficient number to find 8-10 bands of covering the size ranges.

4. For each locus, the chosen individuals were amplified in 8 replicate PCR reactions, yielding approximately 80µl of product for each individual.
5. PCR product from each individual was then diluted appropriately and combined

5. Electrophoresis

5.1 Preparation of polyacrylamide gels

1. Dinucleotide PCR products are run on 25cm boroflot plates, while tetranucleotides are run on 18cm plates.
2. Both plate sizes require 20ml of acrylamide to fill the entire rig.
3. Plates are first cleaned thoroughly with distilled water and dried using white barrel roll tissue paper.
4. Plates are then polished using absolute ethanol.
5. 0.25mm spacers are then placed at either side of the bottom plate, and the top plate is placed flat down over this, creating a narrow space between the plates into which the gel will be poured.
6. The plates are securely clamped together.
7. The acrylamide is then prepared, by pouring 20ml of Licor KB acrylamide matrix into a graduated cylinder.
8. To this, 15 μ l of Temed and 150 μ l of 10% (w/v) Ammonium persulphate (APS) is added.
9. Parafilm is placed over the top of the cylinder and it is mixed gently by overend turning 2-3 times.
10. Once the APS has been added, the acrylamide will begin to polymerise, therefore it is essential to work very quickly from that point onward.
11. Using a 25ml pipette, with a bulb mechanism attached for aspirating and releasing, the acrylamide mixture is sucked up, and then released between the glass plates.
12. It helps to push the bottom end of the plates slightly downward, and pour into the top, but care must be taken not to pour too quickly which can cause it to spill over the top of the plates, or too slowly which can allow air bubbles to form.
13. Once the gel has been poured, a mould is placed in the top to create a well where the comb will later be placed.
14. The top part of the gel is securely clamped down, so that the same pressure is exerted over the whole surface area.
15. A piece of wet tissue paper is placed at either end of the gel to prevent those areas from drying out.
16. The gel is allowed to set for one hour, or more commonly, overnight.

5.2 Setting up of sequencer

1. The Licor setup requires approximately 1100ml of buffer to fill the tanks.
2. The buffer used is 1x concentrated TBE (Tris, Boric acid, EDTA), and this is made by making a 1:10 dilution of a 10x concentrate TBE sourced from SIGMA.
3. The door of the sequencer is opened, and the bottom buffer tank is filled with 550ml of buffer.
4. The outside of the gel plates are once again cleaned and polished (to remove any dust which may have settled there while the gel was polymerising), and the mould is removed from the top of the gel.
5. The gel is then placed into the machine, and the top buffer tank is attached.
6. The remaining buffer is placed in this upper buffer tank.
7. The well created is flushed out to remove any liquid or solid acrylamide which may have been left behind, and would block the well.
8. A small amount (20-30 μ l) of formamide loading dye is flushed into the well.
9. All electrical circuits are connected, and the voltage is switched on for 10-15 seconds.
10. The lid of the top buffer tank is removed, and using a Pasteur pipette, the well is flushed out again. The loading dye which was placed there will now have left a navy line along the origin, which allows visualisation of the line along which the comb must be inserted.
11. A 0.25mm thickness, 64 well sharktooth comb is then inserted between the plates, until the teeth just bite into the origin (enough so that there is no leakage between the wells) marked by the loading dye.
12. The gel is then put through a pre run for 25 minutes during which the machine focuses on the exact centre of the gel where the PCR products will run through, and the buffer and plates heat up sufficiently.
13. The running conditions are the same for all loci; Voltage – 1000V, Power – 40W, Current – 37mA, Temperature - 45°C.
14. Each set of PCR products takes 45-60 minutes to come through the gel, and each gel can take 5-6 loadings before becoming exhausted.

Table I. Primer sequences for microsatellites used to screen samples. Label refers to the type of infra-red label attached to primers to facilitate screening on the double-dye Licor system.

Locus	Reference	Primer sequence	Label
MHC I		For AGGAAGGTGCTGAAGAGGAAC Rev CAATTACCACAAGCCCGCTC	800
MHC II		For GATGGCAAAGAGGAAAGTGAG Rev TTGTTATGCTCTACCTCTGAA	700
<i>Ssa197</i>	O'Reilly <i>et al.</i> (1996)	For TGGCAGGGATTTGACATAAC Rev GGGTTGAGTAGGGAGGCTTG	800
<i>Ssa171</i>	O'Reilly <i>et al.</i> (1996)	For TTATTATCCAAAGGGGTCAAAA Rev GAGGTCGCTGGGGTTTACTAT	700
<i>Ssa202</i>	O'Reilly <i>et al.</i> (1996)	For CTTGGAATATCTAGAATATGGC Rev GTTCATGTGTTAATGTTGCGTG	800
<i>SsaD170</i>	EMBL accession no: AF525205	For GGAGGCAGTTAAGAGAACAAAAG Rev TCACCTACCCCTTCTCATTCAG	700
<i>SsaD157</i>	King <i>et al.</i> (2005)	For ATCGAAATGGAACTTTTGAATG Rev GCTTAGGGCTGAGAGAGGAATAC	800
<i>SsaD71</i>	King <i>et al.</i> (2005)	For AACGTGAAACATAAAATCGATGG Rev TTAAGAATGGGTTGCCATGAG	800
<i>SsaD48</i>	King <i>et al.</i> (2005)	For GAGCCTGTTTCAGAGAAATGAG Rev CAGAGGTGTTGAGTCAGAGAAG	700
<i>Sssp2210</i>	Paterson <i>et al.</i> (2004)	For AAGTATTCATGCACACACATTCCTGC Rev CAAGACCCCTTTTTCCAATGGGATTC	800
<i>Sssp2201</i>	Paterson <i>et al.</i> (2004)	For TTAGATGGTGGGATACTGGGAGGC Rev CGGGAGCCCCATAACCCCTACTAATAAC	800
<i>Sssp2216</i>	Paterson <i>et al.</i> (2004)	For GGCCCAGACAGATAAACAAACACGC Rev GCCAACAGCAGCATCTACACCCAG	700
<i>Sssp1605</i>	Paterson <i>et al.</i> (2004)	For CGTAATGGAAGTCAGTGGACTGG Rev CTGATTTAGCTTTTTAGTGCCCAATGC	800
<i>Sssp3016</i>	Paterson <i>et al.</i> (2004)	For GACAGGGCTAAGTCAGGTCA Rev GATTCTTATATACTCTTATCCCCAT	800
<i>SSOSL85</i>	Slettan <i>et al.</i> (1995)	For TGTGGATTTTTGTATTATGTTA Rev ATACATTTCCCTCCTCATTCAGT	700

Table IIa. PCR recipe for MHCI reaction

	X1
5x (green)	0.5
5x (white)	1.5
MgCl₂ (25mM)	0.2
DNTPs (1.25mM)	2.0
MHC I Forward primer (100μM)	0.05
MHC I Reverse primer (100μM)	0.05
Taq	0.1
H₂O	4.6

Table IIb. PCR recipe for SSOSL85 reaction

	X1
5x (green)	0.5
5x (white)	1.5
MgCl₂ (25mM)	0.2
DNTPs (1.25mM)	2.0
SSOSL85 Forward primer (100μM)	0.1
SSOSL85 Reverse primer (100μM)	0.1
Taq	0.1
H₂O	4.5

Table IIc. PCR recipe for SSa202, SSa170 & SSa157 reaction

	X1
5x (green)	0.5
5x (white)	1.5
MgCl₂ (25mM)	0.2
DNTPs (1.25mM)	2.0
202 Forward primer (100μM)	0.025
202 Reverse primer (100μM)	0.025
170 Forward primer (100μM)	0.05
170 Reverse primer (100μM)	0.05
157 Forward primer (100μM)	0.1
157 Reverse primer (100μM)	0.1
Taq	0.1
H₂O	4.35

Table IId. PCR recipe for SSsp2210 reaction

	X1
5x (green)	0.5
5x (white)	1.5
MgCl₂ (25mM)	0.2
DNTPs (1.25mM)	2.0
MHC I Forward primer (100μM)	0.05
MHC I Reverse primer (100μM)	0.05
Taq	0.1
H₂O	4.6

Table IIe. PCR recipe for SSsp2201 reaction

	X1
5x (green)	0.5
5x (white)	1.5
MgCl₂ (25mM)	0.2
DNTPs (1.25mM)	2.0
MHC I Forward primer (100μM)	0.05
MHC I Reverse primer (100μM)	0.05
Taq	0.1
H₂O	4.6

Table II f. PCR recipe for MHC2 reaction

	X1
5x (green)	0.5
5x (white)	1.5
MgCl₂ (25mM)	0.2
DNTPs (1.25mM)	2.0
MHC I Forward primer (100μM)	0.05
MHC I Reverse primer (100μM)	0.05
Taq	0.1
H₂O	4.6

Table IIg. PCR recipe for Sssp2216 and SsaD71 reaction

	X1
5x (green)	0.5
5x (white)	1.5
MgCl₂ (25mM)	0.2
DNTPs (1.25mM)	2.0
D71 Forward primer (100μM)	0.2
D71 Reverse primer (100μM)	0.2
2216 Forward primer (100μM)	0.025
2216 Reverse primer (100μM)	0.025
Taq	0.1
H₂O	4.25

Table IIh. PCR recipe for Ssa197 and Ssa171 reaction

	X1
5x (green)	0.5
5x (white)	1.5
MgCl₂ (25mM)	0.2
DNTPs (1.25mM)	2.0
197 Forward primer (100μM)	0.05
197 Reverse primer (100μM)	0.05
171 Forward primer (100μM)	0.05
171 Reverse primer (100μM)	0.05
Taq	0.1
H₂O	4.5

Table Iii. PCR recipe for Sssp3016 reaction

	X1
5x (green)	0.5
5x (white)	1.5
MgCl2 (25mM)	0.2
DNTPs (1.25mM)	2.0
MHC I Forward primer (100μM)	0.05
MHC I Reverse primer (100μM)	0.05
Taq	0.1
H2O	4.6

Table IIj. PCR recipe for Sssp1605 and SSaD48 reaction

	X1
5x (green)	0.5
5x (white)	1.5
MgCl2 (25mM)	0.2
DNTPs (1.25mM)	2.0
D48 Forward primer (100μM)	0.1
D48 Reverse primer (100μM)	0.1
1605 Forward primer (100μM)	0.025
1605 Reverse primer (100μM)	0.025
Taq	0.1
H2O	4.45

Table III. Standard PCR recipe used for all 15 loci in dried scale samples

	X1
5x (green)	0.5
5x (white)	1.5
MgCl₂ (25mM)	0.2
DNTPs (1.25mM)	2.0
Forward primer (100μM)	0.1
Reverse primer (100μM)	0.1
Taq	0.1
H₂O	4.5

Appendix 5

Samples provided for the construction of the freshwater baseline. Only samples with assigned codes were included in genetic analysis. Italics indicate samples which were screened but not included in the final baseline due to Hardy-Weinberg deficits.

Original sample code	Sample code for statistics	No.	River system	Stream/tributary	Date collected	No. & age of individual	District/Fisheries Board number
			Flurry	Ravensdale br.	26/9/06	0+	Dundalk 2
			Flurry	Ravensdale br.	26/9/06	1+	Dundalk 2
DK-3a-a	DK3a	1	Castletown	Kilcurry Br. On R177	25/9/06	48 0+	Dundalk 3
			Castletown	Kilcurry Br. On R177	25/9/06	1+	Dundalk 3
			Castletown	Hackballs cross	18/9/06	0+	Dundalk 3
			Castletown	Hackballs cross	25/9/06	1+	Dundalk 3
DK-4a-a	DK4a	2	Fane	Maguney bridge	12/9/06	48 0+	Dundalk 4
			Fane	Maguney bridge	12/9/06	1+	Dundalk 4
			Fane	Castlering trib	1/10/07	0+	Dundalk 4
			Fane	Castlering trib	1/10/07	1+	Dundalk 4
			Fane		1/10/07	0+	Dundalk 4
			Fane		1/10/07	1+	Dundalk 4
<i>DK-5a-a</i>			<i>Glyde</i>	<i>Cormy bridge</i>	<i>22/9/06</i>	<i>48 0+</i>	<i>Dundalk 5</i>
<i>DK-5a-b</i>			<i>Glyde</i>	<i>Cormy bridge</i>	<i>22/9/06</i>	<i>48 1+</i>	<i>Dundalk 5</i>
DK-5b-a	DK5b	3	Glyde	Cormy	1/10/07	48 0+	Dundalk 5
			Glyde	Trib	12/9/06	0+	Dundalk 5
			Glyde	Trib	12/9/06	1+	Dundalk 5
			Glyde		10/1/07	1+	Dundalk 5
DK-6a-b	DK6a	4	Dee	MC IR04/6C	15/9/04	48 1+	Dundalk 6
			Dee	MC IR04/6A	14/9/04	1+	Dundalk 6
			Dee	Killary IR04/6B	15/9/04	1+	Dundalk 6

			Dee		1/10/07	0+	Dundalk 6
			Dee		1/10/07	1+	Dundalk 6
DR-8a-a	DR8a	5	Boyne	Trimblestown	05/07/06	48 0+	Drogheda 8
DR-8b-b	DR8b	6	Boyne	Trimblestown	05/07/06	48 1+	Drogheda 8
DR-8c-a	DR8c	7	Boyne	Blackwater Maudlin Br	06/07/06	48 1+	Drogheda 8
DR-8c-b			Boyne	Blackwater Maudlin Br	06/07/06	36 0+	Drogheda 8
DR-8d-a	DR8d	8	Boyne	Monality	06/07/06	48 0+	Drogheda 8
DR-8d-b			Boyne	Monality	06/07/06	42 1+	Drogheda 8
			Boyne	Mattock	10/07/06	0+	Drogheda 8
			Boyne	Mattock	10/07/06	1+	Drogheda 8
DB-15a-b	DB15a	9	Liffey	Ballymore- eustace	20/7/06	48 1+	Dublin 15
			Liffey	Ballymore- eustace	20/7/06	0+	Dublin 15
			Liffey	Rye-Sandford br	17/7/06	0+	Dublin 15
			Liffey	Rye-Sandford br	17/7/06	1+	Dublin 15
DB-18a-a	DB18a	10	Dargle	Bray PPl park	19/7/06	48 0+	Dublin 18
DB-18a-b			<i>Dargle</i>	<i>Bray PPl park</i>	<i>19/7/06</i>	48 1+	<i>Dublin 18</i>
DB-21a-a			<i>Vartry</i>	<i>Hunters hotel</i>	<i>19/7/06</i>	48 0+	<i>Dublin 21</i>
DB-21a-b	DB21a	11	Vartry	Hunters hotel	19/7/06	48 1+	Dublin 21
WX-26a-a	WX26a	12	Avoca	Avonbeg/Greena n br.	20/7/06	48 0+	Wexford 26
			Avoca	Avonbeg/Greena n br.	20/7/06	1+	Wexford 26
			Owenva- vorragh	Ballacanew br	18/7/06	0+	Wexford 28
			Owenva- vorragh	Ballacanew br	18/7/06	1+	Wexford 28
WX-31a-b	WX31a	13	Slaney	Baltinglass	1/9/05	48 1+	Wexford 31
WX-31b-b	WX31b	14	Slaney	Seskin Bridge	1/9/05	48 1+	Wexford 31
WX-31c-b	WX31c	15	Slaney	Derry	27/9/05	48 1+	Wexford 31
			Slaney	Bann - Gorey- Carnew br	18/7/06	0+	Wexford 31
			Slaney	Bann - Gorey- Carnew br	18/7/06	1+	Wexford 31

			Slaney	Derren	27/9/05	1+	Wexford 31
			Corock		1/10/07	0+	Waterford 33
			Corock		1/10/07	1+	Waterford 33
			Owenduff		1/10/07	0+	Waterford 34
			Owenduff		1/10/07	0+	Waterford 34
			Pollmounty		1/10/07	0+	Waterford 35
			Pollmounty		1/10/07	1+	Waterford 35
WD-37a-b	WD37a	16	Barrow	MC (Ballyclare)	8/10/04	40 1+	Waterford 37
WD-37b-a	WD37b	17	Barrow	Greese	14/06/06	48 1+	Waterford 37
WD-37b-b			Barrow	Greese	14/06/06	34 0+	Waterford 37
WD-37c-b	WD37c	18	Barrow	Mountain	14/06/06	44 1+	Waterford 37
WD-37d-b	WD37d	19	Barrow	Owenass (Weir/mills)	7/10/04	21 1+	Waterford 37
			Barrow	Slate (d/s Rathangan)	8/10/04	1+	Waterford 37
			Barrow	Finnery	1/10/07	0+	Waterford 37
			Barrow	Finnery	1/10/07	1+	Waterford 37
			Barrow	Lerr	1/10/07	0+	Waterford 37
			Barrow	Lerr	1/10/07	1+	Waterford 37
			Barrow	Monafelim	1/10/07	0+	Waterford 37
			Barrow	Monafelim	1/10/07	1+	Waterford 37
			Barrow	Stradbally	1/10/07	0+	Waterford 37
			Barrow	Stradbally	1/10/07	1+	Waterford 37
WD-38a-b	WD38a	20	Nore	Delar	21/6/05	48 1+	Waterford 38
WD-38b-b	WD38b	21	Nore	Dinn	22/6/05	48 1+	Waterford 38
WD-38c-a	WD38c	22	Nore	Kings river	1/8/06	48 0+	Waterford 38
WD-38d-a	WD38d	23	Nore	Goul river	2/8/06	48 0+	Waterford 38
WD-38e-a	WD38e	24	Nore	Arrigle	2/8/06	48 0+	Waterford 38
			Nore	Kings	22/6/05	1+	Waterford 38

			Nore	Owenbeg	21/6/05	1+	Waterford 38
			Nore	Kings river	1/8/06	1+	Waterford 38
			Nore	Goul river	2/8/06	1+	Waterford 38
			Nore	Arrigle	2/8/06	1+	Waterford 38
			Nore	Glory	1/10/07	0+	Waterford 38
			Nore	Glory	1/10/07	1+	Waterford 38
			Nore	Kilfane	1/10/07	0+	Waterford 38
			Nore	Kilfane	1/10/07	1+	Waterford 38
			Lingan	Gregg Br.	3/8/06	0+	Waterford 41
			Lingan	Gregg Br.	3/8/06	1+	Waterford 41
			Glen	Carrick	1/10/07	0+	Waterford 42
			Glen	Carrick	1/10/07	0+	Waterford 42
WD-43a-b	WD43a	25	Suir	Drish	27/7/05	48 1+	Waterford 43
WD-43b-a			<i>Suir</i>	<i>Burren</i>	<i>10/10/06</i>	48 0+	<i>Waterford 43</i>
WD-43b-b			<i>Suir</i>	<i>Burren</i>	<i>10/10/06</i>	48 0+	<i>Waterford 43</i>
WD-43c-a	WD43c	26	Suir	Multeen	9/8/06	48 0+	Waterford 43
WD-43c-b			Suir	Multeen	9/8/06	48 1+	Waterford 43
WD-43d-a	WD43d	27	Suir	Tar	8/8/06	48 0+	Waterford 43
WD-43d-b			Suir	Tar	8/8/06	48 1+	Waterford 43
WD-43e-a	WD43e	28	Suir	Nire	8/8/06	48 0+	Waterford 43
WD-43e-b			Suir	Nire	8/8/06	48 1+	Waterford 43
WD-43f-a	WD43f	29	Suir	Anner	4/8/06	48 0+	Waterford 43
WD-43f-b			Suir	Anner	4/8/06	48 1+	Waterford 43
WD-43g-a	WD43g	30	Suir	Aherlow	9/8/06	48 0+	Waterford 43
WD-43g-b			Suir	Aherlow	9/8/06	48 1+	Waterford 43
WD-43h-b			<i>Suir</i>	<i>Upper reaches</i>	<i>22/7/05</i>	48 1+	<i>Waterford 43</i>
			Suir	Arglo	1/10/07	0+	Waterford 43

			Suir	Arglo	1/10/07	1+	Waterford 43
			Suir	Clashawley	1/10/07	0+	Waterford 43
			Suir	Clashawley	1/10/07	1+	Waterford 43
			Suir	Fidaghta	1/10/07	0+	Waterford 43
			Suir	Fidaghta	1/10/07	1+	Waterford 43
			Mahon	Aughshemus Br. D/s	10/8/06	0+	Waterford 50
			Mahon	Aughshemus Br. D/s	10/8/06	1+	Waterford 50
			Tay	Fox Castle bridge	10/8/06	0+	Waterford 51
			Tay	Fox Castle bridge	10/8/06	1+	Waterford 51
			Colligan		10/10/07	0+	Waterford 53
			Colligan		1/10/07	1+	Waterford 53
			Licky		1/10/07	0+	Lismore 55
			Licky		1/10/07	1+	Lismore 55
			Finisk		1/10/07	0+	Lismore 57
			Finisk		1/10/07	1+	Lismore 57
			Glenshelane		1/10/07	0+	Lismore 58
			Glenshelane		1/10/07	1+	Lismore 58
LS-59a-a	LS59a	31	Cork Blackwater	Mallow (Longfield)	12/07/06	48 0+	Lismore 59
LS-59a-b			Cork Blackwater	Mallow (Longfield)	12/07/06	48 1+	Lismore 59
LS-59b-b	LS59b	32	Cork Blackwater	Awbeg	13/07/06	48 1+	Lismore 59
LS-59c-b	LS59c	33	Cork Blackwater	Funshion	11/07/06	48 1+	Lismore 59
LS-59d-a	LS59d	34	Cork Blackwater	Glen	12/07/06	48 0+	Lismore 59
LS-59d-b			Cork Blackwater	Glen	12/07/06	48 1+	Lismore 59
LS-59e-a	LS59e	35	Cork Blackwater	Rathmore	13/07/06	48 0+	Lismore 59
LS-59e-b			Cork Blackwater	Rathmore	13/07/06	47 1+	Lismore 59
			Cork Blackwater	Awbeg	13/07/06	0+	Lismore 59
			Cork Blackwater	Funshion	11/07/06	0+	Lismore 59

LS-60a-a	LS60a	36	Bride		20/9/06	48 0+	Lismore 60
			Bride		20/9/06	1+	Lismore 60
			Tourig		1/10/07	0+	Lismore 61
			Tourig		1/10/07	1+	Lismore 61
			Womanagh		1/10/07	0+	Lismore 62
			Womanagh		1/10/07	1+	Lismore 62
CK-66a-b	CK66a	37	Lee	Bride	4/7/05	48 1+	Cork 66
CK-66b-b	CK66b	38	Lee	Shournagh	5/7/05	48 1+	Cork 66
CK-69a-b	CK69a	39	Bandon	Brinny	5/7/05	48 1+	Cork 69
CK-69b-b	CK69b	40	Bandon	Blackwater	7/7/05	48 1+	Cork 69
			Bandon	Clubhse	7/7/05	1+	Cork 69
			Bandon	Caha	4/7/05	1+	Cork 69
			Argideen		1/10/07	0+	Cork 70
			Argideen		1/10/07	1+	Cork 70
CK-72a-a	CK72a	41	Ilen	Savinose Bredagh br.	17/8/06	48 0+	Cork 72
			Ilen	Savinose Bredagh br.	17/8/06	1+	Cork 72
			Meelagh	East lahadane	15/8/06	0+	Cork 77
			Meelagh	East lahadane	15/8/06	1+	Cork 77
CK-78a-a	CK78a	42	Owvane	D/s Carrig-an – eas br.	16/8/06	48 0+	Cork 78
CK-78a-b			Owvane	D/s Carrig-an – eas br.	16/8/06	48 1+	Cork 78
			Coomhola	Knockancas-duff br.	16/8/06	0+	Cork 79
			Coomhola	Knockancas-duff br.	16/8/06	1+	Cork 79
CK-80a-a	CK80a	43	Glengariff	Eskinmucky	16/8/06	48 0+	Cork 80
CK-80a-b			Glengariff	Eskinmucky	16/8/06	48 1+	Cork 80
CK-81a-a			<i>Adrigole</i>	<i>Inchintaglin bridge</i>	17/8/06	48 0+	<i>Cork 81</i>
CK-81a-b	CK81a	44	Adrigole	Inchintaglin bridge	17/8/06	48 1+	Cork 81
KY-84a-b	KY84a	45	Croanshagh	U/s Glanmore L	26/7/06	48 1+	Kerry 84

			Croanshagh	U/s Glanmore L	26/7/06	0+	Kerry 84
KY-85a-a	KY85a	46	Owenshagh	Laragh	25/7/06	48 0+	Kerry 85
KY-85a-b			<i>Owenshagh</i>	<i>Laragh</i>	25/7/06	48 1+	<i>Kerry</i> 85
KY-86a-b	KY86a	47	Cloonee	B/T 2 lakes	24/7/06	48 1+	Kerry 86
			Cloonee	B/T 2 lakes	24/7/06	0+	Kerry 86
KY-87a-b	KY87a	48	Sheen	Dromrossig	25/7/06	48 1+	Kerry 87
			Sheen	Dromrossig	25/7/06	0+	Kerry 87
KY-88a-b	KY88a	49	Roughty	Inshee	26/7/06	48 1+	Kerry 88
KY-88b-a	KY88b	50	Roughty	Slaheny	28/7/06	48 0+	Kerry 88
			Roughty	Inshee	26/7/06	0+	Kerry 88
			Roughty	Slaheny	28/7/06	1+	Kerry 88
KY-89a-a	KY89a	51	Finnihey	Bridge at Kenmare	10/10/06	28 0+	Kerry 89
			Finnihey	Bridge at Kenmare	10/10/06	1+	Kerry 89
KY-90a-b	KY90a	52	Kerry Blackwater	Gearha Br.	27/7/06	48 1+	Kerry 90
			Blackwater	Gearha Br.	27/7/06	0+	Kerry 90
KY-92a-b	KY92a	53	Sneem	Ardsheelin	27/7/06	48 1+	Kerry 92
			Sneem	Ardsheelin	27/7/06	0+	Kerry 92
			Sneem	Dromtime	27/7/06	0+	Kerry 92
			Sneem	Dromtime	27/7/06	1+	Kerry 92
KY-93a-b	KY93a	54	Owreagh	D/s Gort- dromagh	10/10/06	48 1+	Kerry 93
KY-97a-b	KY97a	55	Currane	Finglas	25/7/05	48 1+	Kerry 97
KY-97b-b	KY97b	56	Currane	Main channel	26/7/05	45 1+	Kerry 97
			Currane	Toormore	26/7/05	1+	Kerry 97
KY-98a-a	KY98a	57	Inny		16/8/06	48 0+	Kerry 98
			Inny		16/8/06	1+	Kerry 98
KY-102a-a	KY102a	58	Ferta	Foilmore bridge	17/8/06	48 0+	Kerry 102
			Ferta	Foilmore bridge	17/8/06	1+	Kerry 102

KY-103a-a	KY103a	59	Behy	Glenbeigh	17/8/06	48 0+	Kerry 103
			Behy	Glenbeigh	17/8/06	1+	Kerry 103
KY-104a-a	KY104a	60	Caragh	U/s L. Acoos	17/8/06	48 0+	Kerry 104
KY-104b-a	KY104b	61	Caragh	Upper reaches	16/8/06	48 0+	Kerry 104
			Caragh	U/s L. Acoos	17/8/06	1+	Kerry 104
			Caragh	Upper reaches	16/8/06	1+	Kerry 104
KY-106a-b	KY106a	62	Laune	Cottoners	12/10/04	48 1+	Kerry 106
KY-106b-b	KY106b	63	Laune/Flesk	Cumeenduff	27/7/05	48 1+	Kerry 106
KY-106c-b	KY106c	64	Laune/Flesk	Gearhameen/D/s	27/7/05	48 1+	Kerry 106
KY-106d-b	KY106d	65	Laune	Gaddagh	12/10/04	48 1+	Kerry 106
KY-106e-b	KY106e	66	Laune	Gweeston	12/10/04	33 1+	Kerry 106
KY-106f-b	KY106f	67	Laune	Deenagh	13/10/04	48 1+	Kerry 106
KY-106g-b	KY106g	68	Laune	Quagmire	13/10/04	48 1+	Kerry 106
KY-106h-b	KY106h	69	Laune	Clydagh	13/10/04	24 1+	Kerry 106
KY-107a-b	KY107a	70	Maine	MC Castleisland	22/10/04	48 1+	Kerry 107
KY-107b-b	KY107b	71	Maine	Brown Flesk	22/10/04	45 1+	Kerry 107
KY-108a-a	KY108a	72	Emlagh		28/9/06	34 0+	Kerry 108
			Emlagh		28/9/06	0+	Kerry 108
KY-109a-a	KY109a	73	Owenascaul		27/9/06	48 0+	Kerry 109
			Annascaul		27/9/06	1+	Kerry 109
KY-111a-a	KY111a	74	Milltown	Dingle	28/9/06	42 0+	Kerry 111
			Milltown	Dingle	28/9/06	1+	Kerry 111
KY-112a-a	KY112a	75	Feoghanagh		28/9/06	48 0+	Kerry 112
			Feoghanagh		28/9/06	1+	Kerry 112
			Owenmore		1/10/07	0+	Kerry 114
			Owenmore		1/10/07	0+	Kerry 114
KY-117a-a	KY117a	76	Tralee Lee		18/8/06	48 0+	Kerry 117

			Tralee Lee		18/8/06	1+	Kerry 117
LK-119a-b	LK119a	77	Feale	Main channel	6/7/05	48 1+	Limerick 119
LK-119b-b	LK119b	78	Feale	Smearlagh	7/7/05	48 1+	Limerick 119
			Feale	Allaghaun	6/7/05	1+	Limerick 119
			Feale	Owveg	6/7/05	1+	Limerick 119
LK-120a-b	LK120a	79	Galey		7/7/05	48 1+	Limerick 120
			Deel	Main channel	19/7/06	Incomplete sample	Limerick 125
LK-126a-a	LK126a	80	Maigue	Main ch. Not stock	18/7/06	48 0+	Limerick 126
			Maigue	Main ch. Not stock	18/7/06	1+	Limerick 126
			Maigue	Morning star-stocked	18/7/06	0+	Limerick 126
LK-128a-b	LK128a	81	Mulcair	Bilboa	16/8/05	48 1+	Limerick 128
LK-128b-b	LK128b	82	Mulcair	Newport	17/8/05	48 1+	Limerick 128
			Mulcair	Clare	16/8/05	1+	Limerick 128
			Shannon	Main ch Clareville	17/8/05	Tail and adipose	Limerick 128
GY-145a-a	GY145a	83	Kilcolgan	St. Clarins trib	1/8/06	48 0+	Galway 145
			Kilcolgan	St. Clarins trib	1/8/06	1+	Galway 145
			Kilcolgan	Main channel (1)	1/8/06	0+	Galway 145
			Kilcolgan	Main channel (2)	1/8/06	0+	Galway 145
GY-146a-a			Clarín		30/8/06	32 0+	Galway 146
			Clarín		30/8/06	1+	Galway 146
GY-147a-a	GY147a	84	Corrib	Cornamona	23/9/04	30 1+	Galway 147
GY-147a-b			Corrib	Cornamona	12/07/06	18 1+	Galway 147
GY-147b-a	GY147b	85	Corrib	Glenglosh	23/9/04	30 1+	Galway 147
GY-147b-b			Corrib	Maam (Glenglosh)	12/07/06	18 1+	Galway 147
GY-147c-a	GY147c	86	Corrib	Oughterard	28/9/04	30 1+	Galway 147
GY-147c-b			Corrib	Oughterard	12/07/06	18 1+	Galway 147
GY-147d-a	GY147d	87	Corrib	Failmore	28/9/04	30 1+	Galway 147

GY-147d-b			Corrib	Failmore	12/07/06	18 1+	Galway 147
GY-147e-a	GY147e	88	Corrib	Grange	12/11/04	30 1+	Galway 147
GY-147e-b			Corrib	Grange	2/8/06	22 1+	Galway 147
GY-147f-a	GY147f	89	Corrib	Abbert	2/8/06	48 0+	Galway 147
GY-147f-b			Corrib	Abbert	2/8/06	48 1+	Galway 147
GY-149a-a	GY149a	90	Owenboliska	Spiddal	24/8/06	48 0+	Galway 149
			Owenbolisk	Spiddal	24/8/06	1+	Galway 149
CN-152a-b	CN152a	91	Cashla	Costelloe	13/07/06	48 1+	Connemara 152
			Cashla	Costelloe	13/07/06	0+	Connemara 152
			Cashla		1/10/07	0+	Connemara 152
			Cashla		1/10/07	1+	Connemara 152
CN-155a-a	CN155a	92	Screebe		31/7/06	48 0+	Connemara 155
			Connemara Screebe		31/7/06	1+	Connemara 155
CN-161a-b	CN161a	93	Owenmore	Ballynahinch Boesail	17/6/05	48 1+	Connemara 161
CN-161b-a	CN161b	94	Owenmore	Ballynahinch Glen Inagh	06/07/06	48 0+	Connemara 161
CN-161c-b	CN161c	95	Owenmore	Ballynahinch Glen Inagh	06/07/06	48 1+	Connemara 161
			Owenmore	Ballyna-hinch Glencoag-han	06/07/06	1+	Connemara 161
			Owenmore	Ballyna-hinch Glencoag-han	06/07/06	0+	Connemara 161
CN-166a-a	CN166a	96	Dawros		11/8/06	48 0+	Connemara 166
			Dawros		11/8/06	1+	Connemara 166
CN-167a-a	CN167a	97	Culfin	Main channel	11/8/06	48 0+	Connemara 167
			Culfin	Main channel	11/8/06	1+	Connemara 167
BK-168a-b	BK168a	98	Errif	Derrycraff	14/7/05	48 1+	Ballinakill 168
BK-168b-b	BK168b	99	Errif	Main channel	14/7/05	48 1+	Ballinakill 168
			Errif	Drummin	13/7/05	1+	Ballinakill 168
			Errif	Sheelfry	13/7/05	1+	Ballinakill 168
BK-169a-b	BK169a	100	Bundorragha	Glenamurra	13/7/05	48 1+	Ballinakill 169

			Carrownisky		1/10/07	0+	Ballinakill 171
			Carrownisky		1/10/07	1+	Ballinakill 171
BK-172a-a	BK172a	101	Bunowen	Main ch footbridge	10/8/06	48 0+	Ballinakill 172
			Bunowen	Main ch footbridge	10/8/06	1+	Ballinakill 172
			Bunowen	Laghta road bridge	10/8/06	0+	Ballinakill 172
			Bunowen	Laghta road bridge	10/8/06	1+	Ballinakill 172
BG-178a-a	BG178a	102	Newport	Crumpaune	1/10/07	48 0+	Bangor 178
			Newport	Crumpaun	10/1/07	1+	Bangor 178
			Newport	Skerdagh	10/1/07	0+	Bangor 178
			Newport	Skerdagh	10/1/07	1+	Bangor 178
BG-179a-b	BG179a	103	Srahmore	Burrishoole trap	1/5/05	48 1+	Bangor 179
			Srahmore	Burrishoole trap	'03	1+	Bangor 179
			Srahmore	Burrishoole trap	'04	1+	Bangor 179
			Owengarve		1/10/07	0+	Bangor 181
			Owengarve		1/10/07	1+	Bangor 181
BG-185a-b	BG185a	104	Owenduff	Main channel	9/9/05	48 1+	Bangor 185
BG-185b-b	BG185b	105	Owenduff	Tarchainn	9/9/05	48 1+	Bangor 185
BG-186a-b	BG186a	106	Owenmore	Main channel	8/9/05	48 1+	Bangor 186
BG-186b-b	BG186b	107	Owenmore	Glencullin	9/9/05	29 1+	Bangor 186
BG-186c-b	BG186c	108	Owenmore	Oweninny	9/9/05	48 1+	Bangor 186
			Owenmore	Altnabrocky	8/9/05	1+	Bangor 186
BA-194a-a	BA194a	109	Cloonaghmo re	Palmerstown	07/03	48 0+	Ballina 194
BA-194a-b			Cloonaghmo re	Palmerstown	07/03	41 1+	Ballina 194
BA-195a-a	BA195a	110	Moy	Deel	07/03	48 0+	Ballina 195
BA-195a-b			Moy	Deel	07/03	48 1+	Ballina 195
BA-195b-a	BA195b	111	Moy	Clydagh	07/03	48 0+	Ballina 195
BA-195b-b			Moy	Clydagh	07/03	48 1+	Ballina 195

BA-195c-a	BA195c	112	Moy	Manulla	07/03	48 0+	Ballina 195
BA-195c-b			Moy	Manulla	07/03	48 1+	Ballina 195
BA-195d-a	BA195d	113	Moy	Trimoge	07/03	48 0+	Ballina 195
BA-195d-b			Moy	Trimoge	07/03	47 1+	Ballina 195
BA-195e-a	BA195e	114	Moy	Owengarve	07/03	48 0+	Ballina 195
BA-195e-b			Moy	Owengarve	07/03	47 1+	Ballina 195
BA-195f-a	BA195f	115	Moy	Cloonacool	07/03	48 0+	Ballina 195
BA-195f-b	BA195f		Moy	Cloonacool	07/03	48 1+	Ballina 195
BA-196a-a	BA196a	116	Brusna	Bunrea	07/03	48 0+	Ballina 196
BA-196a-b			Brusna	Bunrea	07/03	48 1+	Ballina 196
BA-200a-a	BA200a	117	Easkey		07/03	48 0+	Ballina 200
BA-200a-b			Easkey		07/03	48 1+	Ballina 200
SO-202a-a	SO202a	118	Ballysadare		07/03	48 0+	Sligo 202
SO-202a-b			Ballysadare		07/03	46 1+	Sligo 202
SO-202b-b	SO202b	119	Ballysadare	Owenmore main	21/6/05	48 1+	Sligo 202
			Ballysadare	Owenbeg	21/6/05	1+	Sligo 202
			Ballysadare	Unshin	22/6/05	1+	Sligo 202
SO-203a-a	SO203a	120	Garvogue	Bonet Sportsfield site	16/10/06	48 0+	Sligo 203
			Bonet	Owenmore trib	16/10/06	1+	Sligo 203
			Bonet	Sportsfield site	16/10/06	1+	Sligo 203
			Drumcliff	Difreen	1/10/07	0+	Sligo 205
			Drumcliff	Difreen	1/10/07	1+	Sligo 205
BS-208a-b	BS208a	121	Duff	Lower reaches	29/6/05	48 1+	Ballyshannon 208
BS-208-b-a	BS208b	122	Duff	Muckrum	23/8/06	48 0+	Ballyshannon 208
			Duff	Ballina-trillick	29/6/05	1+	Ballyshannon 208
			Duff	Muckrum	23/8/06	1+	Ballyshannon 208
BS-209a-a	BS209a	123	Drowes	Lennox bridge	23/8/06	48 0+	Ballyshannon 209

			Drowes	Lennox bridge	23/8/06	1+	Ballyshannon 209
			Drowes	Melvin Glenariff	23/8/06	0+	Ballyshannon 209
			Drowes	Melvin Glenariff	23/8/06	1+	Ballyshannon 209
			Drowes	Melvin Ballagh	1/10/07	0+	Ballyshannon 209
			Drowes	Melvin Ballagh	1/10/07	1+	Ballyshannon 209
			Drowes	Melvin County	1/10/07	0+	Ballyshannon 209
			Drowes	Melvin County	1/10/07	1+	Ballyshannon 209
BS-210a-a	BS210a	124	Erne	Termon Kilmore	22/8/06	48 0+	Ballyshannon 210
			Erne	Termon Kilmore	22/8/06	1+	Ballyshannon 210
BS-211a-a	BS211a	125	Abbey	Tullymore Br.	22/8/06	48 0+	Ballyshannon 211
			Abbey	Tully-more Br.	22/8/06	1+	Ballyshannon 211
			Bridetown/B allintra	Rath	28/7/06	0+	Ballyshannon 212
			Bridetown/B allintra	Rath	28/7/06	1+	Ballyshannon 212
BS-213a-a	BS213a	126	Laghy		27/7/06	48 0+	Ballyshannon 213
			Laghy		27/7/06	1+	Ballyshannon 213
BS-214a-a	BS214a	127	Eske	L Eske Br, Main ch.	27/7/06	48 0+	Ballyshannon 214
			Eske	L Eske Br, Main ch.	27/7/06	1+	Ballyshannon 214
			Eske		26/7/06	0+	Ballyshannon 214
			Eske		26/7/06	1+	Ballyshannon 214
BS-215a-b	BS215a	128	Eany	Eany more	30/6/05	48 0+	Ballyshannon 215
			Eany	Eanybeg	30/6/05	1+	Ballyshannon 215
			Oily		1/10/07	0+	Ballyshannon 216
			Oily		1/10/07	1+	Ballyshannon 216
			Bungosteen		1/10/07	0+	Ballyshannon 217
			Bungosteen		1/10/07	1+	Ballyshannon 217
BS-219a-a	BS219a	129	Glen	Meenaneary	24/8/06	48 0+	Ballyshannon 219
			Glen	Meenaneary	24/8/06	1+	Ballyshannon 219

BS-220a-a	BS220a	130	Owenwee	Donegal way/road	24/8/06	48 0+	Ballyshannon 220
			Owenwee	Donegal way/road	24/8/06	1+	Ballyshannon 220
			Bracky		1/10/07	0+	Letterkenny 221
			Bracky		1/10/07	1+	Letterkenny 221
			Owentocker		1/10/07	0+	Letterkenny 222
			Owentocker		1/10/07	1+	Letterkenny 222
LY-223a-b	LY223a	131	Owenea	Main	1/7/05	48 1+	Letterkenny 223
			Owenea	Stracashel	1/7/05	1+	Letterkenny 223
LY-225a-a	LY225a	132	Gweebarra		2007	48 0+	Letterkenny 225
			Gweebarra		1/10/07	1+	Letterkenny 225
			Owennamar ve		1/10/07	0+	Letterkenny 226
			Owennamar ve		1/10/07	1+	Letterkenny 226
LY-228a-a	LY228a	133	Gweedore	Crolly Br. S of clodder	7/9/06	48 0+	Letterkenny 228
			Gweedore	Br. S of clodder	7/9/06	1+	Letterkenny 228
LY-229a-a	LY229a	134	Clady	Cois clad	29/8/06	48 0+	Letterkenny 229
			Clady	Cois clad	29/8/06	1+	Letterkenny 229
			Glenna		1/10/07	0+	Letterkenny 234
			Glenna		1/10/07	1+	Letterkenny 234
			Tullaghobeg ley		1/10/07	0+	Letterkenny 235
			Tullaghobeg ley		1/10/07	1+	Letterkenny 235
			Ray		1/10/07	0+	Letterkenny 236
			Ray		1/10/07	1+	Letterkenny 236
LY-240a-a	LY240a	135	Lackagh	Owenacurrow Glenveigh	15/9/06	48 0+	Letterkenny 240
			Lackagh	Owenacarro Glanveigh	30/8/06	0+	Letterkenny 240
			Lackagh	Owenacarro Glanveigh	29/8/06	1+	Letterkenny 240
			Lackagh	Owenacurrow Glenveigh	15/9/06	1+	Letterkenny 240
			Lackagh	d/s L. Veagh	1/10/07	0+	Letterkenny 240

			Lackagh	d/s L. Veagh	1/10/07	1+	Letterkenny 240
LY-248a-a			<i>Leannan</i>	<i>Bulluba Gartan br</i>	13/9/06	48 0+	<i>Letterkenny 248</i>
LY-248b	LY248b	136	Leannan	Bulluba Gartan br	13/9/06	48 1+	Letterkenny 248
LY-248c	LY248c	137	Leannan	Bulluba	2007	48 0+	Letterkenny 248
			Leannan		1/10/07	1+	Letterkenny 248
LY-249a-a	LY249a	138	Swilly	Newmills Bridge	14/9/06	48 0+	Letterkenny 249
			Swilly	Newmills Bridge	14/9/06	0+	Letterkenny 249
			Swilly		1/10/07	0+	Letterkenny 249
			Swilly		1/10/07	1+	Letterkenny 249
LY-253a-a	LY253a	139	Crana	Illies U/s waterwork	14/9/06	48 0+	Letterkenny 253
			Crana	Illies U/s waterwork	14/9/06	1+	Letterkenny 253
			Crana	Owenboy drumfree	5/10/06	0+ trout?	Letterkenny 253
			Crana	Owenboy drumfree	5/10/06	1+ trout?	Letterkenny 253
			Crana	MC	1/10/07	0+	Letterkenny 253
			Crana	MC	1/10/07	1+	Letterkenny 253
			Clonmany		1/10/07	0+	Letterkenny 256
			Clonmany		1/10/07	1+	Letterkenny 256
			Donagh		1/10/07	0+	Letterkenny 258
			Donagh		1/10/07	1+	Letterkenny 258
			Glennagann on		1/10/07	0+	Letterkenny 259
			Glennagann on		1/10/07	1+	Letterkenny 259
			Culoort	Keenagh	1/10/07	0+	Letterkenny 261
			Culoort	Keenagh	1/10/07	1+	Letterkenny 261
Foylea	Foylea	140	Foyle	Drumragh Quiggery		48 1+	NI
Foyleb	Foyleb	141	Foyle	Faughan Glenrandel		48 1+	NI
Foylec	Foylec	142	Foyle	Finn		48 1+	NI
Bush	Bush	143	Bush			48 1+	NI

Aquagen	Aquagen	144	Aquagen	Farm		48 1+	na
Fanad	Fanad	145	Fanad	Farm		48 1+	na

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