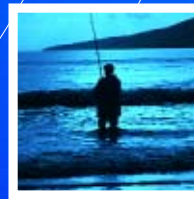


THE CENTRAL AND REGIONAL FISHERIES BOARDS
annual report 2002



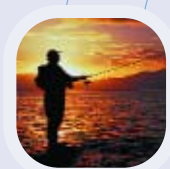
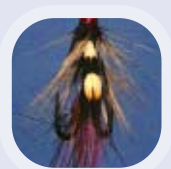
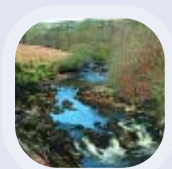
annual report 2002



THE CENTRAL AND REGIONAL FISHERIES BOARDS
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Fisheries Ireland
Our Natural Heritage



Mission Statement

To ensure that the valuable natural resources of inland fisheries and sea angling are conserved, managed, developed and promoted in their own right and to support sustainable economic activity, recreational amenity and job creation.

The Fisheries Boards

The Fisheries Boards are the statutory agencies responsible for inland fisheries in Ireland and operate under the aegis of the Department of Communications, Marine and Natural Resources.

The principal functions of the Central Fisheries Board are to:

- advise the Minister for Communications, Marine & Natural Resources on policy relating to the conservation, protection, management, development and improvement of inland fisheries;
- support, co-ordinate and provide specialist services to the seven Regional Fisheries Boards; and
- advise the Minister on the performance by Regional Fisheries Boards of their functions.

The seven Regional Fisheries Boards have responsibility for conservation, protection, development, management and promotion of inland fisheries in their regions. They have a duty to co-ordinate and co-operate in the delivery of a national fisheries service observing principles of sustainability, biodiversity and the conservation of all species in inland water ecosystems.

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Chairperson's Statement



Bill Mc Lysaght
Chairman

I am pleased to present the 2002 Annual Report of the Central and Regional Fisheries Boards and the Fisheries Cooperative Societies.

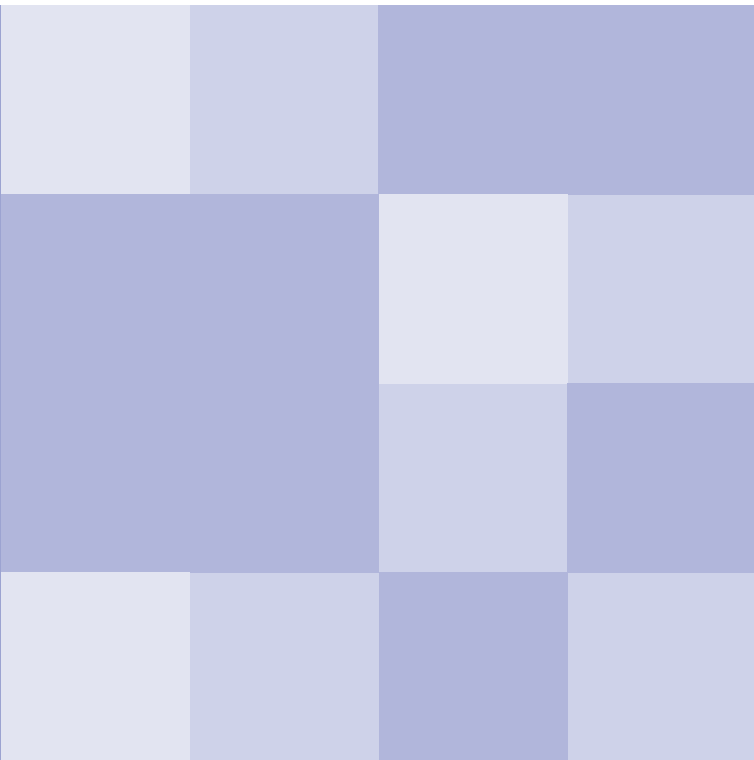
At a corporate level 2002 saw the identification of state of the art new headquarters for the Central Board. We have been endeavouring for some time to secure new headquarters and with the support of Minister of State John Browne, TD, and the Office of Public Works we are now well on the way to providing the standard of accommodation appropriate for a State Agency.

I would like to take this opportunity on behalf of my Board to thank Minister Browne for his strong support and also to OPW who have given priority to addressing our accommodation needs.

Implementation of the modernisation of the Civil and Public Service is advancing apace generally and this is certainly true of the Central and Regional Fisheries Boards. In the last number of years a targeted national training programme has been drawn up by the Boards and implemented. This training programme is now being

advanced through PMDS (performance management development system) and we now have a number of staff members from each of the eight Fisheries Boards trained to provide the PMDS training. Investment in training has grown year on year both in actual terms and as a percentage of the pay budget. A total of €250,000 was spent on training in 2002. This investment in our staff will enhance our capability to provide excellent value for money and a quality service to our customers.

On the sectoral side 2002 saw the introduction of wild salmon quotas for the first time in Ireland. The Regional Fisheries Boards were charged with implementation of the scheme with support and national co-ordination being provided by the Central Board. The excellent manner in which the scheme was managed by the Boards in this, its inaugural year, is now well recognized and I would like to congratulate all involved in making this a success and in providing such an excellent service to the sector and the Minister.



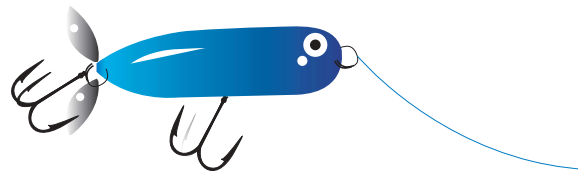
The first element of the NDP (National Development Plan) funding came on stream in 2002. A number of interesting and exciting projects were undertaken by each of the Fisheries Boards. I'm particularly interested in the outcome of the economic/socio economic evaluation of wild salmon in Ireland which was undertaken by the consultants, Indecon. The project quantifying the wetted area for salmon is also interesting and timely and will contribute to the better management of wild salmon on an individual stock basis.

During the year the Board set about developing explicit policies for a number of strategically important areas such as the management of State Fisheries, pike policy and the role of hatcheries/stocking in fisheries management and the development of angling. I am particularly enthused with their policy initiatives as the general area of policy development and advice to the Minister is one of the principal functions assigned to my Board under the Fisheries Acts.

All in all 2002 was an exciting and successful year for the Central and Regional Fisheries Boards and, on my own behalf and on behalf of my fellow Board members I would like to congratulate and thank all the staff.

Bill Mc Lysaght
Chairman

Comment of Chief Executive Officer



John O'Connor
Chief Executive Officer

During 2002 the Central Fisheries Board and the Regional Fisheries Boards worked collaboratively to advance and deliver a range of strategically important corporate and sectoral initiatives. The time and effort committed to developing sound and effective management and operational policies and strategies is now paying rich dividends.

All eight Fisheries Boards worked to develop a suite of corporate strategies to deliver at local and national level. We will now for the first time have a strategic planning process that, while addressing the needs of individual boards, provides synergies and efficiencies across all boards. This approach also facilitates good business planning and creates a sound backdrop to the Service Level Agreements with the Minister and between Boards.

Particular emphasis is being placed on improving corporate governance and developing systems and processes that ensure we deliver best value for money for the taxpayer. A nationally co-ordinated approach to the modernisation process is also being undertaken with particular emphasis on supporting and upskilling all our staff to provide a professional service and to advance their own careers. The Fisheries Boards are now subject to the Freedom of Information Act and, again, structures have been put in place in each of the Boards to deliver on the requirements of this legislation.

During the year the Boards collaborated to advise the Minister on the introduction of district quotas for wild salmon in Ireland. They then proceeded to successfully implement the scheme. Successful implementation in the inaugural year has created a positive and trusting environment where salmon quotas are now accepted as a key component of salmon management.



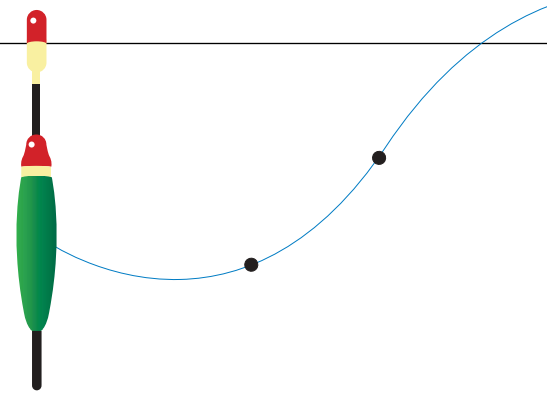
Throughout this report you will see many other examples of where specific initiatives have been advanced and delivered at individual board level and where boards have worked collaboratively to successfully deliver specific inter board and national initiatives and projects.

I would like to express my appreciation and thanks to my Board and the staff of the Central and Regional Fisheries Boards for their support and commitment throughout the year in delivering a quality service to our Minister and the other stakeholders across the sector.

A handwritten signature in black ink, appearing to read 'John O'Connor'.

John O'Connor
Chief Executive Officer

Central Fisheries Board



Central Board Members

Mr. Bill McLysaght (Chairman)

Mr. Paddy Byrne

Ms. Paula Carroll

Ms. Marian Corcoran

Dr. Alan Craig

Mr. Eamon Cusack

Mr. Lal Faherty

Dr. James J. King

Mr. Gerry Marry

Research

Aquatic Habitats and Water Quality

Laboratory Services

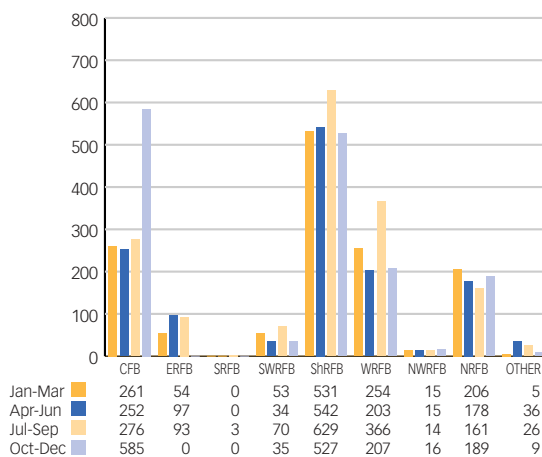
The Central Fisheries Board (CFB) continued to operate its laboratory facility to a high standard and retained EPA certification status throughout 2002. Always careful to improve performance the CFB introduced standard operating procedures and strict quality controls for several methodologies during the year. Very low concentrations have been reported in the past for total phosphorus, detection limit analysis dictates setting 18 milligrams per meter cubed as the limit of detection (LOD) for total phosphorus. Staff will continue to refine laboratory practice and to reduce the LOD for total phosphorus.

The laboratory analysed 6,000 samples for nutrients and other parameters in 2002. The laboratory support service



provided to the Regional Fisheries Boards is summarised, on a quarterly basis, in the accompanying figure 1.

Fig.1: Environmental Protection



The CFB continued to expand the reference database of trace elements, which delivers a 'fingerprint' or chemical signature for each waterbody and improves understanding of the chemistry of surface waters. The Board delivered specialist analytical services to the Eastern Regional Fisheries Board (ERFB) in its catchment management programme for the Avoca River. On several occasions copper, lead, zinc and aluminium levels were significantly elevated downstream of Avoca. The significance of these metal concentrations is being investigated in connection with recorded fish kills in this area. Despite the occurrence of hostile chemical conditions, it is reassuring and somewhat surprising to find the remnants of a native sea trout stock continuing to populate this river.

Longterm Lake Monitoring Programme

The introduction of the LOD for total phosphorus (TP) prevents direct comparison with previous data when very low concentrations were reported. For most of the year monthly total phosphorus concentration was low in the open waters of Loughs Carra, Corrib, Mask, Conn South basin and Arrow. Summer samples from Lough Lene and Derravaragh also showed low TP.

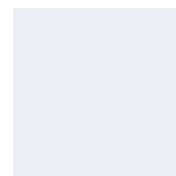
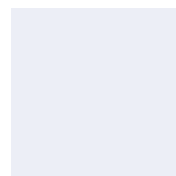
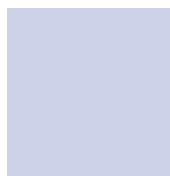
As outlined last year, this programme uses annual average values for chlorophyll (a green pigment contained in plants) and TP together with a measure of water clarity (Secchi Disc values) to categorise the

quality status of lakes. The monthly sampling programme shows Lough Carra remains in a clean state with low chlorophyll in both basins (Twin Islands and Castlecarrá). Corrib Lower, Corrib Upper, Mask, Conn South, Arrow and Conn North all demonstrated mesotrophic (moderately enriched) conditions during 2002. However, several of these lakes showed some symptoms of increasing enrichment e.g. big 'hatches' of chironomids (buzzers) on Lough Carra; and diminishing trout stocks in Lough Conn but with trout growing bigger and faster than those in this lake prior to 1980.

Lough Garadice produced low chlorophyll values but high average TP suggesting that this lake could be in the eutrophic category. Lough na Back and Annamakerrig lake are placed in the upper eutrophic category. Lough Oughter at Eonish and at the Chalets also continues to produce algal crops symptomatic of the upper eutrophic category as do Lough Sillan, White Lake and Lavey Lake. Lough Gowna displays water quality in the hypereutrophic category (seriously polluted) with high algae content and high TP in the north and south basins respectively.

The Shannon Regional Fisheries Board (ShRFB) re-commenced the monthly sampling programme on Lough Ennell during 2002. The CFB laboratory provided analytical support performing analysis for the key water quality parameters. Ennell, having been 'clean' for many years, appears to be undergoing a reversal in quality; increasing total phosphorus and chlorophyll concentration and declining transparency water, suggest that the lake is again in the eutrophic or over-enriched category. This signifies a disimprovement in the general ecological conditions of Ennell with adverse consequences for fish stocks and other beneficial uses of the lake.

A significant expansion was recorded in the submerged vegetation, to depths of 4.0 metres, in Lough Sheelin in August. This signified a marked recovery in the general ecological conditions relative to recent years. However, it has been established for many years that wet weather increases nutrient input to Lough Sheelin. The unusually wet spring and summer in 2002 produced a peak in algae production in March, the algal crop declined thereafter but increased again throughout July and August and remained high to year end. TP and chlorophyll values were both higher than 2001 which,



coupled with reduced water clarity represents an overall disimprovement in quality and signifies a reversal of the trend reported in 2001.

Water Framework Directive (WFD)

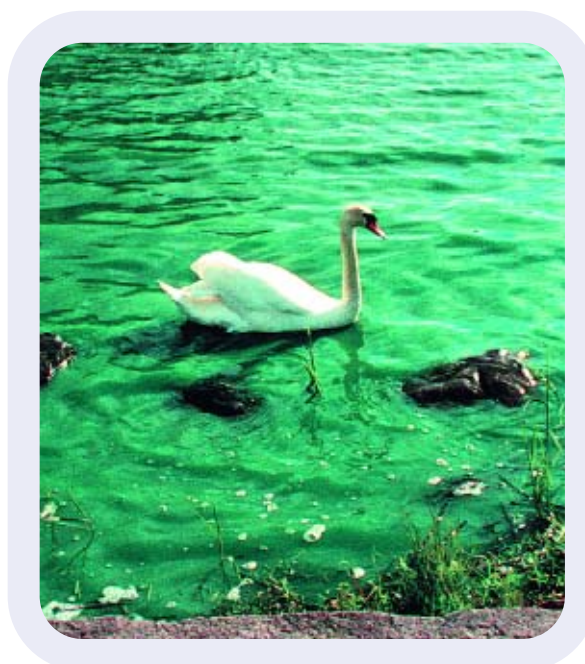
The CFB continued the coordination of the joint EPA RTDI research project, initiated in 2001, which advanced on schedule in 2002 when a further 159 sites were surveyed by the CFB and the four University partners (UCD, UCC, NUIG and UU). The sites surveyed include 14 potential reference and 15 potential intercalibration sites identified by the EPA for the WFD. The project database now contains information on the physical habitat, chemistry, aquatic insects and fish at about 450 sites. These datasets will be subjected to comprehensive statistical analysis to deliver a model based on fish as a biological element to measure ecosystem quality, as required by the WFD. An experiment was initiated on the Robe and Liffey catchments to investigate salmonid egg survival in January 2002. An experiment on the effects of diurnal variation on trout was carried out on the Rye Water in July and September 2002. A hydroacoustic survey was successfully completed on L. Sheelin in March 2002 in partnership with Dr. Robert Rosell from Department of Agriculture & Rural Development, Northern Ireland (DARDNI).

The CFB, following deliberation with the Regional Boards, compiled and submitted a discussion document to the Department of Communications, Marine and Natural Resources (DOCMNR) on implementation of the WFD, in the fisheries context, for consideration by the Department of the Environment and Local Government (DOELG). The document is available on the CFB website, www.cfb.ie.

Fish Kills

Freshwater fish species exhibit different sensitivity levels to environmental stress. Juvenile salmon and brown trout are the most sensitive, while pike, perch, rudd, roach, bream, tench and carp are progressively more tolerant. Water temperatures and river flows, factors influenced by seasonal and yearly variations in climatic conditions can affect fish kill statistics from year to year. Furthermore, the prolonged steady decline

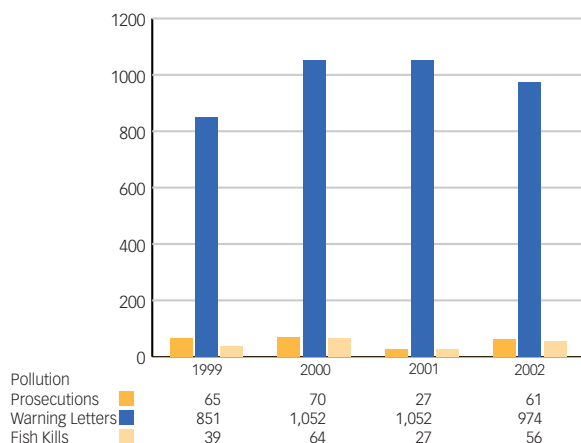
in water quality documented by the EPA over recent decades has reduced fish stocks in many waters and denuded others of their native populations. In these circumstances, the comparison of annual fish kill records over extended periods is of questionable value. Fish kill data, therefore, are not good indicators of pollution trends. However, such incidents (in fish bearing waters) provide visible evidence of a problem, which is socially unacceptable and highlight the need for greater protection of our waters and associated natural resources.



A swan paddles the green (highly eutrophic) waters of Mullagh Lake, Co. Cavan.

It is acknowledged that greater attention has been placed on the prevention of pollution in recent years with licensing of industrial discharges by local authorities and the EPA; the provision of essential finance through cohesion funds and the NDP for the systematic upgrading of sewage treatment works in towns and cities throughout the State and the availability of grant aid under the Control of Farmyard Pollution Schemes. The current emphasis on waste management, it is hoped, will deliver essential improvements in the interception, containment and treatment of leachate from landfill sites.

Fig.2: Regional Board Environmental Protection



Reported fish kill incidents for 2002 are summarised in the accompanying table. Last year was somewhat atypical climatically. The spring and early summer were cold and wet, water temperatures remained low and water levels stayed high. There was some improvement in the weather in July and while water levels declined and remained low until mid-October, temperatures were not high. Consequently stress due to high temperatures and low water was not a significant problem in 2002.

A total of 52 fish kill incidents was reported by the Regional Boards for 2002 of which only 11 incidents occurred before July. The majority of fish kills during the year were eutrophication related (21). These occurred mostly in the coarse fish lakes in Cavan/Monaghan throughout the period July to September. Prolonged mortalities, with varying numbers of fish dying daily from April to September, have been a recurring feature in these highly enriched lakes since 1987. Initially these incidents consisted of many thousands of very young fry. In recent years increasing numbers of adult pike, perch, roach and bream are being recorded in these incidents and this was especially noticeable last year. The precise cause of these mortalities is not known but their occurrence, primarily in lakes which are highly discoloured with blue green algae (cyanobacteria), suggests that the likely causative agents are toxins or ecological stress associated with eutrophication.

Fish kill incidents attributable to agricultural sources (9) were fewer last year, as were those relating to industry (2). Six fish kills were attributed to local authorities during 2002, five of these resulted from sewage

treatment discharges and one to landfill leachate. This latter was perhaps the most significant incident in 2002 when leachate escaped to the Tolka River in March. This caused the total wipe out of a small residual brown trout population struggling to survive in this channel which is frequently polluted from various sources. Small numbers of sea trout were known to occur in this river. These fish, while feeding outside the confines of the river, can avoid pollution events which occur during their absence. Because these trout return to their natal river to spawn they perform a vital role in perpetuating the stocks of trout native to the system. The tragedy on this occasion was the sea trout had returned to the Tolka before the pollution incident and several hundred sea trout were killed. These fish constituted a significant portion of the remnants of the natural gene pool for the river Tolka trout, though few in number they were of inestimable value. Residual stocks of dwindling fish populations, native to individual Irish river catchments, are of immense value environmentally and ecologically. Calculation of damages in such cases, on the basis of replacement with fish of hatchery origin is meaningless and greatly undervalues the natural environment.

Of fourteen fish kills grouped in the "unknown" category (to which incidents attributed to disparate causes have also been assigned) seven relate to inspections of the Avoca River between July and October when dead fish were recorded on each occasion. The cause of the mortalities in this system is connected with elevated metal concentrations in acid mine leachate.

Table 1 Summary of Fish Kill Incidents 1998 to 2002

Causes	1998	1999	2000	2001	2002
Eutrophication	13	12	13	4	21
Agriculture	17	9	20	12	9
Local Authority	0	6	10	1	6
Industry	8	5	8	3	2
Unknown	5	5	6	7	14
Totals	43	37	57	27	52

NOTE The details of fish kills described by the CFB relate to mortalities attributed to pollution incidents only. Statistics presented by the respective Regional Boards in this report include fish mortalities attributed to other causes. This will account for minor discrepancies in amalgamated data sets.



Fisheries Development - Applied Scientific Research

Conservation Fish Species

This title refers to 'non-angling' species such as shad, smelt, char, pollan and lamprey. Both the shad and lamprey groups have been designated under the EU Habitats Directive and work on these species was undertaken with the support of Dúchas, who are charged with implementation of the Habitats Directive in Ireland.

A major review of lamprey ecology and conservation, with implications for Ireland, was compiled by the CFB and was published in late 2001.

A series of investigations focussing on lamprey, shad and smelt was continued in 2002. Much of the work programme was severely hampered by flood conditions. Autumn fyke netting for river lamprey recorded this species on the Boyne above Drogheda and on the Liffey in the freshwater reaches above Islandbridge. The strong support of netsmen liaising with the ERFB and Southern Regional Fisheries Board (SRFB) yielded a large sample of shad and confirmed the presence of both twaite and allis shad in the estuaries of the Slaney, Barrow, Suir and Munster Blackwater. Material from the Irish Specimen Fish Committee's work is also being integrated into this programme and investigations into the ecology of Killarney shad is continuing.

The programme has yielded valuable information to date. The building-up of a picture on shad status will be a slow one and the support of Dúchas, the Regional Fisheries Boards and individual netsmen in operations during 2002 is gratefully appreciated and highlights the benefits of a good close working relationship between interest groups.

The CFB in association with Compass Informatics successfully tendered for an EPA funded research project titled "Hydromorphology of Irish Rivers". This will develop a methodology to measure hydromorphology quality in Irish rivers in the context of the Water Framework Directive (WFD).

A programme for juvenile fish in estuarine waters was initiated in 2000 in the context of shad and lamprey investigations. The initial survey yielded information on the fish community structure relevant to WFD requirements for transitional waters. A two-week survey was undertaken in the Shannon Estuary in September 2002 using beach seining and fyke netting to examine the structure of fish communities at a range of sites. Netting was carried out at 60 sites in a range of habitats and yielded 29 species.

The Shannon survey was a joint undertaking involving staff from the CFB and the ShRFB. Use was made of one of the LPVs as a floating laboratory and stores and as a mother vessel from which a small RIB was launched to reach otherwise inaccessible locations in this very large water body.

The findings from this and previous estuarine surveys in Cork and Waterford Harbours are contributing to the development of a baseline on fish community composition and distribution in Irish estuaries or Transitional Waters, necessary under the WFD. The species lists from these surveys are also currently being used in a joint UK-Ireland intercalibration study, also in the context of WFD.

A Review of the Relationship Between Sea Lice Infestation, Sea Lice Production and Sea Trout Survival In Ireland, 1992-2001

The relationship between sea lice infestation on sea trout and distance to salmon aquaculture sites for a broad geographic range of Irish rivers was reviewed over a ten year period. A report was compiled in 2002 and submitted for publication. Highest mean levels of total lice and juvenile (Chalimus stages) lice were recorded at sites less than 20 km from farms. The mean total lice infestation was lower at sites less than 30 km from farms and beyond 30 km, very low mean total lice levels were recorded. There was a significant relationship between the level of lice infestation on sea trout and distance to the nearest salmon farm in seven of the ten years.



There was a significant negative relationship between sea trout marine survival and the level of lice infestation on sea trout in four bays in the mid-West. A model of the relationship between the total number of lice produced in two bays in spring and the average number of sea lice infesting sea trout in nearby rivers showed a significant positive relationship between lice reproductive potential and infestation of trout.

The relationships shown from this ten-year review indicate that sea lice from marine salmon farms were a major contributory factor in the sea trout stock collapses observed in aquaculture areas in the west of Ireland. If recovery of depleted sea trout stocks is to be achieved in this area, it is critical to ensure that ovigerous sea lice levels are maintained at near zero levels on marine salmon farms each spring period prior to and during sea trout smolt migration.

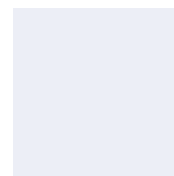
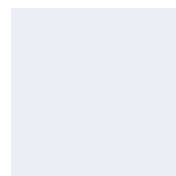
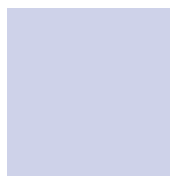
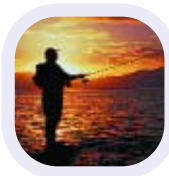
Environmental Drainage Maintenance (EDM) Programme

The aims of this study are to examine the environmental impacts both of current channel maintenance work carried out by OPW and of environmentally-sensitive maintenance. The programme is funded by OPW Drainage Division and 2002 was the first in a new five-year programme (2002-2006). A summary report was compiled for the previous five-year study and was made available on the CFB website in summer 2002.

The OPW requested that a training programme on environmentally sensitive maintenance be developed and delivered to its machine drivers. This would cover strategies to retain elements of the river corridor habitat and strategies to incorporate environmentally sensitive digging work into normal maintenance. A training programme was developed during 2002, following extensive consultation with colleagues in the Regional Fisheries Boards who have regular bank-side dealings with OPW schemes. Roll-out of this programme commenced in late 2002 and is scheduled for completion by mid-February 2003.

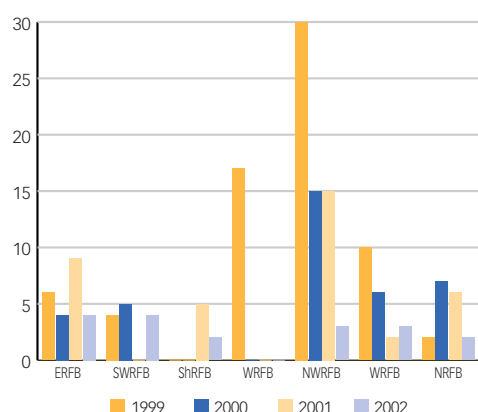
Desk Study to Quantify the National Freshwater Salmon Habitat Resource

To date, the calculation of salmon stock conservation limits for the fisheries districts in Ireland has been based on historical catch data over a 30-year period. A conservation limit is an estimate of the number of adult salmon that are required to spawn in a given river in order to optimise the number of fish that can be produced by that river in subsequent generations. Habitat information and conservation limits are required to rationally manage and enhance the salmon resource. A desk study entitled "Quantification of the National Freshwater Salmon Habitat Asset" was undertaken in 2002 to quantify the freshwater salmon habitat and to provide a second approach to the calculation of salmon stock conservation limits based on the carrying capacity of a given wetted area in a fisheries district. The calculations that derive from this work will enable a cross-check of existing conservation limits and therefore provide a robust basis for the management of the salmon stock.



Fisheries Development - Targeted Programmes

Fig.3: Improving Angling with Development Works



Salmonid Surveys

As part of the Lough Melvin Catchment Management Initiative, a survey was undertaken of fish stocks in tributaries of the Lough Melvin Catchment in association with the Northern Regional Fisheries Board (NRFB). Sites were electro-fished on the County, Roogagh and Clancy's streams or rivers to determine juvenile salmonid densities. Sites had been previously electrofished on the Glananiiff and Ballagh rivers in 2000. This was a repeat of a previous survey carried out in 1992.

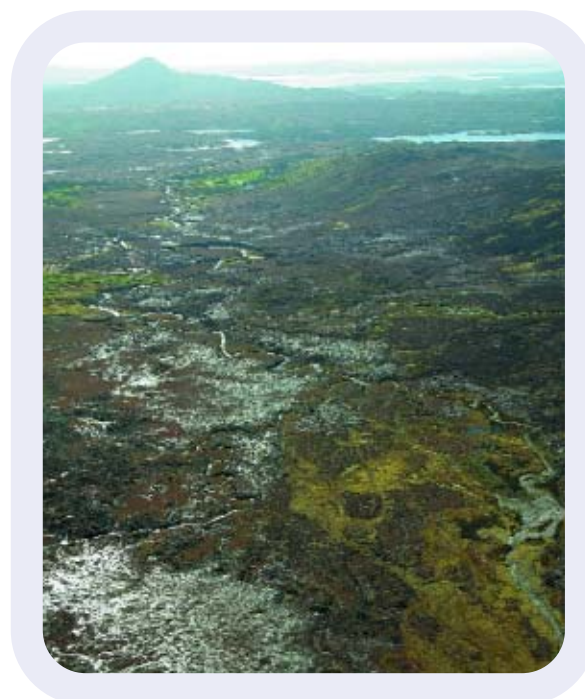
A comparison of trout and salmon mean density at sites in the Ballagh and Glenaniiff tributaries in 1992 and 2000 showed no significant differences indicating no deterioration in juvenile stocks over the time period. Mean densities of trout and salmon for these tributaries were higher than those from the County/Roogagh and Clancy's tributaries. This result emphasises the importance of the Ballagh/Glenaniiff tributaries to juvenile trout and salmon recruitment to the Melvin catchment.

The productive capacity of the County river could be increased by improvement of the existing fish pass and input of spawning gravels at suitable sites upstream of

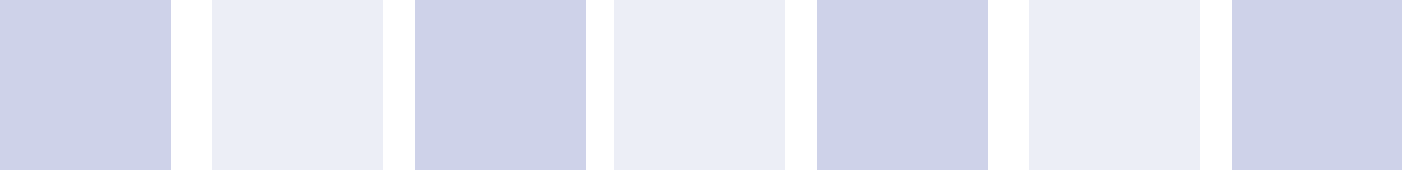
the cascade. The Roogagh system is very insignificant in terms of juvenile salmon production for the catchment. However the presence of juvenile salmon located on a tributary above the waterfall in Garrison village indicates that some salmon can negotiate the falls in certain years. Survey results indicate that Clancy's river is a very important tributary for both salmon and trout production. Recommendations were made regarding habitat enhancement proposals on tributary streams.

Monitoring of salmonid populations was also undertaken in the Currane catchment – a repeat of work carried out in 1994. Good numbers of juvenile salmonids were recorded indicating no change in populations since the previous survey.

A survey was conducted on Lough Shure on Arranmore Island, Co. Donegal to determine the status of one of the only self-sustaining rainbow trout populations in Irish waters. This population has been present in this lake since the early 1900s. Results indicate that the population is now extinct.



Seriously eroded peat, a consequence of overgrazing by sheep is depressing salmon and trout production.



An extensive electrofishing survey of the Avoca River which includes the Avonmore complex, the Avonbeg and the Aughrim complex was undertaken during summer 2002 by the CFB and the ERFB. The purpose of the survey was to establish the status of fish stocks in the catchment with an emphasis on salmon populations. Many have regarded the Avoca as a “dead” river because of mining activities and associated acid mine discharges in the lower reaches of the river dating from the late 1700s. Juvenile salmon, trout, eel, lamprey, stickleback and minnow were recorded in the catchment over the survey period. The lower reaches of the Avoca main channel downstream of the principal mine adit have been severely impacted and few salmonids were recorded in these reaches. However, juvenile salmon were well distributed in all major tributaries. Physically the catchment has excellent juvenile salmon production, and angling potential. A costed remedial programme designed to remove the pollutants and return clean effluent to the watercourse is being finalised by the ERFB.

Fish stock surveys were carried out on three managed lake trout fisheries in 2002 – Loughs Ennell, Sheelin and Arrow. This is part of an ongoing programme to monitor stocks and advise Regional Fisheries Boards on the success of their management strategies in relation to these fisheries. Exceptionally large stocks of brown trout were recorded in Lough Ennell. The trout population in Lough Sheelin has improved marginally compared to recent years. The trout stock in Lough Arrow is currently dominated by large fish.

Monitoring of the effectiveness of salmonid stream enhancement programmes, carried out under the TAM programme, continued in a number of catchments. In 2002 the effectiveness of such programmes in Lough Ennell and Arrow’s stream catchments and the Glenglosh River (Corrib Catchment) were assessed.

Sea Trout/Sea Lice Monitoring Programme

The Fisheries Boards continued to monitor estuaries for prematurely returning lice infested sea trout in 2002. Sampling was carried out on 16 rivers. The heavy floods during May and June 2002 prevented many rivers being sampled during the annual programme and only 202

fish were captured. Highest mean lice levels were recorded from the Eske and Eany rivers in Donegal Bay and the Crana river in Lough Swilly. No heavily infested fish were recorded in rivers in the western region. The small sample size limits the interpretation of the data.

Urban Flood Relief Schemes

The CFB was requested to undertake investigations over a two-year period on the status and conservation of lamprey species in the Kilkenny city flood relief scheme, funded by OPW. This investigation was requested by Dúchas in view of the location of the flood relief scheme within the designated Special Area of Conservation (SAC) on the River Nore.

The study, which commenced in spring 2002, provides an opportunity to undertake research on lampreys, on which little work has been done previously in Ireland. To date this study has been important in regard to:

- Baseline on ecology, population structure and density of juvenile lamprey;
- Development of a robust and statistically verifiable sampling methodology and salvage methods for juvenile lamprey.

These will contribute to development of monitoring protocols both for assessment of favourable conservation status of lampreys, under the EU Habitats Directive, and for effective sampling of an element of the riverine fish biota, under the WFD.

Programme for Waterways Ireland

Under contract to Waterways Ireland, the CFB continued to manage, monitor and develop the environmental aspects of the Royal and Grand Canals, the River Barrow Navigation and the Shannon-Erne Waterway in 2002. An ongoing programme of water quality monitoring, aquatic plant management and fisheries development succeeded in both maintaining and promoting these waterways as valuable and sustainable inland resources and amenities.

■ Aquatic Plant Management

Aquatic plant surveys were conducted along the canals, the River Barrow and the Shannon-Erne Waterway in spring and autumn, 2002. These site surveys were aimed at determining the status of the vegetation in the waterways prior to and post weed treatment. This enabled the CFB to deliver informed comment on the dynamics of aquatic plant populations in these managed waterways. The autumn survey evaluated the efficacy of weed control strategies and programmes, facilitating the formulation of the aquatic weed control programme for 2003.

■ Invasive Plant Species: *Azolla*

Between May and August the distribution and abundance of the invasive aquatic plant *Azolla filiculoides* along the River Barrow was closely monitored. Surveys were carried out by boat between Athy and St. Mullins to ensure no areas of the navigation were overlooked. The plant was noticeable along the edges of the navigation from the cut above Levittstown Lock, to St. Mullins mainly in slack water along the riverbank. The plant did not cause any disruption to the navigation and no large dense floating mats were observed. The high rainfall and increased flow rate in the river probably explain the absence of large dense, plant mats, which occurred during 2001.



Azolla from the River Barrow.

■ Fish Stock Assessment

During 2002 a total of seven fish stock surveys were carried out. These were on level 12 of the Royal Canal, level 31 of the Grand Canal, and level 24 of the Barrow Line. Stock assessments on Coologe, Derrycassan and Ballymagauran Lakes on the Shannon-Erne Waterway were also conducted. A hydroacoustic survey of the lower River Barrow was completed in September, with the cooperation of the Environment Agency UK.

■ Bream Surveys

In May 2002 the CFB undertook a programme to determine the movements and migrations of bream (*Abramis brama*) in the lower reaches of the River Barrow. Bream is a bottom feeding cyprinid that is characteristic of the fish communities of slow flowing European lowland rivers. Bream is an important coarse angling species attracting many anglers to the River Barrow throughout the year. Bream stocks in the Barrow were surveyed using new and advanced acoustic telemetry/tracking technology. The development of acoustic technology has been a major step forward in understanding the movements and migrations of fish species throughout the world. An acoustic tag is placed in the body of the fish; the tag emits a signal, which is picked up using a submerged hydrophone. This allows the movements of the tagged fish to be recorded. Over time a picture is built up of how, where, and when a particular fish species uses its available habitat under varying conditions and at different times of the day, month or year. The results from the study will allow informed fisheries management decisions to be made which will allow this area to be usefully developed as a sustainable bream fishery.

■ Fish Stock Enhancement

During 2002 eight coarse fish species (roach, rudd, bream, hybrids, tench, pike, perch, and carp) were stocked at 14 locations along the inland waterways. Requests are constantly made regarding the development and enhancement of fisheries across the entire inland waterways network. The CFB assess these requests on an ongoing basis and work in cooperation with angling groups, and other fisheries organisations,



to enhance the fishery resource. In excess of 1.4 tonnes of coarse fish were stocked into inland waterways during 2002. Many of the fish stocked are tagged with individually numbered floy tags prior to release.



Fish stocking at the Grand Canal, Clondalkin, Dublin.

■ *Salvage Operations*

Salvage, or fish rescue operations, may be conducted for a number of reasons. These can include: routine maintenance work, pollution incidences or when an unexpected dewatering of a waterway requires a section to be drained and the resident fish removed. A total of eight salvage operations were conducted during 2002.

■ *Bathymetry of Lakes in the Shannon-Erne*

Bathymetric surveys of the entire complex of lakes on the Shannon-Erne Waterway were completed in 2002. The output of these surveys allows three dimensional wire-frame depth profiles of these lakes to be generated using modern computer software. These maps are also being developed to include useful information for Waterways Ireland engineers, fisheries managers, anglers and other waterways users.

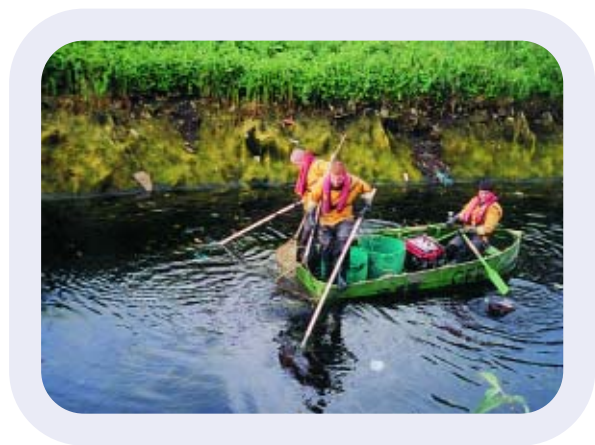
■ *Water Quality Monitoring and Pollution Abatement*

Water quality monitoring on the Royal and Grand Canals, the River Barrow Navigation and the Shannon-Erne Waterway continued in 2002. In order for water quality to meet EU standards for recreational activities it is necessary to closely monitor the physico-chemical

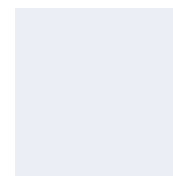
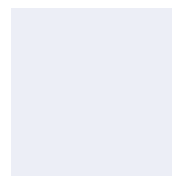
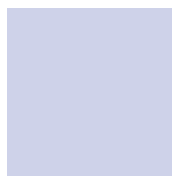
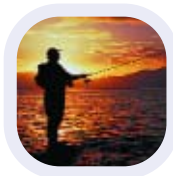
composition of the waterways on a regular basis. This is carried out by taking water samples from the waterways and analysing them for a number of parameters, both on site and in the laboratory at CFB. The main objective of the water quality-monitoring programme is to survey water quality and identify pollution sources to the canals, rivers, lakes and feeders within these systems. The negative effect of on-going chronic pollution can often be worse than once-off pernicious discharges, which may result in fish-kills. In the case of low level pollution the life cycle of the fish may be disrupted. This can be reflected by reduced growth rates, poor survival and destruction of habitats.

The canals are divided into a number of sections and are sampled separately, east and west of the summit points. In total, 71 main channel sites and 38 feeder sites are sampled. The Shannon-Erne Waterway is sampled at 53 sites across lakes, rivers and canal sections. The River Barrow Navigation is sampled at 23 river and at 27 feeder sites. All sites are sampled on four occasions each year.

Using a system known as Colilert, the bacteriological condition in the waterways and their feeders is monitored. Coliforms, when present, indicate contamination from an external source - be it agriculture, industry, domestic or municipal. Coliform samples were taken twice over the four sampling occasions during the summer and winter periods in 2002.



Fish salvage operation at Royal Canal, Phibsboro, Dublin 7.



On site, a YSI Water Logger is used to determine: temperature, dissolved oxygen, turbidity and conductivity. An independent pH probe is used to measure the pH on site.

Water samples are returned to the CFB laboratory for analysis of colour, total hardness, alkalinity, molybdate reactive phosphorus, total phosphorus, total oxidised nitrogen, chlorophyll (lake samples only) and biological oxygen demand.

The condition of the Royal and Grand Canals remains satisfactory. The quality of the Barrow Navigation, however, could be significantly improved. The Shannon-Erne Waterway is in an overall good state.

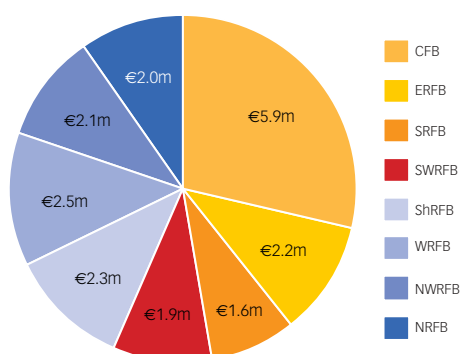
Seminars/Conferences

- The CFB hosted and organised the 13th International Salmonid Habitat Enhancement Workshop in Westport in September, 2002. This was the first time this prestigious biannual event was held outside of North America. It consisted of two days of talks from experts in the field. Speakers were from all over Western Europe and North America. This was followed by a two day bus tour trip to salmonid channels which had been enhanced by either the WRFB or North Western Regional Fisheries Board (NWRFB) under the recent TAM Programme. The workshop was a great success being attended by 235 delegates from all parts of Western Europe and North America. The workshop proceedings and a detailed field guide were presented to delegates at the conference. All CFB papers are available on www.cfb.ie.
- Two papers were presented by the CFB at the Symposium on Inland Fisheries Management and Aquatic Environments: The Effects of Fishery Management on Freshwater Ecosystems at Windermere, UK. Titled 'Coarse Fishery Creation in Irish Cutaway Bogs' and 'The Habitat Enhancement Programmes required by the Salmonid Fisheries in the Republic of Ireland' respectively.
- The CFB participated in the annual North Atlantic Salmon Conservation Organisation (NASCO) meeting as part of the EU delegation in the Faroe Islands in June 2002.
- A presentation was given at the Tweed Foundation Workshop on the 'Success of Salmonid Riverine Habitat Enhancement in the Tweed Catchment' at Melrose, Scotland.
- A delegation from the NWRFB, including M. O'Grady (CFB) as technical advisor, met the E.U. Commission and Irish MEPS at Brussels expressing their concern about pollution problems in the Lough Conn catchment.
- A presentation was made to Ballinrobe Anglers at behest of WRFB to put the value of brown trout hatcheries in perspective.
- A presentation was also made to the NWRFB outlining the extent of pollution problems in the Castlebar River.

Finance/IT

In 2002, the Fisheries Boards received an exchequer grant of €17.8m of which pay costs amounted to €14.4m or 82% of the total grant received. In addition €1.3m was allocated to national based programmes, which were co-ordinated by the CFB. Following a submission co-ordinated by the CFB, a supplementary allocation of €2.8m was received in Q4, bringing total funding to €20.6m.

Fig 4: 2002 Funding per Board (in €000's)



During 2002, work commenced on the development of a corporate strategy for all eight Fisheries Boards. This involved the development of individual plans for each Regional Fisheries Board and a composite plan for all eight.

Throughout the year, the CFB developed and improved the IT and communications systems within the Board. The CFB website continued to increase in popularity in 2002. Over 59,000 visitors made use of this online facility viewing over 300,000 pages, up 50% from 2001. Once again the Irish Angling Update was a major factor in attracting visitors from 50 countries worldwide. In December the website was completely overhauled. A new image was created and a number of new sections were added. In particular a commercial fisheries section was developed as part of a departmental innovation to create a commercial fisheries web portal, drawing information from each of its agencies with a responsibility in this area.

During the year, the Minister of State visited CFB HQ and approved the securing of new state of the art accommodation for the Board. A number of premises were identified in a partnership approach with staff and unions and the proactive support of the OPW. Excellent accommodation was located in Maynooth and arrangements were advanced to move to these premises. The Board has been endeavouring to secure new accommodation for a long number of years and the identification of these premises provides the opportunity to provide all staff with a suitable and attractive working environment.

The first tranche of funding for inland fisheries development under the National Development Plan (Tourism & Recreational Angling Measure – TRAM) came on stream in 2002 with the provision of €1.226m.

The CFB engaged in a process with the Regional Boards, inviting them to submit projects for consideration for funding. An independent selection process was undertaken which resulted in the approval of the following projects:

Fig 5: TRAM Funding per Board

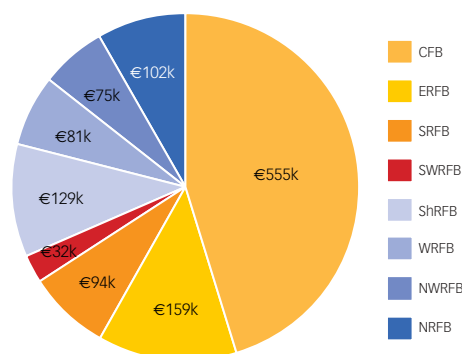
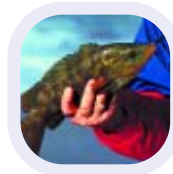
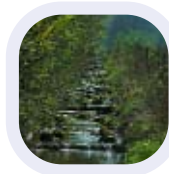




Table 2		
BOARD	PROJECT TITLE	COST (€)
Central	Study to quantify the National Freshwater Salmon Habitat Asset	149,000
	Economic/Socio-Economic Evaluation of Wild Salmon in Ireland	75,000
	Expansion of Rainbow Trout Fish Farm Offaly	110,000
	Study re Implementation of National Carcass Tagging Scheme & Rod License Distribution	30,000
	National Corporate Stand	37,000
	Establishment of a new National Photographic Archive and Library	35,600
	On-line sale of National Salmon Licences	3,000
	National Angling Festivals Support Scheme	3,000
	TRAM Unit Admin Costs	112,500
	TOTAL	555,100
Eastern	Corcris Lake Co. Monaghan - Stands & Catwalk	12,000
	Lisnashannagh Upper Lake Co. Monaghan - Stands & Catwalk	4,000
	Lisnashannagh Lower Lake Co. Monaghan - Stands & Catwalk	9,000
	Descant Lake Co. Monaghan - Stands & Catwalk	5,000
	River Dee Co. Louth – Access incl. Walkway & Wheelchair Ramp	15,000
	River Dee Co. Louth – Footbridge	9,000
	River Dargle Co. Wicklow - Access & Instream Development	10,500
	River Avoca Co. Wicklow – Investigative Study to Reduce Acid Mine Drainage Impact on River	51,000
	Eastern Region Promotional Literature	44,000
	TOTAL	159,500
Southern	Stradbally Lake Development Co. Laois - Creation of Trout Fishery	30,000
	Blackwater Stream Enhancement Cork & Kerry	30,000
	Rockforest Blackwater Enhancement Scheme Co. Cork	34,000
	TOTAL	94,000
South Western	Three Information Sea Angling Boards	19,000
	Caherciveen - Wheelchair Hoists	13,000
	TOTAL	32,000
Shannon	Purchase of Electrofishing Equipment for Information & Data Collection	30,000
	Production of Angling Promotion Guides	25,000
	Development of Pallas Lake	20,000
	River Maigue – Renew Cabling on Counter	20,000
	Promotional Advertising Campaign	33,000
	TOTAL	128,000
Western	Cong Recreational Development	50,000
	Game & Coarse Regional Angling Guide	31,000
	TOTAL	81,000
North Western	Glenamoy River Development Co. Mayo	75,000
	TOTAL	75,000
Northern	Erection of Structures to Facilitate Sea-Trout Counter on Rosses Fishery	20,000
	Owenea River – Enhanced Access	62,000
	Eske Fishery - Stiles, Parking, Boats & Spawning Gravel	20,000
	TOTAL	102,000



All projects were completed on time and within budget. Regarding the CFB's projects, the following provides a brief description of each:

Study to quantify the National Freshwater Salmon Habitat Asset

This study will be central to calculating salmon conservation limits on a District basis in future years rather than using District historic catches alone.

Economic Socio/Economic Evaluation of Wild Salmon in Ireland

The Terms of Reference of the study were:

- To consider and quantify the economic/socio economic value and importance of the commercial wild salmon fishery in Ireland
- To consider and quantify the economic/socio economic value and importance of the salmon rod angling fishery in Ireland
- To set out options/models with recommendations on how both segments of the industry should be sustainably managed from an economic/socio economic perspective in the future
- While this is a national study, due consideration should be given to the importance of wild salmon to coastal and rural communities

Increase production of 2+ Rainbow Trout, Roscrea Fish Farm

This project involved the construction of a large 1/2 acre pond, with access routes, water and electrical supplies. A tower was erected to facilitate the flow of water to the pond from a pump and two bridges were built to bring the water to the farm. The area was fenced and an oxygen system to produce our own oxygen for injection into farm water was installed. The fish farm will be in a position to meet projected increased demand for 2+ trout. It will have better trout for anglers because of their improved environment.

Technological Solutions for the Fisheries Boards

Microsoft Solutions and Rococo were engaged to look at technological solutions for the Fisheries Boards in relation to the following areas:

- Computerisation of rod license issue
- Mobile Technology for Fisheries Officers
- Bar-code readers for gill tags for fish dealers/logbook scanning equipment.

These solutions have been presented and will be considered by all Boards.

Production of National Corporate Stand

This project involved the development of a professional display solution for all the Fisheries Boards. The stand make up has the necessary flexibility to allow for different component parts to be used for different events around the country. The display stand also functions as a unit in different displays to cover different situations i.e. conferences, launches, exhibitions. This display stand will ensure that the Central and Regional Fisheries Boards are represented at a professional level at any event.

Establishment of National Photographic Archive and Library

The aim of this project was to set up a comprehensive image database library in the CFB for the Fisheries Boards. By the end of 2002, almost 500 images were scanned and archived and several projects have already received assistance through the library, including angling promotion and marketing campaigns and production of corporate literature.

Online Sale of National Salmon Licences

This aim of this project is to make salmon licences available for sale online. It will act as a stepping stone to service wide integration of web based solutions and improvements to customer service as per the Programme for Better Government and the Department of the Taoiseach's eGovernment strategy.



National Angling Festivals Support Scheme

The aim of this project was to purchase eight sets of quality weighing scales for use in rural angling festivals held in all parts of Ireland including Northern Ireland. The CFB has a tradition in supplying sets of weighing scales for all angling competitions on inland waters and at sea.

Human Resources

Employee Relations/Change Management

Implementation of the change and modernisation agenda continued across the service. The advancement of a range of new measures and initiatives were reported to the DOCMNR, in the context of specific performance indicators required under clause 4 (c) of the Programme for Prosperity & Fairness (PPF).

The 1% lump sum was paid to all staff in April 2002 and staff also benefited from the 3rd phase increase of 4% on 1st October 2002 under the PPF.

A number of action plans were agreed with the DOCMNR to advance the recommendations in the H.R. Consultancy Report produced by Cap Gemini, Ernest & Young. However, the increasingly difficult budgetary and economic climate towards year-end effectively halted these discussions.

The Board continued to work closely with the management of the service in advancing a progressive H.R. agenda and ensuring a consistent and co-ordinated approach to developing and implementing H.R. policies and procedures.

As a follow on to the launch of the Equal Opportunities Policy and Respect and Dignity at Work Policy and Grievance Procedure, briefing sessions were provided for all staff and designated contact persons were appointed in all 8 Boards.



Arising from a consultative process with the management and staff of the Boards, a comprehensive report was produced by an external facilitator, which covered an evaluation of the current culture and issues arising together with recommendations for developing partnership. The report was accepted by management and trade unions and the process of seeking additional resources to enable implementation to proceed, was begun.

In order to facilitate the introduction of a Performance Management and Development System (PMDS), an implementation team drawn from the 8 Boards and the various disciplines/grades within the service was established. From this team, 3 task groups were established viz. training task group, competency/role profile task group and the communications task group, which delivered on a range of activities to support the implementation process.

In November the Fisheries Boards came within the scope of the Freedom of Information (FOI) Act 1997. An FOI Officer was appointed to co-ordinate requests to all 8 Boards.

Fig 6: Distribution of Staff in the Fisheries Boards

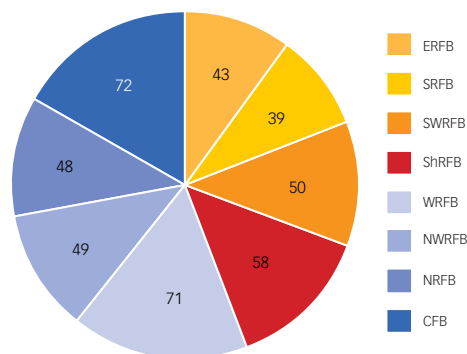
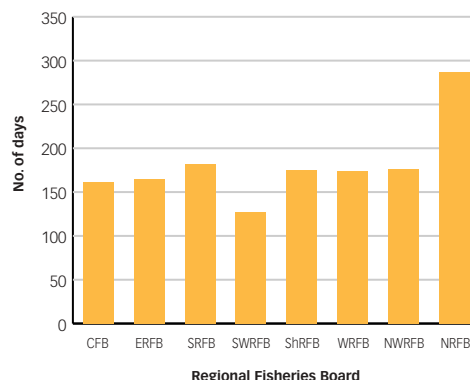


Fig 7: Training Days per Board



Training and Development

The Fisheries Service commitment to national training and development was demonstrated in the €250K investment made by the Fisheries Boards in 2002. A focused and prioritised training plan was developed with input from the Fisheries Boards. Some of the main training and development interventions delivered in 2002 were as follows:

Health & safety training, occupational first aid, safety rep training, construction regulations, confined space regulations, handling hazardous materials, train-the-trainer in manual handling, fire safety. Briefing sessions for all staff were provided on such areas as PMDS and FOI.

A further education policy was introduced outlining the commitment of the Fisheries Boards to supporting staff undertaking further educational courses.

A third level certificate programme, (Certificate in Fisheries Management), was developed with Sligo Institute of Technology with input from staff of the Fisheries Boards for commencement in 2003.

During the year, total days training delivered was 1,448, an average of 3.6 days training per staff member.

New Accommodation

The sourcing of new accommodation was given priority in 2002 following the Minister of State's indication of support. The Board decided to advance this important project through a partnership approach with staff and unions.

The Board looks forward to being in a position to provide all staff with quality accommodation and general working conditions befitting a state body.

Health & Safety

Safety continues to be a priority and is one of the Fisheries Boards' core operating principles. The completion of risk assessments and updating of site specific statements continued across the service.

New standard operating procedures on prioritised activities were produced and adopted by the Boards. A focus on safety awareness and national and local safety training continued to make an important contribution to sustaining a proactive safety culture.

Marketing

In 2002, the CFB established a working group to develop a national angling marketing strategy. In addition to the CFB, the Regional Boards and Bord Fáilte are represented on this group. It is expected that strategy will be finalised in 2003. The strategy will create a backdrop for a suite of regional angling marketing strategies.

Fin (Fisheries Ireland News), the newsletter for the Fisheries Boards, was published in 2002 and distributed to a wide range of customers including TDs, senators, state agencies, government departments, anglers and environmental groups. The newsletter endeavors to give an insight into the many facets of work the Fisheries Boards undertake and will continue to educate and inform in 2003.

A new education pack was developed in 2002 in response to a growing demand for educational material in schools and to create a greater awareness and appreciation of our inland fisheries amongst young people. In order to educate primary school children about fish, their habitat and the Fisheries Boards, it was advised that the best way to inform pupils is through their teachers. The course content developed is relevant to the Social, Environmental and Scientific Education and Social, Personal and Health Education syllabi in the primary school curriculum and is designed to be teacher and pupil friendly. The course will be launched in 2003.

The CFB developed a new corporate identity in partnership with the Regional Boards, so that a clear and focused visual identity represent the ideals and the role of the Boards. This was introduced during summer 2002 and adopted by all Boards. It will be used in all future stationary, brochure and promotional material.

During 2002, the CFB took part in a number of shows in Ireland and abroad. The National Angling show in Swords hosted over 9,000 visitors and the Boat Show at the RDS was attended by 30,000 visitors where a huge amount of angling enquiries were handled. The CFB also participated at shows abroad in Paris, Holland, England and the USA.

Photographic shoots were organised in conjunction with Bord Fáilte and a programme featuring shore angling, was completed in Mayo, Clare and Kerry by internationally noted photographer Peter Gathercole.

Advice and technical assistance was given to the production team and camera crew working for BBC/Discovery in successfully completing a six part TV series called "From Coast to Coast". The success of this series has resulted in the CFB being involved in a series of new programmes for 2003.

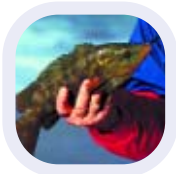
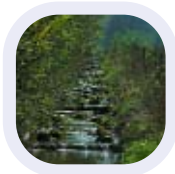
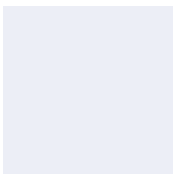
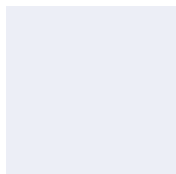
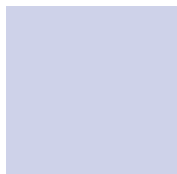


CFB participating in an international angling show in Paris, France.

The Irish Angling Update was distributed on the CFB website throughout the year with weekly reports during the main summer angling season. The report is produced with the assistance of Regional Fisheries Boards and tourist angling contacts. It is circulated to Irish tourist offices all over the world, Irish and foreign journalists and the tourist angling trade in Ireland. Angling enquiries covering all aspects of Irish angling were handled daily by phone, mail and e-mail.

The annual Sherkin Island Marine education awards were supported with sponsorship of rods and reels for the prize giving ceremony in Cork.

Three projects submitted for funding under the NDP were successful during the latter part of the year. A new image database library project was created to digitally archive 30 years worth of photographs and



slides. A festival support project was also funded which involved the purchase of new certified weighing scales, nets and tripods to support the many angling festivals around the country. A national corporate stand was also funded under this programme, which involved the development of a professional display stand for the Fisheries Boards.

Angling

Sea Angling

Poor weather conditions hindered the season, with sea conditions particularly unsettled for long periods of time. Boat angling was generally good with pollack proving to be the most predominant species. The weather in the early part of the year (June to early August) was very unsettled and many days were lost to windy conditions. Wreck fishing was excellent last year and Courtmacsherry recorded the most specimen fish for the second year in a row with over 20 fish.

Approximately 30 blue fin tuna were hooked last season and 20 of these were successfully boated. The tuna catching area is concentrated off the northwest coastline from Clifden to Downings.

There were some excellent sea angling festivals and tournaments, and of particular note was the attendance of Minister of State, John Browne and Board members at the Rosslare Small Boats Tournament, which the CFB and ERFB run annually.

Shore fishing was generally quiet and there was a slight drop off in codling catches on the east and south coastlines. Large flounder are notable by their absence which is causing concern among the shore angling community.

Bass fishing has improved but has not recovered to catches experienced by shore anglers in the sixties or seventies. Ongoing monitoring and protection needs to be maintained and increased to ensure stocks remain at an acceptable level.

Game Angling

Just as the 2001 season was overshadowed by the Foot & Mouth disease outbreak, the 2002 angling season was severely restricted by adverse weather conditions that made fishing virtually impossible or pointless on many fisheries at the peak of the season. Heavy rainfall caused many rivers to flood. This not only affected the spring salmon river fishing but the exceptional heavy rainfall from mid April to mid August severely affected river trout fishing and several of the major salmon fisheries, particularly on the bigger systems, e.g., the Moy Fishery, Galway Weir and the Lower Cork Blackwater were unfishable for several weeks at a time. As a result, rod catches were much reduced and it is difficult to assess performance.

The spring salmon season opened on January 1st. The majority of the fisheries reported disappointing and poor fishing. Only the River Laune in January, the River Drowes in March and Carrowmore Lake in April reported fishing to be "good".

The grilse fishing was severely restricted by floods particularly on the bigger rivers, e.g., Moy, Blackwater, Corrib and Ballynahinch. The persistent rain benefited the smaller spate systems by extending the fishing time. Rivers like the Bandon, Erriff, Finn, Donegal Rivers and Upper Moy reported fair, good and even very good fishing. However, despite the good water conditions, many others, e.g., Delphi, Burrishoole and Currane say the run of fish was disappointing. In September, the River Nore was an exception. There were excellent numbers of fish in the river and some exceptionally good catches were made.

Where salmon stocks are concerned, it would appear from the information available that the steady decline in Irish salmon stocks continues. With every passing season, it is becoming increasingly difficult to find good salmon fishing.

The decline in sea trout stocks in the traditional tourist frequented fisheries of the northwest, west and southwest continues. The majority, if not all of them, are experiencing difficulty. This has serious implications not only for the tourist and recreational anglers but also for guesthouses, hotels, guides and the broader economy in these areas. A few east-coast rivers reported good sport.



Loughs Corrib and Mask performed best of the brown trout loughs. The majority of anglers who fish these Loughs reported very good and even excellent fishing right through the season. The best of the “developed” brown trout Loughs were disappointing with the possible exception of Lough Melvin and Lough Conn at mayfly time. Lough Derg on the Shannon is also going through a revival.

Many of the prime brown trout rivers were adversely affected by floods and high water right through the season, particularly in the period April to July which sees the most prolific fly hatches. Anglers were forced to fish the headwaters, side streams and tributaries in order to find sport. Overall, it was a poor trout season on the rivers, due to high water.

Coarse and Pike Angling

Following the foot and mouth problems in 2001, there was an increase in the number of coarse and pike angling visitors in Ireland in 2002. Quite good coarse fishing was reported in all major coarse centres but catches of bream were not great with the exception of the Northern end of Lough Derg and Inniscarra. Good coarse catches of roach and hybrids were reported at all centres. The very wet summer hindered the sport with many fisheries flooded or having very high water levels during the summer months.

It was a poor year for tench generally, but rudd catches were better than in recent years. There were several great catches of specimen perch recorded particularly on the River Barrow.

The new 41lbs Irish pike record taken in Lough Ross in south Armagh rounded off a very good year for pike fishing. The rivers Suck, Barrow and Bann produced the bulk of specimen pike reported. Pike fishing is very popular among Irish and visiting anglers and while there is a reported decline in stocks in some areas, the general trend is that the fishing was good at most of the angling centres around Ireland. Fly fishing for pike is getting very popular and is a growing product in the market place.

There were many pike competitions held throughout the year producing good catches including the

European pike challenge at Lough Derg which attracted a great number of continental visitors. The Biannual Pike International between Ireland and England, held on waters in the Suck valley, saw the English team victorious at last after losing out for several years to Irish teams at home and in the UK.



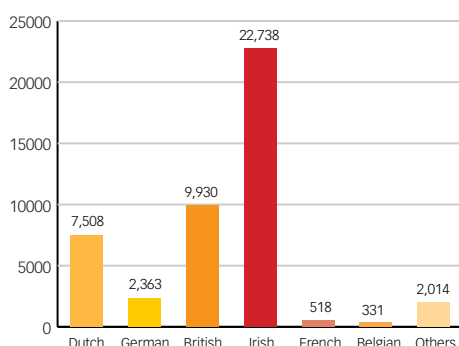
Ian Wortley of Kilkeel, Co. Down with his new Irish record pike of 41lbs taken from Lough Ross in February 2002.

Marine Sport Fish Tagging Programme

Over 65 charter skippers and several dedicated individual anglers took part in the 2002 Marine Sport Fish Tagging Programme. 1,200 fish including blue shark, tope, monkfish, common skate, ray and bass were tagged and released. Since 1970, 34,537 fish have been tagged and released under the programme. The Conservation Prize, for the skipper tagging the most fish, was won by Mary Gavin Hughes, skipper of “Shamrock 1” and operating out of Newport, Co. Mayo.

The Marine Sport Fish Tagging Programme would not be possible without the dedicated co-operation and help of participating charter skippers and anglers. The Board would like to express a sincere word of thanks to all for their voluntary efforts to date.

Fig 8: Numbers of Anglers chartering sea angling boats 2002

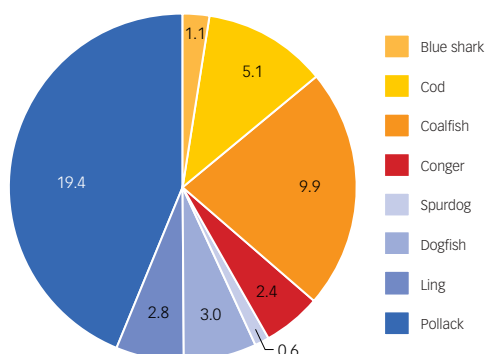


Angling Logbook Statistics (1978 – 2002)

The number of charter skippers who completed an angling logbook in 2002 was 102, an increase of 7 on the previous year. Figure 8 shows the Irish market down 3%, Dutch up 1%, UK up 2% and the rest remaining as they were.

Blue shark fishing was poor this year and the number of blue shark per boat, per day was 1.14, down, 45% on the previous year and is causing concern to the angling charter fleet.

Fig 9: Numbers of Most Common fish caught per boat, per day 2002



Surveys

The Board continued the ongoing bass survey in conjunction with the Marine Institute on the southern coastline. Several fixed sites (generally in estuaries) are netted to establish the recruitment of juvenile bass into the fishery.

The annual estuary netting survey was carried out in the Shannon Estuary. Altogether 61 sites were netted producing 31 different species. The two week programme was carried out in September with the ShRFB and the Large Patrol Vessel (LPV) 'Bradán Beatha'. This is the 3rd year of the programme and previous locations were Waterford Estuary and Cork Harbour.

Irish Specimen Fish Committee (ISFC)

The ISFC is an independent voluntary body, representative of angling interests in Ireland, whose principal function is to verify, record and publicise the capture of large fish (i.e. specimens, and record fish) caught on rod and line by anglers in Ireland, both in freshwater and marine waters. Over 600 claims were received in 2002, the majority of which were ratified. Eight new Irish records were established including roach, lake pike, roach/bream hybrid, bluemouth, coalfish, dab, spurdog and electric ray. This was the greatest number established for many years. All of the freshwater records in 2002 were broken in waters in Northern Ireland. On the marine side, the electric ray record was broken off Achill. The electric ray record was last broken in 1933. Large numbers of specimen coalfish were taken during the year with carp, river pike, roach/bream hybrids, lake brown trout, sea trout and spurdog also prominent in the listings. Infrequently recorded species like dace, perch, a single hake and a single turbot were also claimed in 2002. The Awards will be presented to successful anglers in early 2003 in Dublin, the UK and in Holland. The overseas presentation was arranged by Bord Fáilte/Tourism Ireland. The CFB actively supports the activities of the ISFC. The CFB recognises the importance of verification and publicising the capture of large rod caught fish in Irish waters particularly from the record and angling promotion perspectives.

Protection & Conservation

The Fisheries Boards protection staff are responsible for the enforcement of the Fisheries Acts, Bye Laws and Orders. These regulations exist to ensure the protection and conservation of our fisheries resource. The enforcement of these regulations forms an integral part of sustainable fisheries management. The Boards' responsibilities cover inland waterways and coastal waters out to the twelve-mile limit.

The introduction of the Wild Salmon & Sea Trout Tagging Scheme has been a significant development in salmon conservation. The enforcement of the scheme represents a sizable task for the fisheries service in the present budgetary environment. Despite financial constraints, the tagging programme was successfully operated in 2002. It is the intention of the fisheries service to improve the effectiveness and enforcement of the scheme in coming years.

In order to protect the fisheries resource, the boards work closely with other state agencies. The strategic partners for fisheries protection includes:

1. The Naval Service who in 2002 provided 56 patrol days for inshore fisheries protection. They also provided training for Fisheries Officers in sea survival, fire fighting and as RIB coxswains.
2. The Air Corps provided 20 maritime patrol flights in 2002 and also provided 17 pollution control flights. For the first time the boards used Air Corp helicopters in 2002 for research and monitoring of our lakes and rivers.
3. Garda Síochána supplied personnel to partake in naval service patrols as back up to Fisheries Officers. Following meetings and contacts in early 2002 between the Minister of Marine, Mr. Frank Fahey, the Fisheries Boards and senior Gardaí from the Divisions located on the western sea board guaranteed and enhanced Garda-Fisheries Board liaison particularly in the area of information sharing.

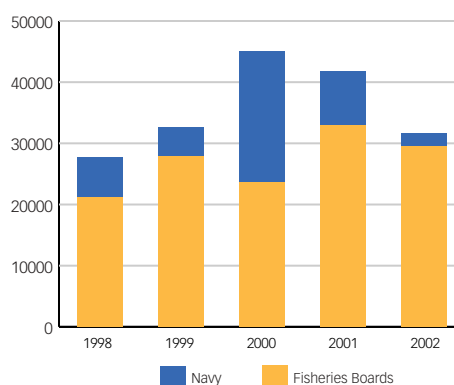
The Boards would like to thank these agencies for all the help and assistance given to the Fisheries Boards in 2002 and for their continued support in the protection of our fisheries.

The Fisheries Boards continue to use a multi-faceted approach to deter illegal fishing and to protect all those species defined under the legislation. The methods used to police the fishery resource include:

- Inshore rigid inflatable boat patrols (RIBs).
- Vehicle patrols day and night for illegal fishing.
- Foot patrols day and night for illegal fishing.
- Inspections at fisheries.
- On the spot fines.
- Sea patrols in all regions using the Boards' LPVs.
- Verbal warnings.
- Spot checks at fish dealers.
- Spot-checks at restaurants, hotels and guesthouses.
- Inspections at fishing competitions.

In 2002 finance was secured from the DOCMNR to purchase six new RIBs to replace boats that had reached the end of their operational life span. The first of these new boats, a 7.5 metre Tornado is due for delivery in February 2003. These boats will ensure the continued effectiveness of the inshore fisheries protection service in addition to maintaining appropriate health and safety standards for staff that operate the service.

Fig 10: Yards of Net seized for Five Year Period ending 2002





TRAM

In October 2002 a successful application was submitted under TRAM to investigate the provision of technological solutions available to support the implementation of the Wild Salmon and Sea Trout Tagging Scheme and Rod Licence Distribution.

Three main areas were reviewed: the computerisation of rod licence issuing by distributors, the alignment of Regional and Central Fisheries Boards' databases and the provision of mobile technology to support the activities of Fisheries Board staff in the field.

The report recommended that the provision of a computer system in a distributor's premises will significantly reduce the time taken to issue licences and simplify the process both for the distributor and the angler. The workload for Fisheries Board staff will also be significantly reduced as licence and tag issue details will no longer need to be manually inputted to the Regional Fisheries Board databases.



A Fisheries Board RIB on patrol.

Supplying Fisheries Board staff working in the field with hand held computers with access to web based solutions (through GPRS), will give access to up to date information reducing the time taken for a broad range of checks and inspections, and the use of bar codes will enable the rapid capture of information on large numbers of tagged fish.

The introduction of this scheme would revolutionise the rod licencing regime in Ireland and deliver a significant return on investment through efficiency improvements and put in place an improved conservation mechanism.

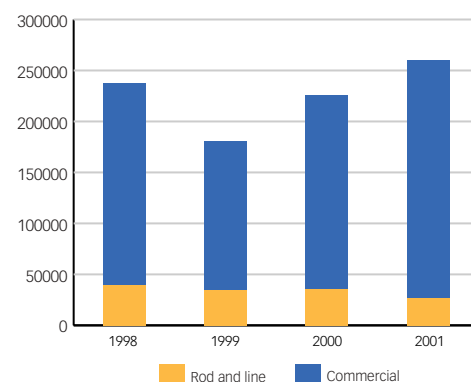
The Minister of State, Mr. John Browne TD increased the prices for salmon rod licences following recommendation from the Fisheries Boards. This increase is estimated to bring in additional revenue to the Fisheries Boards in 2003 and will be invested in the maintenance and protection of fish habitats.

Table 3: Rod Licence Prices for the 2003 season

Licence Type	Price (€)
A (Annual Licence)	55
B (District Licence)	25
R (21 day Licence)	20
P (Juvenile Licence)	10
S (One-day Licence)	10
W Foyle Area Extension	35

The Wild Salmon and Sea Trout Tagging Scheme

Fig 11: Irish Salmon Catches 1998-2001



Salmon Conservation Measures

The 2002 season saw the introduction of Total Allowable Catch (TAC) for the commercial sector and the introduction of a bag limit of 1 salmon (or sea trout over 40cm) per day per angler from 1st January up to 1st June.



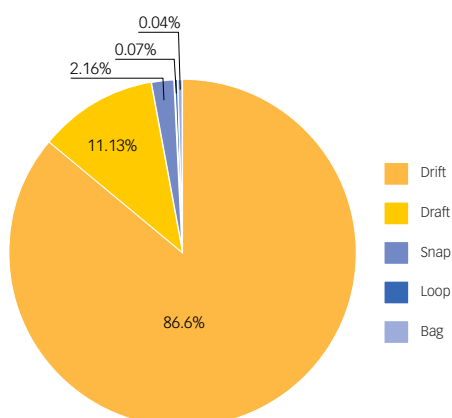
■ Review of the Scheme

A post season review of the implementation of the Tagging Scheme was conducted by the CFB in conjunction with the Regional Fisheries Boards. The outcomes of this review formed a series of recommendations in relation to legislative amendments and operational procedures for the 2003 season. Legislative amendments included the make up and responsibilities of the District Committees, the responsibilities of the CEOs of the Regional Fisheries Boards in relation to tag distribution, the closure of the fisheries and the granting of safety days.



A draft net fishing operation.

Fig 12: Commercially caught Salmon by Fishing method 2002

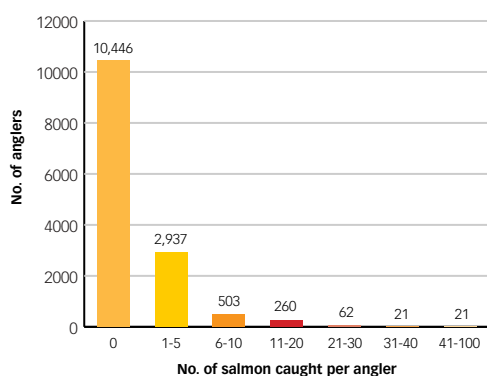


■ Statistics Report

In December 2002 the Wild Salmon and Sea trout Tagging Scheme statistics report was published (available on www.cfb.ie). The report contains statistics relating to 2001 and 2002 commercial catches and 2001 angling catches.

- The total number of salmon captured in 2001 was 259,475. 76% were captured by drift nets, 12% by draft nets, 2% by other engines and 10% by rod and line.
- The biggest commercial landings of salmon in 2002 were: 30,199 (14.6%) fish in the Kerry district; 29,152 fish (14.1%) in the Ballina district; 28,233 (13.6%) in the Cork district; Letterkenny district 20,340 (9.8%); Shannon district 18,647 (9.0%).
- In the commercial salmon drift net fishery approximately 25% of the fishermen caught just over 70% of the fish.
- A little over half or 53% of the commercial drift net fishermen caught 100 salmon or less in the 2002 season.
- In the inshore draft net fishery during the 2002 season 75% of fishermen caught 100 fish or less.
- 99% of commercial fishermen returned their logbooks in 2002.
- 32,814 rod and line licences were sold in 2001. 14,238 logbooks or 43% were returned nationally to the Fisheries Boards. Logbook returns ranged from 18% for licences sold in the South Western Regional Fisheries Board (SWRFB) area to 59% for licences sold in the ERFB area.
- The Moy River in Co. Mayo provided the largest number of salmon to the rod nationally with an estimated catch of 7,285 fish based on a reported logbook catch of 5,310 salmon.
- Other rivers producing large numbers of fish include the Ballysadare R. in the Sligo district (1,585), the Blackwater in the Lismore district (2,281), the Corrib River system Co. Galway (1,142), and the Lee River in Co. Cork (1,045).

Fig 13: No. of salmon caught per angler from returned logbooks (2001)*



(*From a sample of 14,250 logbooks)

■ On the Spot Fines

Following requests from the Fisheries Boards, the On the Spot legislation was amended in August 2002 to reflect the changes to Tagging Regulations. On the Spot fine notices were printed and distributed to all Regional Boards following the introduction of the new legislation.

■ National Salmon Commission (NSC)

The CFB continued to provide secretarial support to the NSC throughout 2002 and also provided support in running the National Salmon Commission IASC Awards 2002. Dr Paddy Gargan and Dr Philip McGinnity participated in the Standing Scientific Committee of the National Salmon Commission in 2002, the Committee was responsible for formulating advice on conservation limit requirements for salmon.

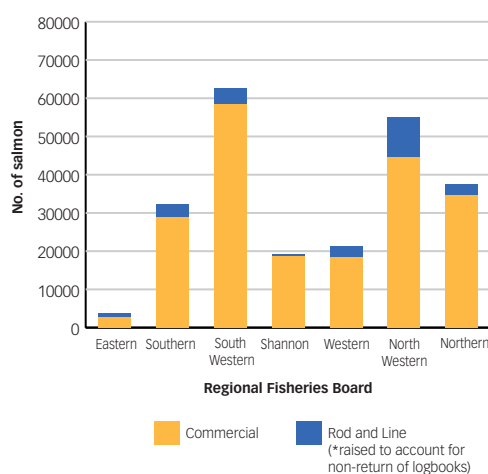
Title Research

The Title Research Unit enjoyed a successful year despite an uncertain start. This was achieved by gaining additional work from Dúchas, researching National Heritage Areas. This enabled the recruitment of three additional staff, bringing the full complement to eight.

In addition to the contract work for Dúchas and Local Authorities etc., fisheries research was concentrated on the Oweninny, the Moynalty, parts of the River Finn and some lakes for the Western Regional Fisheries Board

(WRFB). In the latter part of the year, work commenced on salmonid Rivers, Special Areas of Conservation, for Dúchas, which are of key importance to the core activity of the Boards.

Fig 14: Salmon catch 2001



Reviews

In line with the Board's statutory responsibility to advise the Minister on policy, the CFB undertook a number of policy reviews as set out below.

Review of current policy and strategy for the management of pike and pike angling in Ireland

A working group was established by the CFB. The group had its inaugural meeting in August 2002, following which, a call for written submissions from interested parties and the public was made. Over 100 written submissions and detailed documents were received from individuals and organisations in Ireland, other European countries and the USA. The final document and recommendations will contribute to the formulation of a national policy and strategy.

Review of current policy and strategy for management of State fisheries

A group was established by the CFB and held its inaugural meeting in May 2002. Following subsequent meetings and discussion, it was agreed that the review



would encompass a thorough consultation process and that submissions on the future management of State fisheries be invited from all interested parties and the general public. A number of submissions were subsequently received and are being considered. In addition consultation meetings with interested organisations took place towards the end of 2002. A dedicated workshop will take place in 2003, following which a first draft of national policy on the management of State fisheries will be prepared.

TRAM

Funded by TRAM, INDECON International Economic Consultants were engaged to undertake an exciting new project in October 2002 - An Economic/Socio-Economic Evaluation of Wild Salmon in Ireland.

The information generated will be invaluable in advancing the State's approach to sustainable salmon management in the future, in a manner that ensures the best economic/socio economic return to the country.

The report will be launched in 2003.

Environmental Investigations

In May 2002, the CFB commissioned M.C. O'Sullivan, an environmental consultancy, to carry out an independent analysis of the potential for pollution and consequent potential damage to the relevant fisheries from sewerage systems at selected sites in Co. Mayo.

An independent report on the findings of the research was produced, titled 'Assessment of the potential for pollution of relevant fisheries in the North Western Regional Fisheries Board area resulting from proposed sewerage systems installations'. The consultants principle finding was that the NWRFB's approach with regard to planning issues was reasonable and a number of important recommendations were made in the report, a copy of which is available on the CFB website.

Education/Public Awareness

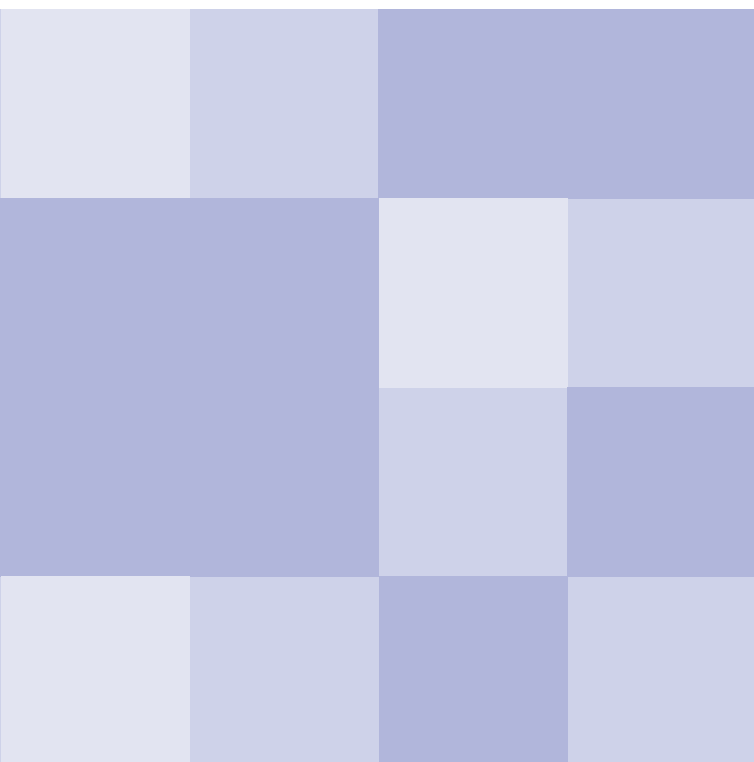
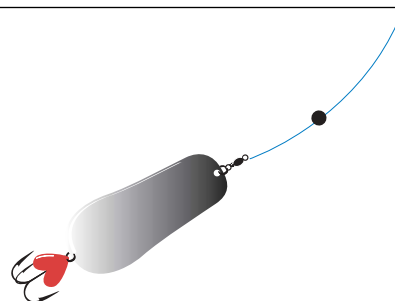
Video and poster information packs 'Source to Sea' were distributed to schools, members of the public, local authorities and other organisations in 2002.

In 2002 Wild Ireland – one of Ireland's leading wildlife and environmental magazines, selected the ShRFB's catchment management officer to feature in their popular 'A Day in the Wildlife' section.

The CFB provided assistance to a number of organisations with regard to video production including the Irish Bio-Energy Association for their video entitled 'Introduction to Biogas – A positive solution that achieves sustainable living'.

The CFB also assisted Teagasc in the production of a REPS (Rural Environmental Protection Scheme) DVD being produced as a product to be used as course material for those involved in the REPS scheme in Ireland. This provided an excellent opportunity for the fisheries service to articulate problems that exist and can occur with regard to the fisheries and farming environmental inter-linkage, and how such problems could be avoided.

Eastern Regional Fisheries Board



Eastern Regional Board Members

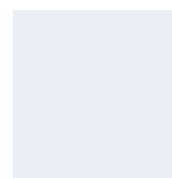
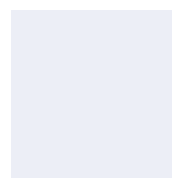
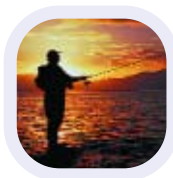
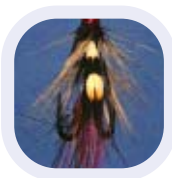
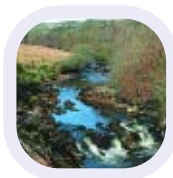
Chairperson	<i>John Chambers</i>
Salmon Rod	<i>Kieran Caffrey Roddy Minogue</i>
Draft Net	<i>Brendan Long Leo Boyle Edward McCormack Patrick Fanning</i>
Drift Net	<i>Martin Costigan</i>
Other Salmon Net	<i>-</i>
Eel Licence	<i>Anthony Wilde</i>
Oyster Licence	
Rated Occupier	<i>John Murphy</i>
Trout Angler	<i>Stewart McGrane</i>
Coarse Angler	<i>John Chambers</i>
Sea Angler	<i>Hugh O'Rorke</i>
IFT Life Member	<i>Patrick J Conneff</i>
Staff Representative	<i>Kevin O'Brien</i>
Ministerial Appointees	<i>Carmel Lynn John Higgins Anne Farrell Des Taylor</i>

General

The Board had a successful year in 2002 and continued to make progress on developing conserving, promoting and managing the region's fisheries. The Wild Salmon and Sea Trout Tagging Scheme entered its second year with a higher level of compliance than the previous year and it also saw the introduction of quotas for each river system. Despite reduced funding, the Board was granted €156,513 from the TRAM, which enabled the completion of a number of valuable projects for the region.

The Region's Fisheries

High water conditions for most of the summer affected angling in the region. Nevertheless the Board was satisfied with the overall returns particularly in the autumn. The number of domestic and visiting anglers increased by comparison to 2001. However, in terms of angling tourism, markets are still feeling the effects of Foot & Mouth disease, September 11th and economic downturn generally.



Anglers accounted for 1,052 salmon* in 2002. (*Figure is based on angling returns at time of press, which was approximately 60%). Sea trout and brown trout angling were reported as very good, most notably on the Boyne and the Boro rivers. Coarse fishing was also reported as excellent with the lakes of Cavan and Monaghan producing specimen bream and tench.

Sea angling had a good season with many specimens reported most notably tope and spur dogfish in the Wicklow and Dundalk areas. A number of successful competitions were held throughout the year.

Aquatic Environment

Despite the slowing of Ireland's economic growth in 2002, infrastructural development continued throughout the year as more roads and houses were built. This continued to place extreme pressure on the region's watercourses. 472 brown trout were salvaged from streams affected by motorway/housing development and by flood relief works in the Dublin area.

The high water levels throughout the summer and flooding towards the end of the year severely affected spawning most notably in the Rivers Tolka and Liffey. It also led to proposals for emergency relief works affecting main channels of the Tolka and Dodder Rivers and the Griffeen, Morrell and Camac tributaries of the River Liffey.

This continuing boom also resulted in an increase in the number of planning applications monitored by the Board's environmental staff. 676 inspections were made in the region relating to specific planning applications and a number were made relating to IPC licences and the Waste Management Act.

788 reports of an environmental nature were received at the Board's offices and investigated during 2002. 15 fish kill incidences occurred, the most serious ones being on the Tolka river in Co. Dublin where the total sea and brown trout stock were wiped out and on the Owendower river where 3,500 brown trout were killed.

Catchment Management

Catchment Management on the Avoca catchment in Co. Wicklow continued in 2002. The principal objective of this process is to agree a plan between the stakeholders, which aims to environmentally rehabilitate the river and its tributaries bringing environmental, social and economic benefits to all. For 230 years, mining was a very productive activity in the catchment. Currently almost 11 kms of river has been very seriously polluted, principally caused by leachate from the old copper mines and resulting in a Q value of 1 (which indicates very poor water quality).

In 2002 the consultation process continued with stakeholders in the catchment. Parallel to this the CFB carried out comprehensive fisheries and habitat surveys and ERFB undertook a baseline water-sampling programme. Findings to date indicate that salmon and trout parr are distributed through the system in small numbers.

In September, €51,182 was approved under TRAM and the University of Newcastle upon Tyne were appointed to carry out a desktop study aimed at devising strategies to reduce acid mine drainage to the Avoca river. It would appear that this river could be restored to salmonid status as recent electrofishing surveys have shown that good numbers of salmon and trout parr are present in the system.

Fisheries Development/Management and Improvement of Fisheries

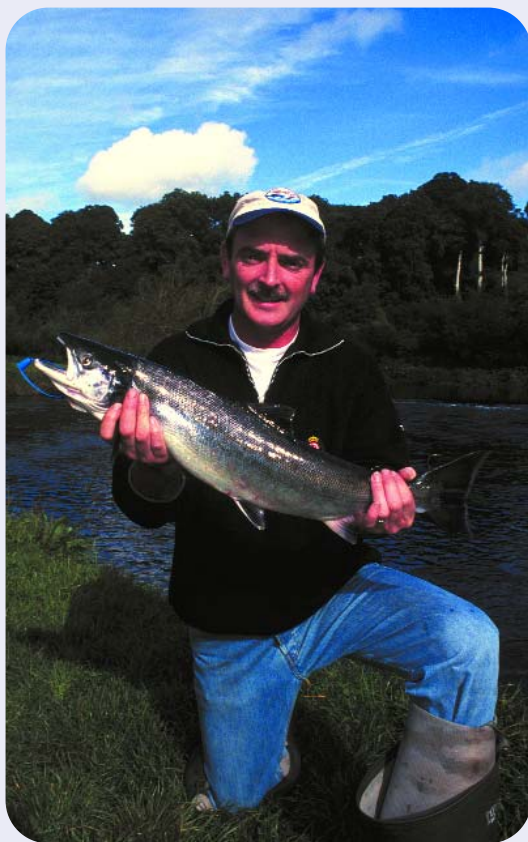
Spawning enhancement took place on a number of rivers and tributaries in the region. Electrofishing surveys and salvage works were undertaken throughout the region and in total fish stocks were monitored on more than 30 rivers.

The high water levels made conditions difficult to ascertain spawning activity on the rivers, however overall it was good on most catchments. For the first time in a number of years spawning activity increased on the River Liffey.

The Board was granted €61,420 under TRAM for specific projects aimed at managing and improving

fisheries in the region. At four lakes in Co. Monaghan, the construction of angling stands and structures enabled greater access to coarse angling on these lakes for visiting anglers. On the River Dee disabled angling access was improved with the construction of a wheelchair ramp and a footbridge. Instream development and access improvement also took place on the River Dargle in Co. Wicklow.

The Board improved a number of its fisheries and provided ancillary services for a number of angling venues. A car park was constructed at Lisgrey Lake and some structures were replaced throughout the region. 10kms of channel was developed on the Boro River, which included the creation of new spawning sites, extra angling spaces and improved nursery areas.



Martin Connolly at Oldbridge fishery on the River Boyne.

Management of Board Fisheries

There was a decline in the number of permits issued on Board Fisheries in 2002, most notably due to the transfer of the River Dee to the Dee and Glyde anglers and to the poor angling season on Emy Lake and Lough Bracken. Fishing was quite good on the River Boro. There were approximately 7,665 rod days on the Board's waters this year with €5,504 revenue created. 2,500 brown trout and rainbows were released into Emy and Bracken Lakes during the angling season.

Eastern Fisheries Development Society (EFDS)

The EFDS met 10 times in 2002. The Society received applications for grant aid from 4 angling clubs and associations. Grant aid totalling €2,200 was allocated to agreed and vouched development works.

Angling Support and Promotion

Angling tourism performed reasonably well in the region during 2002. Markets are still recovering from the adverse impact of the external factors mentioned earlier.

The allocation of €43,911 towards promotional literature from the TRAM programme enabled the completion of a suite of publications, which will be used as a marketing tool to attract and increase the number of tourist anglers to the region. A new angling guide for the southeast was produced and other guides were updated and reprinted.

The Board conducted a number of successful angling promotions at home and abroad while also being heavily involved in the development of angling tourism in the region. These resulted in a number of firm bookings and generated considerable interest. Abroad, specialist fishing shows were attended in US, France, Holland and the UK. At home, the angling show in Swords, and the Boat show, in Dublin was attended, and the Country Fair in County Offaly.



The Board's website increased in popularity with over 15,000 unique users who viewed more than 60,000 pages. The site is in the top ten on six of the major search engines on the Internet. It is proving to be an extremely effective tool in providing the public with information on the Board's services and on angling.

The Dublin Angling Initiative continued its work in the greater Dublin area and succeeded in introducing angling as a recreational activity to almost 1,000 young people. Fishing clubs were also set up and its educational programme continued in a number of schools in the Dublin area, the aim of which is to increase environmental awareness of fisheries in schools. The Initiative also sponsored a number of angling festivals throughout the year and much press and media coverage of the Initiative was received.

Fisheries Protection/Fisheries Conservation and Enforcement

The overall reduction in illegal fishing detections noted in the past number of years continued in 2002. However, there are still some 'black spots' where poaching is still a threat to salmon and trout stocks. This occurs particularly in the tidal sections of the Dee and Glyde Rivers and this year there was an increase in illegal activity on the Oldbridge fishery of the River Boyne. Five on the spot fines were issued during the season for minor offences.

Sea patrols and inland boat patrols were carried out throughout the region. As in previous years there was a much-reduced level of illegal activity at sea. However, patrols of lakes particularly in the Cavan and Monaghan areas during the year detected many incidences of the killing of coarse fish, for which there is currently no legislation. The Air Corps gave their assistance in patrolling the region, which continues to allow us to gather information and monitor illegal activity.

Commercial Fisheries

With the introduction of quotas in 2002, the TAC for the region was 11,191 salmon and sea trout. The total reported catch for the year was 3,791. This represented a decrease in the reported catch of 38% from 2001, when the total reported catch was 6,076.

Of this total, the commercial catch for salmon was 2,830 representing a decrease of 35% on 2001. The commercial sea trout catch was 961, representing a decrease of 45% on 2001. These figures are in line with a continuing declining trend over the last ten years or so and the total reported catch for the region constitutes less than 2% of the national reported catch for salmon and sea trout. An analysis of the distribution of sales and disposals for salmon caught by commercial fishermen in 2002 in the region shows that the vast majority of fish were sold privately (58%). Domestic consumption accounted for 29%, and the remainder was disposed of to licensed salmon dealers and restaurants.

A glass eel survey initiated in 2001 continued this year on the Boyne estuary. Due to the collapse in the price of brown and silver eels, commercial fishing for them was curtailed for much of the season.

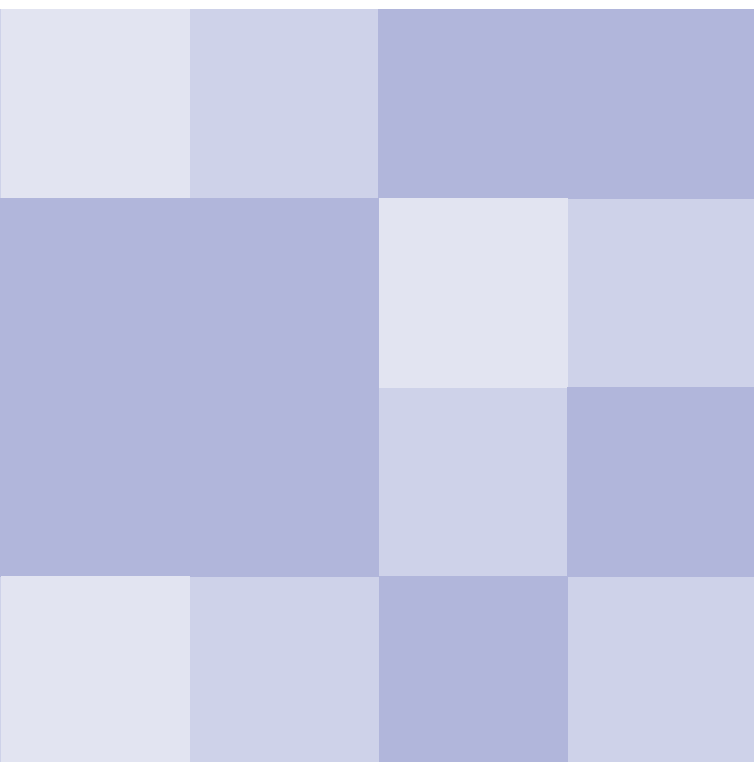
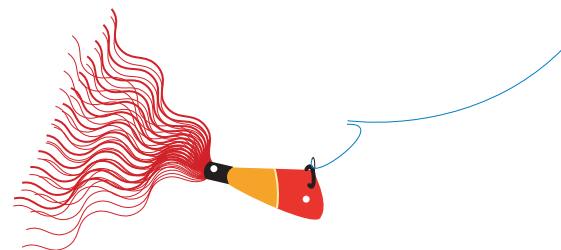
Aquaculture

Aquaculture continues to be carried out in parts of the region particularly Dundalk Bay and Wicklow and Wexford on the south east coast.

Safety, Health and Welfare at Work

Safety continued to be of paramount importance within the Board. Safety courses were attended by staff, most notably the Safe Pass course that all staff are obliged to complete before they enter building sites. This year also saw the introduction of PMDS, which is part of the Partnership programme.

Southern Regional Fisheries Board



Southern Regional Board Members

Chairperson	<i>David Willis</i>
Salmon Rod	<i>James Wymess</i> <i>Edward Stack</i>
Draft Net	-
Drift Net	<i>David Neal</i> <i>Michael Connors</i> <i>John Furlong</i> <i>Thomas Walsh</i>
Other Salmon Net	<i>Peter Walsh</i> <i>John Carroll</i>
Eel Licence	<i>James Butler</i>
Oyster Licence	-
Rated Occupier	<i>Joseph Teesdale</i>
Trout Angler	<i>Michael Byrne</i> <i>Kyrle Delaney</i>
Coarse Angler	<i>Michael Walsh</i>
Sea Angler	<i>Patrick Power</i>
IFT Life Member	<i>David Willis</i>
Ministerial Appointees	<i>Robert Aylward, John Condon</i> <i>Mary Ferns, Ruth Nolan</i> <i>Noeleen Byrne, Ann Gibbons</i>

The Board at its Annual General Meeting elected Mr. Davis Willis as Chairperson.

Staff

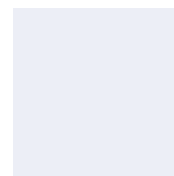
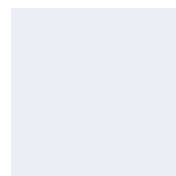
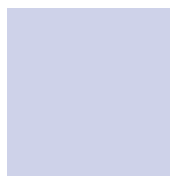
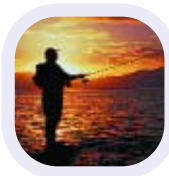
Ms Suzanne Campion BComm FCMA was appointed as Assistant CEO in September.

General Introduction

2002 was the second year of the Wild Salmon & Sea Trout Tagging Regulations and the first year of TACs in the region. The operation of district committees went quite successfully with very good compliance from the commercial sector but only 60% from the angling sector.

The Region's Fisheries

Returns of approximately 60% of anglers' log books means that data for this sector for the second year in succession is incomplete. The heavy flooding in April/May together with low water levels in June, July and August resulted in poor angling returns until a good run of salmon in both the Blackwater and Waterford Estuary in September brought anglers back out in numbers and helped to put some gloss on what was a rather poor year for the sector.



Aquatic Environment

One fish kill in the Blackwater catchment affected 70 trout and 40 eels and three small mortalities occurred in the Nore/Suir catchment where gammarus were killed. The Board staff had a critical input into the drafting of the Three Rivers Final Report which showed the position of the Suir to be better than either the Boyne or Liffey in relation to general water quality. The Board was represented on a delegation comprising representatives of the Fisheries Boards and the DOCMNR, with the Department of Agriculture and Food(DOA&F), concerning agricultural pollution and enrichment of inland waters and the delegation made a joint submission to the DOA&F concerning the review of REPs.

Catchment Management

The Board, in conjunction with the CFB, are carrying out a review of the pilot catchment management project. The Barrow group met four times and published two newsletters. The review should be completed in mid 2003.

Fishery Development

TRAM

Applications were made for TRAM funding for a number of projects in the region. Three were successful:

- Access to Rockforest fishery
- Salmon spawning and nursery habitat enhancement in the River Blackwater
- Development of Stradbally Lake.

Rockforest Fishery

This is a State fishery consisting of two kilometres of right-bank fishing on the Blackwater main channel downstream of Mallow. It is high quality salmon fishing currently leased to the local angling association. A laneway leading from the public road to the fishery had become impassable to vehicular traffic. This was opened up, skimmed and re-surfaced. A number of old decaying stiles were replaced and excess shrubbery pruned and removed from the riverbank. Ten good

quality salmon angling places and a number of trout angling places are now accessible on this fishery.

Upper Blackwater

Salmon spawning ground and juvenile nursery habitat was improved in sections of the upper Blackwater and Owentaraglin river channels. Over one thousand metres of channel was treated, but as the works are designed to eliminate or significantly reduce silt deposition from bankside erosion, the beneficial effects would extend for some distance downstream. Production of around 3,000 additional salmon smolts is expected as a result.

Stradbally Lake

A ten-acre lake adjacent to Stradbally town in Co. Laois was de-watered, deepened, and had its banks re-built and strengthened. It has been re-filled and will shortly be ready for re-stocking with fish. This fishery will be very important to the area, especially at times when conditions in the nearby River Barrow are unfavourable to angling.

Other Development Works

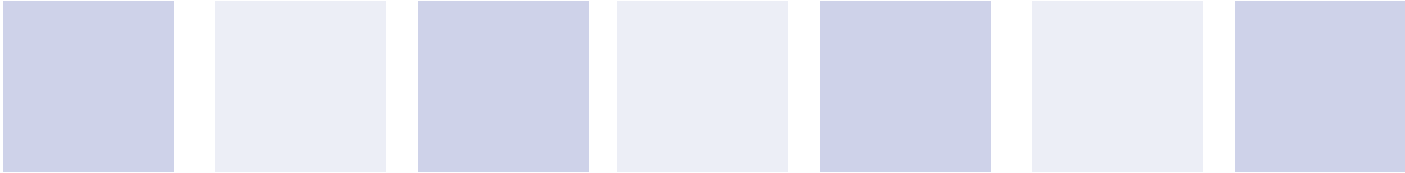
Structures were installed to assist fish traverse fish passes on Ballyellen weir, at Bagenalstown weir and a fish pass in the River Lingaun.

Southern Trout and Coarse Fisheries Development Society

The CEO and Assistant CEO had regular meetings with the Co-op's officers. The Board's representative in the Society is Inspector Tom Sullivan. In order to comply with the appropriate legislation the Board is anxious that the Co-op's expenditure on development projects meets with the Board's objectives and that all expenditures and works completed meet with the Comptroller & Auditor General's requirements.

Angling Support and Promotion

The Board works and liaises closely with the South East Regional Tourism and the East Midland Regional Tourism Authorities. All marketing and promotional activities are channelled through these two bodies.



Fisheries Protection

This year saw the introduction of the commercial salmon quota, which focused our attention on monitoring as well as regulating the fish catch. The deployment of the Boards’ protection staff throughout the region ensured compliance with many seizures and prosecutions being made. The late run of fish through September led to the Board securing an extension of the use of the LPV and this in turn ensured large numbers of fish reached their destination.

Management of Board Fisheries

The SRFB has managed the Rockforest Fishery on the Blackwater on behalf of the CFB. The Board currently is drawing up a list of derelict fisheries to bring them under the control of the Board.

Commercial Licences

The Board issued 131 snap net and 170 drift net licences in the Waterford District. 81 drift net licences issued in Lismore with 6 draft on setaside. 33 eel licences for pots and fyke nets issued in the Waterford District with 3 draft net licences.

Aquaculture

The Board works closely with South East Shellfish Co-op in Passage East, whose manager is a member of this Board.

South Western Regional Fisheries Board



South Western Regional Board Members

Chairperson	<i>Ellen Godfrey</i>
Salmon Rod	<i>David Forde</i> <i>Conor O'Mahony</i>
Draft Net	<i>Jack Howard</i> <i>Denis Teahan</i>
Drift Net	<i>Thomas B. O' Rourke</i> <i>John O' Shea</i>
Other Salmon Net	-
Eel Licence	-
Oyster Licence	<i>Joe Tansley</i>
Rated Occupier	<i>Ellen Godfrey</i>
Trout Angler	<i>John O'Hare</i> <i>Tom Sweeney</i>
Coarse Angler	<i>Richard Whitley</i>
Sea Angler	<i>Bill Emery</i>
IFT Life Member	<i>Jeremiah Keating</i>
Ministerial Appointees	<i>Mary Buwalda</i> <i>James Doyle</i> <i>John Harrington</i> <i>John Harte</i> <i>John Lucey</i> <i>Annette Mc Namara</i> <i>Mary O'Connor</i>

General

The Board had a successful and productive year in 2002 and continued to make headway in the development of the regions' fisheries. The process of catchment management assisted the Board in this regard and proved to be a benefit in many aspects of the Board's work.

The Regions' fisheries

■ Coarse Angling

Inniscarra Lake, managed jointly by the ESB and the SWRFB produced fine catches of bream, rudd and bream/rudd hybrids during 2002. The mild winter seemed to favour both the anglers and the fish as anglers could be seen on the lake throughout the year.

There were a number of very successful angling competitions held on Inniscarra Lake during the summer months and catches in excess of 45 kg were common.

The Inniscarra Users Group continued to function well in the management of the fishery.

Pike angling on the River Lee system was of high quality throughout the year. Fly fishing for pike is becoming popular and several large pike were caught on the fly in 2002.

■ Sea Angling

Sea angling throughout the year was of high quality with growing numbers of anglers coming from main land Europe. While the summer wasn't hot the weather proved ideal for the charter boat fleet with good catches being reported.

The quality of bass fishing was very good in 2002 with plenty of bass being landed on the fly. The popularity of fly fishing for bass grew markedly throughout the year.

■ Game Angling

The quality of game angling in the south west fluctuated throughout the season due to the weather. Overall the season was good and there were many positive reports from visiting anglers. The Kerry Blackwater and the River Laune fished extremely well when conditions were right and the evening wild brown trout fishing was particularly productive.

Sea trout fishing, both on the lakes and in the rivers, was reported to be the best for several years.

Mountain Lough fishing for free rising wild brown trout continued to gain popularity with visiting and local anglers.

Aquatic Environment

The Board received 202 reports of an environmental nature during 2002. These reports ranged from complaints which included the discharge of effluent directly to waters from agriculture, industry and local authority sources, through non-compliance with planning conditions, dumping of materials close to watercourses and physical interference with rivers through drainage and gravel extraction.

The majority of the reports were received from the general public with the remainder being from Fishery Officers, anglers and Board members.

Table 4
Activity

Activity	No.
Agriculture (slurry/silage etc)	38 (19%)
Drainage & Gravel Removal	37 (18%)
Industrial Discharge	28 (14%)
Local Authority Sewage Outfalls	16 (8%)
Civil Local Authority Works	16 (8%)
Eutrophication	14 (7%)
Planning	7 (3%)
Miscellaneous*	46 (23%)

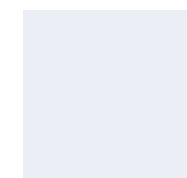
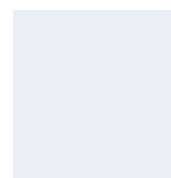
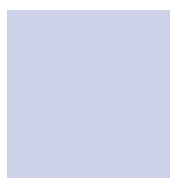
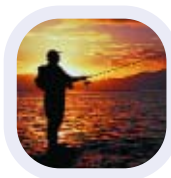
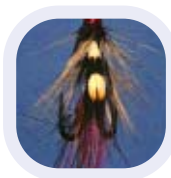
* Includes unsubstantiated reports, fish disease, illegal dumping, odour pollution, fish passage issues and natural events etc.

Prosecutions

The Board initiated 11 prosecutions as a result of environmental investigations in 2002. Six of these cases have been successfully concluded while five remain to be heard. Two of the cases related to in-stream works, four cases resulted from agricultural discharges, two cases were associated with discharges from quarries, while the remaining three cases were due to a local authority sewage discharge, road development works and the use of chemicals in a poaching incident.

Farm Surveys

The Board's farm survey inspections programme continued in 2002. The programme has been operational from 1999 to 2002. In this period 501 farms have been visited in 5 catchments – the Gweestin, Bride, Shournough, Clubhouse and Dromore Rivers. Of the total farms visited some 57% presented no real risk to surface waters, 25% presented a medium risk while 18% were a high risk of pollution. During the study to date, the work of the Board has resulted in a 60% reduction in the number of high-risk farms and a 67% reduction in the number of medium risk farms. In total 5 prosecutions have been taken associated with the inspections.



Fish Kills

7 fish kills were recorded during the year all in Co. Cork. The most serious incident resulted in the death of approximately 1000 fish on a tributary of the Bride River near Beal na Blath as a result of a discharge of silage effluent. A successful prosecution has been completed in this case. Details of all fish kills in 2002 are given below.

Table 5: Fish Kills 2002

Date	River	Location	Nos.	Species	Cause	Prosecution
31.03.02	Owenboy Tributary	Carrigaline	100	B.trout	Unknown	No
22.07.02	Bride Tributary	Beal na Blath	1000	B.trout, Salmon	Silage	Yes
21.08.02	Toon River (Lee trib)	Dromcarra	100's	B.trout, Salmon	Poaching –lime	Yes
12.09.02	Lee Estuary	Cork City	12	Mullet	Possible Herbicide	No
16.09.02	Glashaboy	Glanmire	20	B.trout, S.trout	WT Sludge	No
18.09.02	Kilnaglory Stream	Carrigaline	20	B.trout	Chlorine/ Industry	Cork Co. Co.
08.10.02	Bride	Blackpool	100	B.trout	Sewage	Yes

Institute of Fisheries Management Summer Seminar

The Board hosted the summer seminar of the Institute of Fisheries Management at the Killarney Heights Hotel on 16th May 2002. The theme of the seminar was water pollution. A wide range of individuals representing various fisheries interests from across the country attended. Guest speakers included Owen Carton (Teagasc), Frank O'Flynn (Cork County Council), James Doyle (IFA) and Mr. John Lucey (Environmental Protection Agency).

The Board's five-year development plan, with its emphasis on safeguarding the environment through sustainable development continues to be applied with educational programmes forming its backbone.

Fishery Development Society

The Society held a number of meetings during the year and functioned well. The role of the Society is considered fundamental in the development of the region's trout and coarse fisheries.

Catchment Management

Catchment Management, a process fully adopted by the Board, continues to gain favour and is widely acknowledged as the most appropriate tool for managing the region's fisheries. The Board actively engaged in developing and advancing multiple stakeholder process applications throughout the year.

The Laune/Lein catchment management initiative, which commenced in 1999, continues to break new ground.

Angling Support and Promotion

The Board had a very successful year on the marketing and promotional side.

Four trade shows were attended in 2002, two in the USA, one in the UK (game and coarse) and one in Holland (sea angling). These shows resulted in a number of firm bookings and generated considerable interest.

Several promotional articles were written for various publications and considerable resources were applied to promoting angling in the region.

Fishery Development

The Board undertook two TRAM programmes in 2002. Wheelchair hoists were erected in Cahirciveen and three sea angling notice Boards were erected in Cork and Kerry.

Tourism angling is now well recognised as being a valuable product in the SWRFB, especially as it allows for the generation of business in shoulder and off peak periods. Catchment management similarly recognises its role as an economic driver and over the last year a

growing awareness has built up amongst these groups with regard to the potential of tourism angling.

Fisheries Protection

Through the work of the Board's protection staff several prosecutions were initiated and a substantial quantity of illegal fishing equipment was seized in 2002. The new On the Spot fine system proved effective. An encouraging sign in 2002 was that the general public is becoming more aware of the true value of the region's fishery resources.

The Board's rapid response – 'mobile protection unit', continues to be a valuable addition to the Boards protection resources.

Table 6

Cork Region

Total nets seized	31 nets totalling 6,650 yards
Seizures fish	29 fish
Prosecutions initiated	19 cases
Seizures equipment	9 items

Kerry Region

Total nets seized	32 nets totalling 3,220 yards
Seizure fish	27 fish
Prosecutions initiated	1 cases
Seizures equipment	0 items

Management of the Board's Fisheries

■ Managed Trout Lakes

The Board's 13 managed rainbow trout lakes had a good year in spite of the weather. Approximately 58,000 rainbow trout and 9,500 brown trout were stocked into the lakes. Permit revenue amounted to €87,818. The Creel census forms indicated that people enjoyed fishing the lakes, especially from a family aspect and that a number of fish were caught weighing over 14 lb. The mobile protection unit was a great help in monitoring and checking for permits.

The Jack Charlton Cup proved to be once again a successful event.

■ Commercial Fisheries

The region's commercial salmon fishermen had a successful year and would appear to have embraced the quota and log book systems.

The following catches of salmon and sea trout were compiled from commercial salmon licence holder's logbooks.

Table 7

	Draft nets	Drift nets	Bag nets
SALMON			
Cork	2,699	25,462	72
Kerry	4,820	25,309	70
SEA TROUT			
Cork	133	207	
Kerry	40	25	

■ Aquaculture

The Board's role in aquaculture, while limited to the areas of the management of the region's wild molluscan shell-fisheries and sea lice monitoring on salmon farms, is viewed as pivotal in the development of the region's fisheries overall. The Board, in 2002, undertook a number of inspections and is currently considering initiating a research programme, into what effects if any, inland water pollution has on aquaculture, especially in sheltered and coastal waters.

Health and Safety

The Board held a number of staff health and safety meetings during the year in order to ensure a safe working environment for staff. Annual checks of equipment were undertaken as was the annual infrastructure maintenance programme.

Energy Compliance

The Board, a member of the Lee Valley Eco Label Project, continued its programme of energy improvement in its main office in Macroom.



Shannon Regional Fisheries Board



Shannon Regional Board Members

Chairperson	<i>Michael O'Callaghan</i>
Salmon Rod	<i>Jim Horgan Andy McCallion</i>
Draft Net	<i>Gabriel McKenna John Slattery</i>
Drift Net	<i>Patrick Peril Matthew Benn</i>
Eel Licence	<i>Michael Flanagan</i>
Rated Occupier	<i>Edmond P. Costello</i>
Trout Angler	<i>Martin McEnroe Michael Callaghan</i>
Coarse Angler	<i>Sean Young Joe O'Donoghue</i>
Sea Angler	<i>Jim Robinson</i>
IFT Life Member	<i>Patrick J. Isdell</i>
Ministerial Appointees	<i>Seamus McDermott (Staff Rep.) Cllr. Mary Bohan Declan Quigley Mary Candler-Kennedy Peg Ward Heslin Breege Murray Paddy Mackey Cllr. Hugh Lynn</i>

General

The conservation and protection of fish stocks and their habitat played a major role in the Board's successful accomplishments during 2002. The programmes to detect and eliminate water pollution were increased. The new salmon quota system for the commercial sector was successfully introduced with co-operation from the commercial fishing community. The relocation of the Board's headquarters to new modern office accommodation with laboratory facilities, and the completion of negotiations with all staff on the introduction of flexibility and change agreements, were major contributing factors in the ability of the Board to improve service delivery.



The Region's Fisheries

■ Sea Angling

Sea Angling again produced good results bearing in mind the poor weather conditions. High winds and poor weather conditions over much of the month of May limited angling. Liscannor bay yielded black pollack up to 5lbs., Kilkee beach fished well for flounder, mackerel turned up at Castle Point Kilkee, and the usual spots in west Clare returned wrasse and pollack. September will be best remembered for its nighttime fishing, which produced good results. Horse mackerel provided fine sport on a light spinning rod or fly rod, and whiting, dogfish, rockling, conger eels, mackerel and pollack were caught at Cappagh pier in Kilrush.

■ Trout Angling

The fishing season started well with good angling weather in the early season. However, as the season progressed, weather conditions declined with a resulting knock on effect on angling returns. Reports from Lough Ree and Lough Derg during the mayfly season were very encouraging with significant stocks of juvenile fish averaging 1lb. being reported which augurs well for future years. Returns from the midland lakes were patchy overall, yet Lough Owel continued to supply excellent sport throughout the season. A number of individual anglers reported good river angling experiences, nevertheless the general view was that the river angling season was slow and while weather conditions played their part, pollution and habitat damage were also contributing factors.

■ Salmon Angling

The region's salmon waters produced some excellent individual catches with one lucky angler officially catching 30 salmon during the season. The main Shannon catchment above Limerick produced poor returns to the rod, meanwhile the Fergus, Maigue and Shannon around Limerick continued to give fair sport. Once again the Mulcaire and Feale produced excellent opportunities for anglers. Spring salmon were in relative short supply, although spring fish taken were of good size. Throughout the season a notable feature of the salmon returns in 2002 was the increase in the number of large fish taken.

■ Coarse Angling

While 2001 will be remembered as the year restricted by the Foot and Mouth crisis, 2002 could well be remembered as the year that was confounded by unseasonable summer weather leaving rivers and lakes flooded for prolonged periods. This resulted in mixed coarse angling catches that varied throughout the region. The best months proved to be April and May on the coarse and pike angling calendar with great catches and specimen records broken. Once again the northern shores of Lough Derg at Portumna yielded bumper catches of mainly bream to visiting anglers. Pike angling again produced some excellent results with over 50% of the specimen fish recorded in the country being caught in the region's waters. Good carp and tench fishing were also reported at a number of venues throughout the region.

Shannon Regional Development Societies

The Upper Shannon Trout and Coarse Fish Development Society had a quiet year with no applications for grant funding being received. This possibly reflects the inclement weather curtailing angling in general, although preliminary vetting of fishery development projects was on-going. Approximately 370 annual share certificates were issued and concern was expressed at the lack of shares purchased by visiting anglers.

The Lower Shannon Development Society had a busy and successful year with 8 angling clubs receiving €28,144 in grant aid for fisheries development projects. The society received €2,324.72 from the sale of share certificates, €28,144 in corporate donations and €28,144 was made available by the Board. The society continued its work of developing suitable projects with angling groups.

Habitat Conservation

Water quality continues to be of major concern with negative impacts on fish stocks and fish habitat. The Board attaches high priority to this issue and a large portion of its resources goes towards monitoring and eliminating this problem. During 2002, the Board extended its environmental services in the Upper Shannon catchment. As a direct result 220 inspections



were carried out and 11 prosecutions initiated in the agricultural, local authorities and industrial sectors. This programme has greatly increased the effectiveness of the Board in this area.

In addition to this new initiative, farm surveys, which are on going throughout the region, identified possible pollution threats and warning letters were issued to prevent possible pollution instances. Unfortunately, inappropriate land spreading of slurry continues to be a serious concern. Staff have observed spreading during heavy rain fall and on frozen ground in winter, this inappropriate land spreading gives rise to huge eutrophication problems.

Habitat degradation continued to be a significant issue during 2002. Road construction, drainage works, gravel removal etc. have interfered with many small streams, the lifeblood of our catchments. This loss of habitat is of serious concern and an issue on which the Board has taken its strong position.

The Board's concern at the increasing number of private peat milling operations in close proximity to rivers has lead to regular inspections of such operations. The Board continues to work with local authorities to address this issue that is affecting areas including the River Inny rendering it unsuitable as a fish habitat.

Fisheries Enhancement

Following on from major in stream works carried out in recent years, the Board inspected and maintained nursery streams throughout the region. The Board assisted local groups to draw up enhancement plans and watched over their successful implementation. Such works were carried out in the Lough Ree catchment, Owengarry River, Lough Inchiquinn, Ballylyon River and the Lough Derg catchment.

The Board's trout stocking programme continued with the stocking of over 450,000 in 2002. As part of our ongoing predator control programme, the Board undertook a substantial relocation of fish to other suitable fisheries. Included in this programme were the transfer of over 1,000 pike to Lough Key and the transfer of 9,518 bream and roach to various sections of the Royal and Grand Canals.

Enforcement

135 patrols were undertaken in estuaries and at sea and 1451 yds. of net were seized. On shore our rivers continued to be targeted by salmon poachers. Patrols to check compliance with coarse fish regulations were carried out and also included the checking of 300 boats on the River Shannon with no breaches being reported.

Promotion & Development

The Board's website continues to offer an excellent medium by which information can be made available concerning the angling resource available in the region. The website received on average a staggering 4,000 hits per day during 2002.

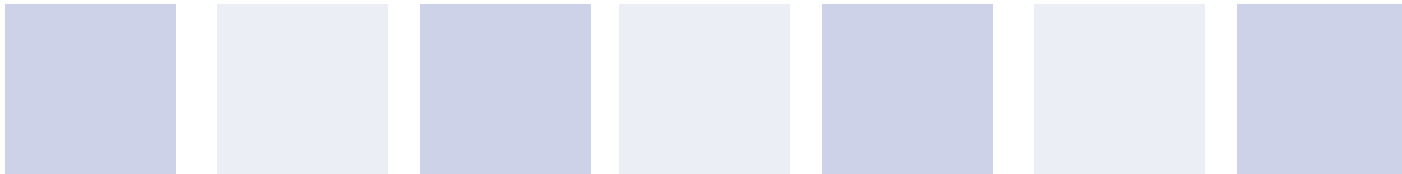
The Board attended a number of angling fairs in Europe to promote the angling product. Stagnation of the tourist angling market during 2002 had a negative impact on local communities who rely on angling tourism for income. The Board continued to work with local groups and provided support for over 20 tourist angling competitions throughout the region.

Public Education/Awareness

The Board considers the education of stakeholders and the public, particularly the young, to be of great importance. As part of the RTÉ series "The State we are in" one programme was co-sponsored by the Board. This programme gave viewers a virtual trip along the Shannon River from a source in Cavan to its Estuary in Clare, and Kerry. The issues affecting the quality of the catchment's waters and its habitat were highlighted.

As part of the REPS programmes, the Board gave presentations to over 1,000 farmers on fisheries and its habitat requirements.

Board staff visited primary schools in a number of areas as part of the Board's youth awareness programme, and junior angling classes were also held. One event in the Sheelin area attracted participants from 16 schools who took part in an environmental art competition, while in association with the local angling club youth angling classes were held.



Bio-Diversity and Rare Fish

This year saw a number of exciting new initiatives undertaken by the Board. Conscious of the neglect some of our more unusual fish have faced, the Board has increased its efforts to create public awareness of these species, e.g. Croneen in the Little Brosna, including press coverage, local radio interviews and lectures on the species involved.

Organisation Support

The development of staff and service delivery is a high priority for the Board. Staff members attended a wide range of training courses, including workshops and conferences related to the introduction of PMDS.

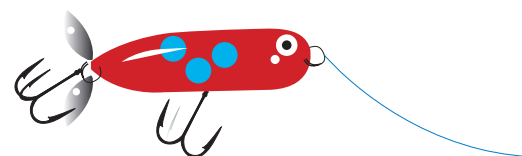
Health and safety is always of utmost concern to the Board and initiatives to highlight health and safety in the workplace, including a safety quiz for staff, were undertaken during the year.

The FOI Act and a number of administrative requirements such as code of practices for the governance of state bodies, were introduced and work has commenced to put systems in place to administer these.

Network and Partnering

In delivering on its active program during 2002, the management and staff worked with a wide range of Government Departments and Agencies, Local Authorities, ESB, OPW, Regional Assemblies, Regional Authorities, Tourism Authorities, Garda, Navy, Air Corps, EPA and others, on issues relating to the conservation and development of fisheries. The Board also met and worked with many angling clubs, community groups and consultants, and the Board hereby wishes to acknowledge and thank all groups concerned for their continued co-operation and support.

Western Regional Fisheries Board



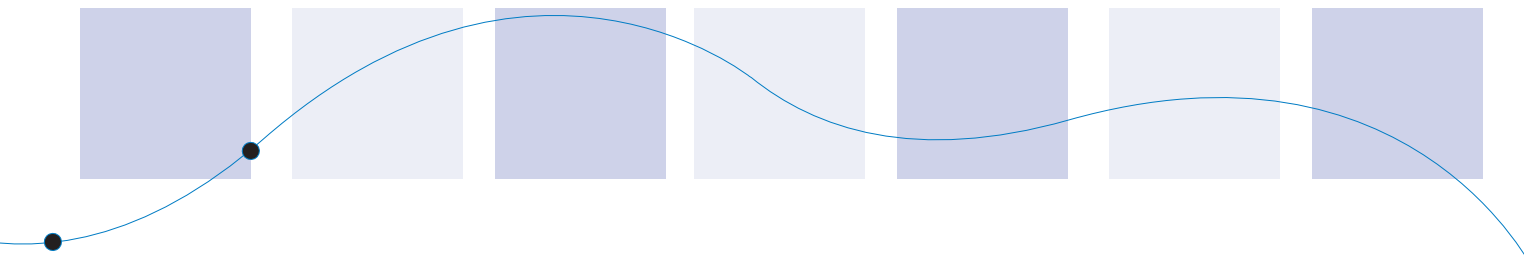
Regional Board Members 2002

Chairperson	Mr. Lal Faherty
Salmon Rod	Mr. Marty Beatty Mr. Lal Faherty
Draft Net	Mr. Thomas Flaherty & Mr. John Joe Flaherty *
Drift Net	Mr. John Needham Mr. Christy Martyn Mr. Frank Flanagan
Other Salmon Net	-
Eel Licence	Mr. Michael Gannon
Oyster Licence	Mr. Josie Curran
Rated Occupier	Mr. Leslie Lyons
Trout Angler	Mr. John Paddy Burke Mr. Paddy Tierney
Coarse Angler	Mr. Richard Bohan
Sea Angler	Mr. Duncan Brown
IFT Life Member	Mr. Edmund Cusack
Ministerial Appointees	Vacant Ms. Maire O'Connor Dr. Mary O'Muircheartaigh Ms. Helen Moynihan Mr. Tom Browne Ald. Michael Leahy Dr. Jim Dunne Mr. Ruaidhri de Barra

* Mr. Thomas Flaherty died in late May 2002, his position on the Board was taken by Mr. John Joe Flaherty in September 2002.

Notable Achievements 2002

- Loughs Corrib and Mask are now widely recognised as the best wild brown trout fisheries in Western Europe. This has been reflected in the substantial increase in angling activity on the lakes. The improvement in fishing has resulted from the €3.05 million development programme undertaken in the late 1990s and the complimentary stock management programme. To assist anglers coming to fish the lake, the Board published a new large format, full colour map of the lake with information on the best angling locations and methods for best results. In addition the Board also published a voluntary code of practice for anglers on these lakes encouraging a degree of moderation on the bags of fish retained. The Board also republished a circular advising of the risks of introducing the zebra mussel and recommendations to ensure a vessel is free of mussels prior to its introduction into the Corrib catchment.
- The Board completed the preparation of site specific safety statements for all 16 of its bases of operation, these will be reviewed and updated on a regular basis.



- The Board continued river protection and development programmes on the Bunowen river and this was also reflected in Carr's Pool, the most famous pool on the river having the best catch of salmon since the old weir was destroyed.
- The Board purchased the Pierce Joyce Fishery on the Clare River during the year. It is hoped that this stretch of river can be developed in conjunction with the Buckley Fishery which is currently leased by the CFB from the owner but the care and management of which has been transferred to the WRFB.
- Ongoing works continued with the upgrading of the Greenfields Store on Lough Corrib, the vast bulk of this work was undertaken under a FÁS scheme.
- The Board continued to monitor the water quality of the lakes and rivers in the region and also to monitor planning applications that could impact on the fisheries of the region.

TRAM

A late call for projects under the TRAM amongst the fisheries service was made at the end of August. There was a pre-requisite that any work must be completed before the year-end. The Board made four applications. One for further development on the Corrib system and a second for the extension of Aasleagh Lodge in Leenane including the production of a brochure and river beat map, both these applications were rejected as it was deemed that they could not be completed by the year-end.

The Board was successful with two projects, the creation of recreational angling areas in the village of Cong, Co. Mayo. This project included the development of angling stands in the village and walk-ways through the trees by the river. The second project was the complete revision and republication of the Boards regional angling guide which had not been reprinted since the late 1980s.

Staff

Staff were briefed on the new PMDS for all personnel in the Board. Performance indicators are being identified

by the Board for all aspects of activities and these will also be reflected in a service level agreement with the CFB and the DOCMNR in 2003.

All field staff also completed the safe pass training course and many other necessary training courses.

During the year Tom Munroe retired after 35 years of dedicated service as general operative in the Cornamona area. In addition Paddy O'Flaherty, inspector, Connemara retired on ill health grounds at the end of December. The dedication and commitment of the staff throughout the region remains the backbone of the service provided by the Board.

Protection

This was the second year of the Tagging scheme with quotas introduced for the first time. A huge effort was made by the Board to ensure that fishermen had the necessary tags as required and this involved an enormous commitment in staff and vehicular resources. There was a 100% return from the commercial sector although it did take some time for the last few logbooks to be returned.

Salmon angler logbooks remain slow to be returned and at time of writing, some 54% have been returned for the region. The Board will be looking to see a significant improvement on this level of return over the coming season and this will include increased training courses for distributors and prosecutions or on the spot fines for non-returns or non-compliance.

Bye-Laws

The conservation of salmon and sea trout byelaw was introduced on 20th December 2001 for the year 2002 (Bye-law 781 of 2001). The salmon and trout conservation byelaw was renewed for the year (Bye-law No. 782 of 2002). New Payment in Lieu of Prosecution regulations were introduced (S.I. 414 of 2002). The conservation of salmon and sea trout bye-law No. 786, 2002 was also introduced at the end of the year for the 2003 season, this will see the capping of the number of salmon an angler can take in a season to 20 with no more than 3 on any day after June 1st and only one per day before that date.



Following a very lengthy period with no increase in salmon licence fees the Minister made an order for the cost of rod and line licences to be increased – (S.I. 625 of 2002) – these new rates were to come into effect from 1st January 2003.

The year 2002 was the first year when the ban on the sale of rod caught salmon was in place. This regulation will be further strengthened in 2003 with the introduction of the daily and season limits for rod caught salmon for the first time.

Aquaculture

The Aquaculture Licence Appeals Board issued a determination in respect of 9 remaining salmon farming licences under appeal by the Board. In most cases the licences were issued in line with the application but the Board remains gravely concerned that the protocol level for ovigerous lice is far too high and does not adequately protect wild salmonids. Lice control must remain the constant priority of regulatory management and practice.

Development

Development programmes concentrated in maintaining river channels previously restored under TAM. Work was ongoing on the Bunowen river where spate floods can cause river bank damage. Stock management continued on Loughs Corrib, Mask and Carra and considerable success was achieved using the new electrofishing technology. Furthermore work was undertaken on the Robe river and other feeder streams.

Aquatic Environment

2002 was unusual as the weather was particularly wet in the summer. This led to problems with slurry spreading as well as difficulties with silage pits and their effluents. In one instance a silage mound collapsed due to the extremely high water content and led to the pollution of a nearby river, this resulted in a successful prosecution.

The Board continued with monitoring programmes but the stream sampling programme on Lough Corrib was scaled back in view of the significant database of background data currently compiled for these rivers.

The Board remained concerned about the apparent ecological changes in Lough Carra. The collapse of the Mayfly (*Ephemera danica*) population of the lake was assessed and it was shown that the lake supported a population only a fraction of densities on Lough Corrib.

A separate survey of the bays around Lough Corrib was undertaken to assess the inherent variability of the bays and try to identify potential problem areas.

The catchment management committee for the Robe River continued its work and a series of sub-committees were established. It is hoped that a catchment management leaflet for the area can be completed and distributed in order to cultivate awareness and improve public participation.

The Board again republished its information leaflet on the risks posed by the accidental introduction of the zebra mussel. The Board is seeking the co-operation of all boat users and fishermen to prevent the introduction of this pest into the region. The zebra mussel is now widely distributed in the Shannon and Erne catchments.

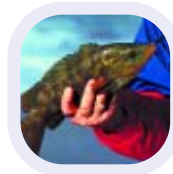
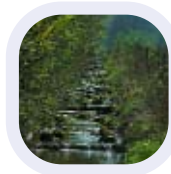
Water Framework Directive (WFD)

The Board undertook surveys of fish stocks on two Q5 'reference condition' sites in its region, one on the Bunowen river and the second on the Owenglin river near Clifden. This was done in conjunction with the scientific personnel of the CFB. The Board also represented Regional Boards on the national steering committee of the WFD under the aegis of the DOELG.

Hatchery

The Board's hatchery at Cong continued to have significant problems caused by diatoms emanating from Lough Mask. This causes mortalities in newly emerging and very young fry. A certain level of this can be stopped with an extremely fine filtration system but replacement of filters every three days is extremely costly.

The salmon ranching programmes continued for Cong (Lough Corrib) the Bunowen River (Louisburgh) and the Ballinahinch system in conjunction with the owner's co-operation. In addition the hatchery reared smolts on a contract basis.



FÁS Programmes

The Board continued with its FÁS schemes and during the period two staff members were dedicated to the supervision of FÁS schemes on a full time basis. Schemes continued in Louisburgh and Oughterard. Considerable work was done on Board facilities in Moycullen and Greenfields as well as in the area around Louisburgh and Westport.

Angling Information/Promotion/Sea Angling

The Board continued to answer a diverse number of angler enquiries over the period. In the region of 4,305 angling enquiries were catered for in 2002. In addition a comprehensive weekly angling update was prepared and circulated widely. The Board continued to maintain and develop its web site.

Commercial Catches – Salmon/Eels/Molluscs

Commercial salmon trapping in the Galway Fishery remained suspended in 2002. The commercial drift net salmon catch for the Ballinakill District showed a significant increase on the previous year but the catches by draft nets was extremely poor. This was due to the very high water during peak salmon run periods which resulted in fish being able to escape upstream when they reached river estuaries.

There was also an increase in commercial salmon caught in Connemara over 2001 but a decrease in Galway. All district catches failed to reach the quotas set in 2002. There was a significant number of escapee salmon caught in the early part of the season despite no escapes from fish farms being recorded in the region. Furthermore in September, fishermen fishing bottom nets off the coast recorded escapee farmed salmon being recovered in bottom nets in as much as twenty fathoms.

The Board remains extremely concerned about the level of eel exploitation on Loughs Corrib and Mask and has called for a full scientific appraisal of the eel stocks and exploitation levels and for long lines to be strictly limited.

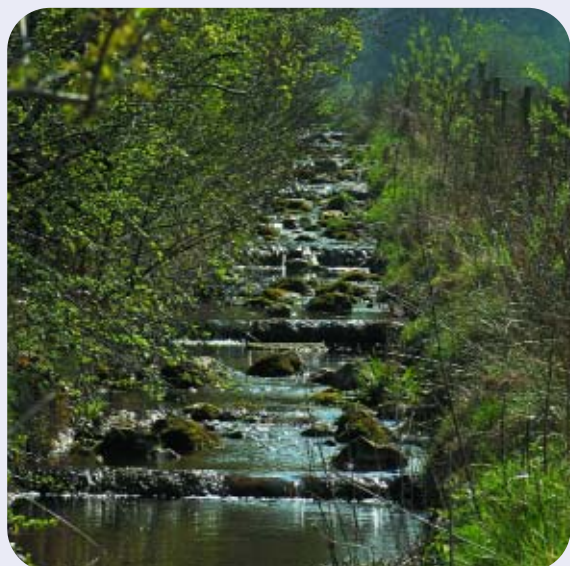
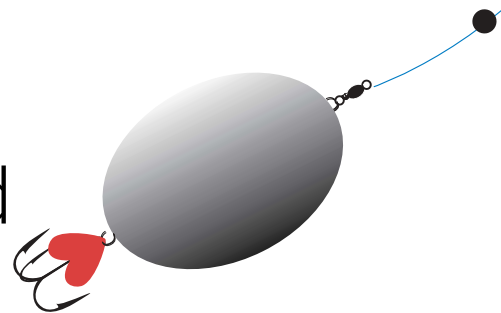
Erriff Fishery, Aasleagh Lodge and the Galway Fishery

Bookings at the Erriff Fishery and Aasleagh Lodge were good for much of the season and the catch from the fishery was 508 salmon but only 282 sea trout. It is the intention of the Board to increase the utilisation of the Lodge over the coming seasons. The Galway Fishery on the other hand had a very disappointing year in view of the fact that the fishery was inundated during the normal peak fishing period. This led to a very low rod catch and substantially depressed income receipts.

Western Fisheries Development Society

The Western Fisheries Development Society continued to meet regularly in 2002. The Society funded development work through many clubs in the Corrib/Mask catchment. Any projects for which funding was sought were carefully inspected and assessed by two members of the Society. In all the Society sought and received matching funding of €21,000 in respect of expenditure undertaken by clubs. The Society identified the need for anglers fishing in the region to be made aware of the share certificate system and for them to be encouraged to buy them.

North Western Regional Fisheries Board

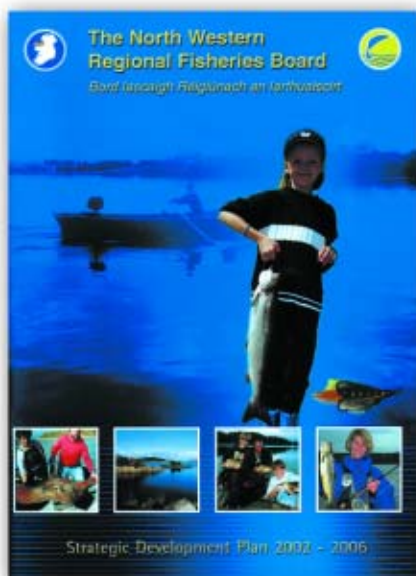


North Western Regional Board Members

Chairperson	<i>John Walkin</i>
Salmon Rod	<i>Seamus Henry Declan Turnbull</i>
Draft Net	<i>John Munnelly</i>
Drift Net	<i>Henry Gaughan Michael Waters J.J. O'Donnell</i>
Other Salmon Net	<i>-</i>
Eel Licence	<i>John Hughes</i>
Oyster Licence	<i>Paddy Quinn</i>
Rated Occupier	<i>Peter Layden</i>
Trout Angler	<i>Finian Dodd Francis Taaffe</i>
Coarse Angler	<i>John Hargadon (up to 19/05/02)</i>
Sea Angler	<i>John Walkin</i>
IFT Life Member	<i>-</i>
Ministerial Appointees	<i>Jimmy Maloney Brendan O'Mahony Anthony Ferguson Ann Campbell Padraic Traynor (Staff rep.) Mary Hensey Mary Gallagher-McBride Ann Geary</i>

General

- Water quality was of major concern to the Board throughout 2002, in particular, the ongoing eutrophication problem in the region's lakes.
- Despite the exceptionally high water conditions which prevailed during the main salmon run, the Board sold a record number of salmon angling licences with total sales of 10,257 licences. The record licence sales confirmed the value of angling tourism to the region as 77% were purchased by anglers resident outside of the region and 57% of the total were purchased by out of State visitors.
- In December, the Board published its Strategic Development Plan 2002-2006. The plan outlined in detail the Board's strategic plan for the conservation, protection, development, management, promotion and marketing of fisheries in the region over the next five years.



- On behalf of the State, the Board acquired a prime salmon fishery on the River Moy at Foxford which included more than a mile of double bank fishing. The fishery will be managed under licence in accordance with the Board's overall plan for the management and development of the River Moy.
- A fish counter installed by the Board on the Munhin River was commissioned and operated satisfactorily.

The Region's Fisheries

Fig 15: Sales of Salmon Angling Licences 1981-2002

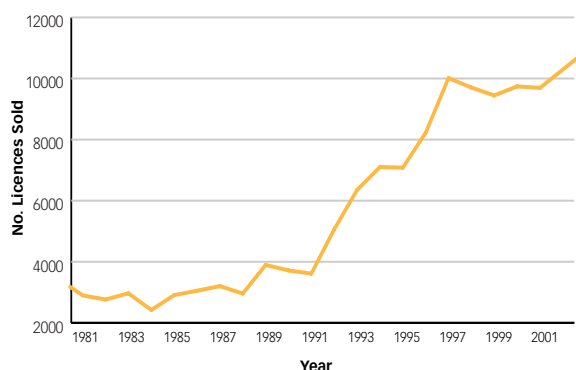
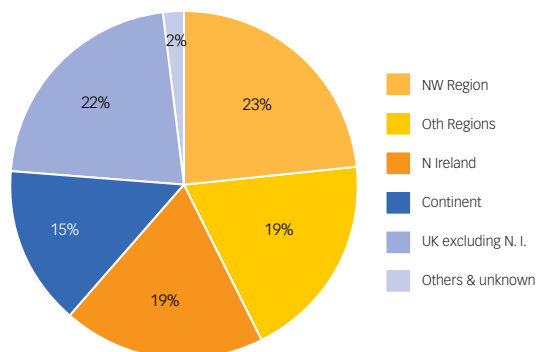


Fig 16: Origins of Anglers who Purchased Salmon Angling Licences in 2002 (N = 10,257)



Salmon anglers reported a total catch of 11,278 fish which represented an increase of 16% on 2001. While Moy Fishery beats fished below par due to persistent high water during the peak season, angling upstream of Ballina was good. Angling on the lower reaches of the Moy improved during the latter part of the season when anglers recorded good catches through August and September.

Trout angling on Loughs Conn and Arrow was again poor compared with previous years and reflected the ongoing enrichment problem at both lakes. The poor catches also reflected a decreased angling effort. Anglers continued to enjoy excellent sport on the region's small managed fisheries, in particular, Ballin Lough and Loughs Bo and Nasool. At Ballin Lough 1,693 rainbows were caught of which 983 (60%) were returned alive.

Boat and shore angling continued to attract large numbers of European, British and east coast anglers with up to 20 different species being taken by some boats. Pods of up to 100 blue fin tuna were also reported off Achill and attracted sea angling charters from as far away as Wexford and Kerry.

Water Quality

The eutrophication problem, particularly on the large lakes, was by far the issue of greatest concern to the Board during the year. There was clear evidence of the impact of enrichment on Loughs Conn, Cullin, Arrow and Gill with problems also evident on minor lakes such



as Derryhick and Doon. Given the Board's inability to deal with this problem on its own, in view of its limited statutory remit in relation to water quality; it endeavoured to heighten awareness of the problem and to bring it to the attention of the relevant authorities including government departments and the European Commission. However there appeared to be little progress made in dealing with the eutrophication problem, which was described during the year by the DOELG as "Ireland's most serious environmental pollution problem" (*Making Ireland's Development Sustainable* –DOELG, September, 2002).

Following requests from local public representatives, an independent report on the impact of rural septic tanks and private effluent treatment systems on water quality in the region was commissioned. The report vindicated the Board's stance in relation to all of the planning applications examined.

Catchment Management

The Board's Strategic Development Plan, which was published during the year, laid particular emphasis on catchment management and set out the Board's strategy in this regard. The plan set out the key objectives, main strategies and performance indicators in respect of the Board's catchment management function.

Work continued throughout the year on preparation of catchment management plans in respect of the Glenamoy, Owenmore and Owenduff River systems. This work was co-ordinated by a fisheries catchment manager who had been recruited towards the end of 2001. Catchment management committees continued to operate in respect of the Owenduff and Owenmore systems and close liaison was maintained with a community-based angling association, and with local land owners, in the Glenamoy River catchment. In parallel with the preparation of plans, good progress was made in the execution of various works, which form elements of the overall plans being developed. A catchment management information leaflet was also produced and circulated to every household in the Bangor Fisheries District.

Development of Fisheries

A major fishery enhancement project funded under TRAM was completed along a 10km section of the State owned Glenamoy River, which included the provision of access for disabled anglers. The works completed included the

creation of 10 additional quality angling spaces including two for disabled anglers and the provision of 150 metres of access runway specifically for disabled anglers.

The Board continued with its trout-stocking programme, which focused principally on small-managed fisheries. In an effort to boost recruitment, 250,000 brown trout fry were stocked into Lough Arrow with a further 50,000 going to the Bilberry system near Castlebar. Predator management continued on the region's large lakes and, wherever possible, the fish removed were stocked into nearby coarse fisheries.

The Board's salmon ova incubation station at Glencullin operated successfully and in excess of 35,000-eyed ova were planted out in the headwaters of the Owenmore system. A further 29,000 eyed ova were planted out in the upper Deel. The eel enhancement programme continued and, in April, 21.25kg of elvers were captured from the Moy and transported upstream to Lough Conn where an estimated 75,000 were released.

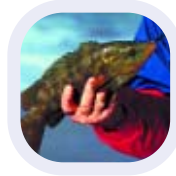
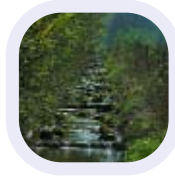
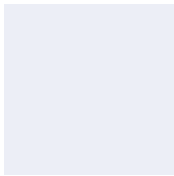
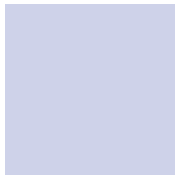
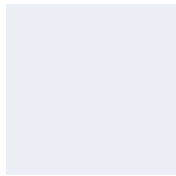
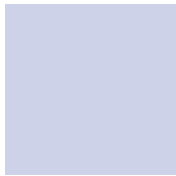
North Western Fisheries Development Society

Representatives of the Development Society, including the Chairman participated in a national forum aimed at addressing the issues facing the Development Societies going forward.

Angling Support and Promotion

The Board continued to deploy one officer on the promotion of angling who dealt with a large number of queries, liaised with angling journalists and produced a weekly angling report. Staff provided logistical support for a number of game angling competitions including an international trout fly fishing competition fished on Lough Conn. Safety cover was also provided for many of the sea angling festivals held in the region.

Board staff promoted the region at the CLA Game Fair and assisted a German film crew which visited the region to shoot a promotional film on angling in conjunction with Tourism Ireland. Sea angling on the Mayo coast was also filmed and the crew were highly impressed with the quality of angling on offer in the region. The Board's web site went on line late in the year and is expected to provide a significant boost to the Board's efforts to promote angling in the region.



The Board continued to support and promote juvenile, ladies and disabled angling. Assistance, including financial and logistical support was provided for the Connaught Juvenile Angling Seminar which was held in the Castlebar area. Support was also provided to the Ladies International Fly Fishing Team.

Protection of Fisheries

Despite the additional workload arising from implementation of the salmon tagging and quota scheme, the Board provided an effective protection service on all fisheries in the region during the year.

The national patrol vessel, *An Cosantóir Bradán*, was manned by Board personnel and deployed in the region during the months of June and July. Sea patrols were also carried out by the Board's RIBs including a number of joint patrols with the WRFB. In general, there was a high level of compliance with the new salmon tagging regulations and fishermen co-operated well with the scheme.

Patrols on inland waters were curtailed during the main season due to the heavy demands placed on staff arising from implementation of the new quota system. In the Bangor District, staff also carried out regular patrols of the oyster fisheries at Belmullet, Achill and Clew Bay.

Management of Board Fisheries

Despite the exceptionally high water levels which persisted for much of the peak salmon angling season and which impacted, in particular, on the Moy Fishery, more than 5,800 rod days were fished by anglers from more than 20 countries on fisheries managed by the Board. The overall catch from Moy Fishery beats was well down on normal years with the exception of the Point where the highest catch, in recent years, was recorded.

Ballin Lough again proved very popular and 1,078 anglers fished the lough and enjoyed excellent rainbow trout fishing on this well stocked fishery. Similarly, Loughs Bo and Nasool continued to be very popular. The Ballintemple fishery on the Moy recorded a slight increase in permit sales compared with 2001. The number of rod days fished on some of the other small-managed fisheries was somewhat disappointing and reflected algal blooms in one case and the proximity of a more sought after fishery in the case of another. The newly acquired Baker Fishery in Foxford was licensed to the local

club and an estimated 300 salmon were taken on the fishery during the season.

Commercial Fisheries

The commercial salmon catch was 44,696 fish, an increase of 2.2% on that recorded in 2001 and represented 80% of the total regional catch. Drift nets accounted for 42,618 fish and the catch was 2.6% up on that recorded in 2001. The draft net catch of 2,078 salmon was down 6% overall in the two districts where these nets were fished.

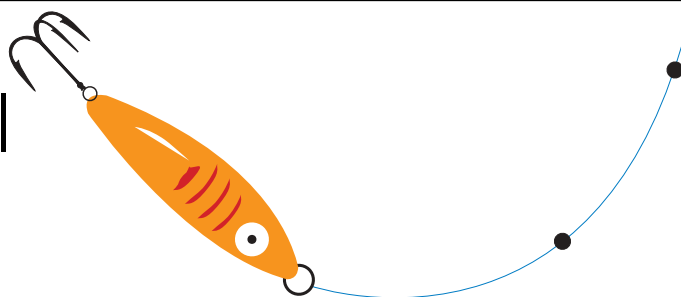
A total of 24 oyster dredge licences were issued and 10 tonnes of oysters were dredged from Clew Bay by the 12 oyster fishermen who fished.

Eel fishing authorisations were issued to 20 eel fishermen and included 15 longline and five fyke net authorisations. The total eel catch reported from the 14 authorisations fished amounted to just over 12 tonnes and was made up of 7.5 tonnes from the Ballina District and 4.6 tonnes from the Sligo District. Long lines accounted for 6.5 tonnes of eel and fyke nets for 5.7 tonnes. Brown eels made up 11 tonnes and migrating silver eels accounted for 1.2 tonnes of the total reported catch.

Aquaculture

Regular escapes of rainbow trout from fish farms were a cause of serious concern to the Board during the year. There was particular concern following the isolation of the Infectious Salmon Anaemia (ISA) virus at farms in Clew Bay and Bellacrogher Bay both of which were owned by the same company. While the presence of the virus was confirmed at the two sea sites, examination of escapees from a nearby river indicated that the virus was not present in the escaped fish. Nonetheless, the isolation of the virus together with the regular escapes, which have been a feature over the past few years, were a cause of serious concern to the Board. Arising from the isolation of the ISA virus and an escape of rainbows from one of the affected sites, the Board devoted considerable resources to the capture of the escapees some of which had run the nearby wild fisheries. Board staff also devoted significant time on an ongoing basis to provide cover against further escapes. The heavy commitment of Board resources to this exceptional problem impacted on the normal protection effort in the Bangor District.

Northern Regional Fisheries Board



Northern Regional Board Members 2002

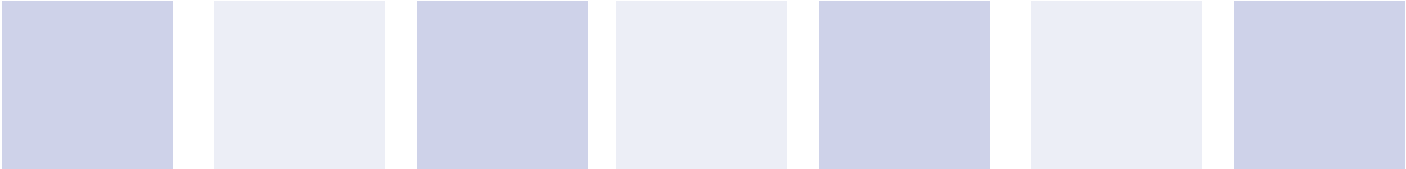
Chairperson	John McLaughlin
Salmon Rod	Chris Shaw Eddie Carr
Draft Net	George Gallagher
Drift Net	Denis Friel Roger Curran Stephen McGonagle
Other Salmon Net	Mary O'Donnell
Eel Licence	Kieran Lynch
Oyster Licence	–
Rated Occupier	Shane Gallagher
Trout Angler	Frankie Byrne
Coarse Angler	Brendan Coulter Terence Sheridan
Sea Angler	Bill McGarvey
IFT Life Member	Patrick Foley
Ministerial Appointees	Patrick Sweeney Matt Caulfield Maeve Quinn Caroline Connolly Peter Kennedy Paddy Boyle Joan Kelly

The Region's Fisheries

■ Game Angling

Donegal saw a good run of salmon to most fisheries in 2002. The first salmon of the year (10.5 lbs) was again taken on the R. Drowse on 1 January. Notable catches of spring salmon, including a 19lb, 12oz springer taken on Desmond's Pool, were again recorded on the R. Leannan, which has shown steady recovery since the outbreak of UDN on the river in the 1970s. The Ramelton pool stretch is now widely regarded as one of the best spring salmon venues in the country.

Catches from the Rivers Owenea, Eany and Lackagh were good, due partly to the wet season and suitable angling conditions. Of particular note was the high salmon return to the Erne with over 7,000 salmon recorded through the counter at Cathaleen's Falls station, which resulted in an estimated catch of 350 salmon in Assaroe Lake (above Cathaleen's Falls dam).



■ *Coarse Angling*

Coarse angling in the Upper Erne continued to attract high numbers of UK and continental tourists with generally good catches recorded through the season.

A major concern in recent years has been the scarcity of adult bream in the Erne, which are targeted by many UK anglers. This was also reflected in the Irish Ferries sponsored British King of Clubs, which represents the major event in the competition calendar. Although total catch and peg averages remain in line with recent years, the low numbers of adult bream has begun to impact on the number of UK competitors participating, and is threatening future sponsorship of the event.

Donegal's coarse angling is centered around the Pettigo lakes and Assaroe Lake on the lower Erne. In addition to the annual pike angling competition on Assaroe Lake, a new coarse match angling competition was instigated, which was co-sponsored by Erne Enterprise and the ESB, and will hopefully become an annual event for the future.

■ *Sea Angling*

The level of sea angling activity in Donegal (from both boat and shore) continued to increase in 2002. The North West Chartered Skippers Association now has 10 members with licensed sea angling boats servicing the coast from Sligo to Malin Head.

Aquatic Environment

■ *Erne Catchment*

Ongoing monitoring of the Erne indicates a significant continuing problem of eutrophication and attendant loss of habitat in both lakes and rivers.

Despite increased public awareness about water quality issues, the number of incidents relating to point source discharges, particularly slurry run off from fields and winter silage effluent discharges from farmyards, remain unsatisfactory. A combination of air patrols, ground and boat patrols in addition to farm surveys were utilised in an effort to address these issues. The level of unacceptable discharges from industry and lack of phosphorus removal at sewage works for small towns and villages is also of concern.

Grave concerns exist that REPS is not contributing in the way it should to environmental protection and to improving water quality. Approximately half the prosecutions taken by the Board for farm related water pollution offences are on REPS farms.

Representatives from the Fisheries Boards met with the Department of Agriculture officials to address these issues. Serious concerns were raised regarding the risks associated with the widespread use of umbilical pipe systems for slurry spreading, this greatly increases the likelihood of extensive spreading of slurry on wet or sloping land, placing increased pressure on catchments which are already showing signs of serious enrichment.

■ *Donegal, North Leitrim & North Sligo*

Significant development in sewerage infrastructure took place in 2002 with construction of the Carndonagh drainage network and new sewerage treatment works, which has led to greatly improved water quality in the Donagh River. Phase 1 of Donegal town main drainage was also completed necessitating daily monitoring of works at R. Eske by NRFB.

Lake monitoring of Loughs Melvin, Sessiagh, Roosky and New Lake continued. Improvements in water quality were recorded in both Sessiagh Lough and New Lake. Loughs Melvin and Roosky indicate nutrient enrichment, which may require ameliorative initiatives.

A comprehensive review of 17 catchments entering Donegal Bay, commissioned by Donegal County Council, was carried out by the CFB in association with NRFB for incorporation into the Donegal Bay Water Quality Management Plan. The report highlights the status of each system in relation to game and coarse angling stocks, water quality and environmental pressures throughout south Donegal.

Catchment Management

Significant progress was made on the Lough Melvin catchment management plan with a range of baseline surveys completed including fish stock assessments and water quality monitoring of L. Melvin and it's primary tributaries, and a soil nutrient survey of the catchment to identify high risk areas for diffuse pollution runoff.



Electrofishing of the main tributaries (the Glenaniff and Ballagh Rivers) indicate healthy stocks of juvenile salmon and trout to be present. Barriers to migration, which could be mitigated with small-scale passage improvements, limit juvenile production in two other tributaries, the County and Roogagh Rivers.

Survey netting of L. Melvin carried out in July 2001 in association with the CFB indicates that trout stocks have increased since last surveyed in 1986, and that Arctic charr are still present. Roach-rudd hybrids were found for the first time, indicating the recent introduction of roach. Ongoing water quality monitoring indicates a worrying trend towards nutrient enrichment, which will require remedial action in order to safeguard L. Melvin's unique fish communities. An interim report on current progress is scheduled for submission to the working group by May 2003.

Fishery Development

Development work was greatly restricted due to the delay and severe reduction in funding available through the TRAM. The following projects were completed:

(i) Rosses Fishery (€20,000)

This project included the construction of a reinforced concrete impoundment area and the re-housing of the counter, which has secured reliable counts of sea trout to the National Counter Programme.

(ii) Owenea Fishery (€61,500)

Works provided 2.3 km of new or resurfaced roadway in addition to 20 stiles, 12 walkways and 4 new parking areas. Vehicle access and parking facilities have now been provided for each of the 9 beats on the Owenea Fishery.

(iii) Eske Fishery (€20,000)

A total of 5 Sheelin angling boats and outboard motors were purchased for provision of visitor boats on L. Eske as part of the joint management agreement between the Eske Angling Association and the NRFB.

(iv) Swilly R. (€62,500)

A comprehensive development programme was instigated on the Swilly catchment using catchment management funds. Work included farm surveys, habitat assessment, bank clearance and electro-fishing, and in-stream enhancement. Stiles and walkways were provided along 8 km of the river.

Fisheries development in the Cavan District was confined to those projects, which could be funded directly by the Board or from compensation funds received as a result of previous pollution events. Projects included:

- (i) Instream rehabilitation and habitat improvement of Derryvalley, Laragh and Bunnoe rivers and L. Gowna tributaries
- (ii) Upgrading of access road to L. Oughter at Drumard
- (iii) Installation of additional stiles at Garadice Lake (to accommodate the Kingspan Pike Angling Final)

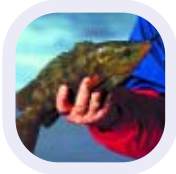
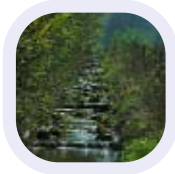
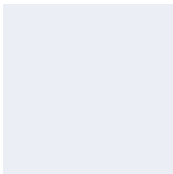
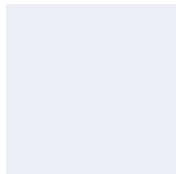
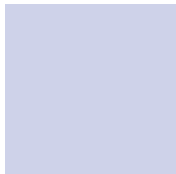
Fishery Development Society

Monthly meetings of the society continued through 2002. However, in light of last year's ballot, which removed the requirement for *compulsory* purchase of share certificates, very limited funds were generated through voluntary contributions. Given the very limited funds available for fisheries development, currently the continued effectiveness and existence of the development societies is questionable.

Angling Support And Promotion

May 2002 saw the official opening of the Eske and Eany Angling centers by Mary Coughlan TD. These centres, in addition to the existing facilities on the Owenea R., have greatly improved customer service in relation to angling queries, bookings and sale of licences and permits.

A series of 'open day' events held at the Eske Angling centre and hatchery proved very popular with local schools in highlighting fisheries and habitat conservation.



Board staff in Cavan again provided vital support to local and international coarse angling competitions in 2002 through preparation of swims, stewarding and administration of several events. Chief amongst these were the British King of Clubs, the NCFFI All Ireland Championship and the Kingspan Pike Angling competitions.

Fisheries enhancement continued in association with the CFB with stocking of carp to selected lakes and transfer of coarse fish from L. Sheelin to parts of the Erne. A total of 10,500 trout (reared from Erne trout broodstock) of various sizes were stocked to parts of the Erne following prior pollution incidents.

Fisheries Protection

The 2002 season proved extremely busy for protection staff due to good returns of salmon, particularly to drift nets early in the season, which resulted in many drift net fishermen reaching their quotas by the end of June. Particular emphasis was placed on ensuring district quotas were met, although difficulties were encountered with some fishermen who continued to fish with few tags remaining.

A total of over 8,000 m of nets were seized over the season, the majority of which was accounted for by illegal fixed stake nets.

Good early season salmon returns together with high rainfall resulted in increased pressure on river protection. Illegal fishing activity appears to be on the rise again in our most productive rivers, with a notable increase in the number of youths engaged in illegal netting of rivers.

A total of 18 prosecutions were instigated in the Letterkenny District with 1 500 m of river nets and 46 salmon seized. In the Ballyshannon district there are 6 cases pending with 1 000 m of river nets seized. Regular patrolling of L. Swilly resulted in a total of 6 prosecutions for illegal handpicking of oysters.

Angling Management, Organisation And Tourism

The consultation document 'Outline Proposal for the Development and Management of Angling In Donegal' was published jointly by the NRFB and the Donegal County Development Board and was widely circulated to all interest groups.

Positive feedback was received from many groups especially from charter boat owners, the tourism sector and state bodies. Game angling clubs are cautious but have agreed to enter formal negotiations on implementation.

A consultation group to meet with angling clubs and other direct interests has been agreed with Mr. Kevin Bonner (member of the Independent Review Group on Government Estimates) to chair the discussions. Negotiations are scheduled for completion by summer 2003.

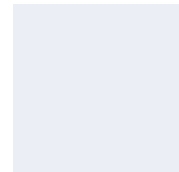
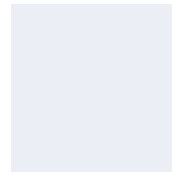
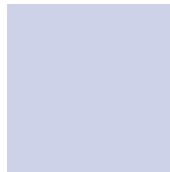
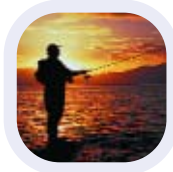
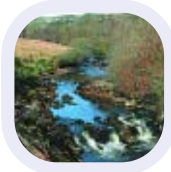
Commercial Fisheries

A primary focus of the Board through the summer was enforcement of the district salmon quotas. Drift and draft net quotas were met in the Letterkenny district, with a marginal overrun in the Ballyshannon district.

Stormy weather throughout June favoured drift net licence holders operating from larger vessels. Catches were particularly good off west Donegal, with relatively lower numbers recorded from inner Donegal bay, particularly during late June and July. No additional tags were issued after 1 July, apart from tagging out fishermen who had exceeded their tag allocation on their last day fishing.

The Erne estuary had it's best run of salmon in July for many years with a total catch of 832 salmon to draft nets, testament to the efforts of the ESB hatchery staff and enhancement work completed by the Board under the Erne Salmon Management Programme.

Due to the wet weather many draft net fishermen did not reach their quota. Some draft net fishermen suffered a severe cut in their previous year's catch as supplementary tags had been allocated by the time their original allocation had expired.



All major dealers and commercial outlets for salmon were inspected at least once through the season with a very high level of compliance observed. However, additional efforts are required in future years to address the level of sales to private houses.

Aquaculture

Donegal contains a number of large finfish aquaculture sites located in Lough Swilly and Inver, McSwine's and Mulroy Bays. The Board continues to have grave concerns regarding the management and husbandry practices in some of these facilities.

Of particular concern, was a major fish kill recorded in Inver Bay in July, where locals recorded dead salmon washed ashore. Subsequent investigation by divers and department officials confirmed significant numbers of dead salmon under and adjacent to a salmon cage.

Later that summer frequent catches of rainbow trout were recorded by anglers and NRFB staff from the R. Eany, with anglers catching up to 6 rainbow trout per day. No record of a farm escape event was reported to the Department as required by law.

In January Dr. P. Gargan (CFB) completed a report on the recorded levels of sea lice on sea trout and salmon farms in Donegal between 1992-2001. Despite availability of improved chemical treatments and effective use of single bay management plans, which has led to reduced sea lice burdens elsewhere in the country, unacceptably high levels of sea lice continue to be recorded in parts of Donegal, particularly in L. Swilly and Inver Bay.

In light of these issues the Board is seeking a review of current procedures in relation to aquaculture prosecutions and applications for future facilities by the DOCMNR to safeguard our wild fisheries.

Appendix 1

Fisheries Development and Surveys

Instream/Spawning Enhancement		Eastern Board	Southern Board	Sth Western Board	Shannon Board	Western Board	Nth Western Board	Northern Board	Total
No. of Rivers/Streams Enhanced	No.	4	4	2	0	3	3	2	18
Investment In Instream/Spawning Enhancement	Value €	11,500	35,000	5,000	0	30,000	50,000	41,736	173,236
Length of River and Stream Developed	km	6.75	1.8	1.2	0	3	12	9	33.75

Angling Development		Eastern Board	Southern Board	Sth Western Board	Shannon Board	Western Board	Nth Western Board	Northern Board	Total
No. of Angling Facility Enhancement Projects	No.	7	12	18	0	2	6	4	49
Investment in Angling Facility Enhancement	Value €	51,647	65,000	23,500	126,000	80,000	55,000	100,000	501,147
Angling Pools Created	No.	42	4	0	0	2	11	15	74
Stiles, Footbridges, Platforms, etc.	No.	7	7	3	0	10	30	70	127
Additional Fishing Spaces Created	No.	145	25	10	30	3	10	12	235

Surveys		Eastern Board	Southern Board	Sth Western Board	Shannon Board	Western Board	Nth Western Board	Northern Board	Total
Salmonid Surveys	No.	11	0	2	4	2	10	2	31
Coarse Fish Surveys	No.	2	6	0	0	0	0	0	8
Other	No.	0	0	0	3*	0	0	0	0
Investment in Fishery Surveys	Value €	19,200	8,000	4,250	20,000	0	21,000	20,000	92,450

*Sea Fish Survey

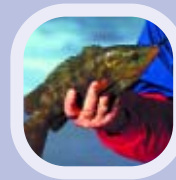


Appendix 2

Pollution Control and Water Quality

Pollution Control		Eastern Board	Southern Board	Sth Western Board	Shannon Board	Western Board	Nth Western Board	Northern Board	Total
Reported Fish Kills	No.	15	4	7	5	1	1	23	56
Fish Kills Caused By Agriculture	No.	2	2	1	3	1	0	1	10
Fish Kills Caused By Industry	No.	1	0	1	0	0	0	0	2
Fish Kills Caused by Eutrophication	No.	0	1	0	2	0	0	21	24
Fish Kills Caused By Local Authority	No.	2	0	2	0	0	1	0	5
Other	No.	10	1	3	0	0	0	1	15
Pollution Inspections	No.	676	520	202	1,380	50	296	547	3,671
Warning Letters	No.	85	373	91	25	30	27	343	974
Pollution Prosecutions Initiated	No.	12	1	11	22	2	1	12	61

Water Quality		Eastern Board	Southern Board	Sth Western Board	Shannon Board	Western Board	Nth Western Board	Northern Board	Central Board	Total
Water Samples Taken	No.	420	179	334	2,454	1,221	80	1,143	1,374	7,205
Samples Tested by Regional Board Laboratory	No.	136	171	126	10	710	0	79	-	1,232
Samples Tested by CFB Laboratory for The RFB	No.	244	3	192	2,229	1,030	60	734	-	4,492
Samples Tested Externally	No.	102	12	40	240	27	8	234	-	663
Total Water Tests	No.	486	179	334	2,454	1,248	80	1,143	5,942	7,205
Average No. of Determinants Tested	No.	8	3	7	6	13	4	16	20	10



Appendix 3

Fish Stocking

Fish Stocking	Eastern Board	Southern Board	Sth Western Board	Shannon Board	Western Board	Nth Western Board	Northern Board	Total
Brown Trout Stocked	8,000	7,700	9,500	421,500	32,676	305,050	10,440	794,866
Salmon Stocked	43,000	500,000	0	113,093	389,004	0	60,000	1,105,097
Rainbow Trout Stocked	0	11,900	57,700	10,000	0	10,500	0	90,100
Coarse Fish Stocked/Transferred	11,500	0	0	9,518	53	523	8,250	29,844

Brown Trout

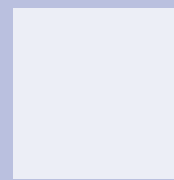
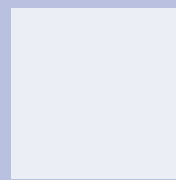
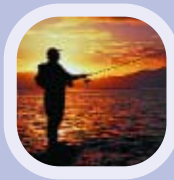
CFB Stocking to Regional Boards - 2002

REGION	Fry	Summerling	2+	Total
EASTERN	100,000	0	1,500	101,500
NORTHERN	100,000	0	1,250	101,250
NORTH WESTERN	300,000	0	3,000	303,000
SHANNON	150,000	0	19,000	169,000
SOUTHERN	0	0	0	0
SOUTH WESTERN	0	0	0	0
WESTERN	0	55,000	0	55,000

Rainbow Trout

CFB Stocking to Regional Boards – 2002

REGION	1+	2+	Total
EASTERN	500	0	500
NORTH WESTERN	600	0	600
SHANNON	9,500	0	9,500
SOUTH WESTERN	33,000	0	33,000



Appendix 4

Fishing Licences and Board Managed Fisheries

Rod Angling Licence Issues	Eastern Board	Southern Board	Sth Western Board	Shannon Board	Western Board	Nth Western Board	Northern Board	Total
Salmon/Sea Trout	3,500	4,104	5,865	2,313	3,343	10,257	5,642	35,024
Share Certificates	-	-	77	-	-	-	0	77

Commercial Licence Issues	Eastern Board	Southern Board	Sth Western Board	Shannon Board	Western Board	Nth Western Board	Northern Board	Total
Salmon								
Drift Net	16	251	147	86	106	120	150	876
Draft Net	179	9	80	97	21	8	126	520
Snap Net	0	139	0	0	0	0	0	139
Trap	0	0	0	0	0	0	0	0
Other	0	0	2	12	0	24	20	58
TOTALS	195	399	229	195	127	152	296	1,593
Eels	34	33	12	0	49	20	48	196
Molluscs	120	0	n/a	0	51	24	25	220

Board Managed Fisheries		Eastern Board	Southern Board	Sth Western Board	Shannon Board	Western Board	Nth Western Board	Northern Board	Total
Fisheries Managed	No.	4	0	15	27	6	6	5	63
Rod Days	No.	7,665	0	Not Recorded	2,563	3,106	5,802	1,744	20,880
Revenue	€	5,504	0	118,736	51,533	134,300	171,708	30,025	511,806

Appendix 5

Commercial Salmon and Sea Trout Catches, 2002

Region	Licence Type	District	No. of Salmon	No. of Sea Trout (over 40cm)
WESTERN	DRAFT NET	GALWAY	6	0
	DRIFT NET	GALWAY	5,254	0
	TOTAL	GALWAY	5,260	0
	DRAFT NET	BALLINAKILL	467	0
	DRIFT NET	BALLINAKILL	8,610	0
	TOTAL	BALLINAKILL	9,077	0
	DRIFT NET	CONNEMARA	4,224	0
	TOTAL	CONNEMARA	4,224	0
	TOTAL	WESTERN	18,561	0
EASTERN	DRAFT NET	DROGHEDA	1,254	86
	TOTAL	DROGHEDA	1,254	86
	DRAFT NET	DUBLIN	12	180
	DRIFT NET	DUBLIN	42	182
	TOTAL	DUBLIN	54	362
	DRAFT NET	DUNDALK	717	280
	TOTAL	DUNDALK	717	280
	DRAFT NET	WEXFORD	805	233
	TOTAL	WEXFORD	805	233
	TOTAL	EASTERN	2,830	961
NORTHERN	DRAFT NET	BALLYSHANNON	4,725	8
	DRIFT NET	BALLYSHANNON	9,688	0
	TOTAL	BALLYSHANNON	14,413	8
	DRAFT NET	LETTERKENNY	1,911	42
	DRIFT NET	LETTERKENNY	18,352	1
	LOOP NET	LETTERKENNY	77	0
	TOTAL	LETTERKENNY	20,340	43
	TOTAL	NORTHERN	34,753	51
NORTH WEST	DRAFT NET	BALLINA	30	0
	DRIFT NET	BALLINA	29,122	1
	TOTAL	BALLINA	29,152	1
	DRAFT NET	BANGOR	2,048	8
	DRIFT NET	BANGOR	6,408	2
	TOTAL	BANGOR	8,456	10
	DRIFT NET	SLIGO	7,088	0
	TOTAL	SLIGO	7,088	0
	TOTAL	NORTH WEST	44,696	11

Region	Licence Type	District	No. of Salmon	No. of Sea Trout (over 40cm)
SOUTH WEST	BAG NET	CORK	72	0
	DRAFT NET	CORK	2,699	133
	DRIFT NET	CORK	25,462	207
	TOTAL	CORK	28,233	340
	BAG NET	KERRY	70	0
	DRAFT NET	KERRY	4,820	40
	DRIFT NET	KERRY	25,309	25
SHANNON	TOTAL	KERRY	30,199	65
	TOTAL	SOUTH WEST	58,432	405
	DRAFT NET	LIMERICK	3,528	73
	DRIFT NET	LIMERICK	15,119	11
SOUTHERN	TOTAL	LIMERICK	18,647	84
	DRAFT NET	LISMORE	0	0
	DRIFT NET	LISMORE	12,746	194
	SNAP NET	LISMORE	53	1
	TRAPS	LISMORE	0	0
	TOTAL	LISMORE	12,799	195
	DRAFT NET	WATERFORD	10	0
	DRIFT NET	WATERFORD	11,753	251
	SNAP NET	WATERFORD	4,418	125
	TOTAL	WATERFORD	16,181	376
FOYLE	TOTAL	SOUTHERN	28,980	571
	DRAFT NET	(HALF)	5,959	-
	DRIFT NET	(HALF)	14,425	-
Grand Total	TOTAL	FOYLE	20,384	-
			227,283	2,083
TOTAL(Salmon & Sea Trout)				229,366

Rod and line salmon and sea trout catch 2001, taken from Tagging Scheme and raised to account for non-returned logbooks

Region	No. of salmon	No. of sea trout	Total
EASTERN	1,030	162	1,192
SOUTHERN	3,202	69	3,271
SOUTH WESTERN	4,133	503	4,636
SHANNON	670	27	697
WESTERN	2,726	14	2,740
NORTH WESTERN	10,403	98	10,501
NORTHERN	2,872	135	3,007
Region not specified	1,038	58	1,096
TOTAL	26,074	1,066	27,140



Appendix 6

Fisheries Protection

Protection and Surveillance	Eastern	Southern Board	Sth Western Board	Shannon Board	Western Board	Nth Western Board	Northern Board	Total Board
Short Boat Patrols (Man Hours)	860	2,603	1,472	1,360	717	2,280	841	10,133
Yards of Net Seized	1,445	886	9,870	1,451	2,635	2,653	10,570	29,510
Boats Seized	0	0	0	0	0	0	0	0
Prosecutions Initiated	4	31	20	4	12	15	21	107

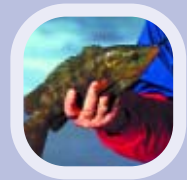
Appendix 7

Marine Tagging Programme

Tag and recapture of Marine Species up to December 2002

Species	Numbers Tagged To Dec. 2002	Numbers Recaptured To Dec. 2002	% Return	Days at Liberty	Dist. Travelled (Miles)	Numbers Tagged in 2002
BLUE SHARK	16,996	698	4.10%	Feb 99	0-4,250	277
PORBEAGLE SHARK	68	7	11.47%	71-3,947	89-2,300	7
THRESHER SHARK	1	0	0%	-	-	0
TOPE	3,791	300	7.90%	28-5,538	0-2,185	237
MONKFISH	1,023	187	18.33%	0-4,525	0-720	3
COMMON SKATE	610	93	15.24%	Oct-75	0-120	74
LONG NOSED SKATE	3	0	0%	-	1	0
WHITE SKATE	21	1	4.76%	975	3	0
BLONDE RAY	349	20	5.73%	26-1871	0-45	44
UNDULATE RAY	1000	53	5.30%	0-2,676	0-60	27
THORNBACK RAY	7612	255	3.34%	0-2,190	0-80	503
PAINTED RAY	254	12	4.72%	13-1,398	0-20	13
HOMELYN RAY	289	11	3.88%	294-1,373	0-72	6
BASS	1805	56	3.10%	0-1,373	0-88	0
MULLET	311	5	1.60%	0-275	0-200	0
FLOUNDER	287	30	10.40%	0-738	0-3.5	0
STING RAY	28	0	0%	-	-	9
BULL HUSS	26	3	11.53%	103-1,499	0-125	0
DABS	43	2	4.65%	378	2	0
SMOOTH HOUND	14	0	0%	-	-	0
PLAICE	5	1	20%	70	0	0
SUN FISH	1	0	0%	-	-	0

TOTAL NUMBER OF FISH TAGGED TO-DATE – 34,537



Appendix 8

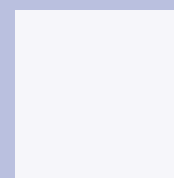
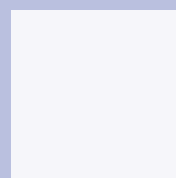
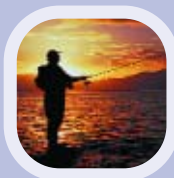
Central Fisheries Board Deep Sea-Angling Logbook Statistics, 1978 -2002

TOTAL NO. OF:	Year																								
	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Centres covered	6	12	13	14	19	14	13	12	16	17	20	17	22	21	30	26	32	33	34	38	39	42	46	52	62
Boats making returns	15	23	22	18	27	17	16	18	21	21	25	26	35	34	47	47	56	56	58	74	74	78	88	95	102
Angling days covered in sample (boat days)	938	1,404	1,213	1,069	12,34	811	795	868	1,160	1,298	1,535	1,763	2,177	2,371	2,725	3,053	3,749	3,961	4,073	5,039	5,006	5,167	5,569	5,842	6,565
Shark angling days covered in sample	234	231	168	126	102	163	141	74	140	148	139	238	252	320	277	359	339	498	337	411	330	447	362	380	314
Ground angling days covered in sample	704	1173	1045	943	1,132	648	654	794	1,020	1,150	1,396	1,525	1,925	2,051	2,448	2,694	3,430	3,416	3,736	4,628	4,676	47,20	5,207	5,462	6,251
Rod days covered in sample	4,668	6,196	5,751	5,479	6,202	4,024	4,006	4,414	6,759	7,145	8,319	9,999	13,212	14,662	16,248	18,589	23,591	24,967	26,135	33,203	32,844	34,873	38,343	41,853	45,402

NO. OF ROD DAYS PER NATIONALITY (% of total)																									
Dutch	2,056	2,765	2,214	1,949	1,851	1,028	587	948	1,947	1,655	1,579	2,020	2,319	3,335	3,821	4,961	4,782	5,436	6,688	6,846	6,216	6,503	6,787	6,492	7,508
(%)	44.04	44.63	38.3	35.57	29.84	25.55	14.65	21.4	28.8	23.16	18.9	20.2	17.55	22.74	23.52	26.69	20.21	21.77	25.6	20.64	18.93	18.65	17.71	15.51	16.54
German	757	967	1,432	881	1,607	645	573	413	464	486	491	696	657	762	1,148	1,378	1,656	1,770	1,457	2,138	2,480	2,198	2,130	2,302	2,363
(%)	16.22	15.61	24.9	16.08	25.91	16.03	14.3	9.2	6.8	6.8	5.9	6.96	4.97	5.2	7.07	7.41	7.01	7.08	5.58	6.42	7.55	6.3	5.55	5.5	5.2
British	490	992	781	935	739	453	531	738	957	1,340	1,809	2,496	3,571	3,481	3,637	3,669	5,509	6,004	5,882	7,256	7,591	8,064	7,790	8,151	9,930
(%)	10.5	16.01	13.58	17.06	11.92	11.26	13.25	16.7	14.1	18.75	21.7	24.96	27.03	23.7	22.39	19.74	23.33	24.04	22.51	21.85	23.11	23.13	20.31	19.47	21.87
Irish	800	825	767	1,051	1,514	1,429	1,468	1,615	2,028	2,486	3,061	34.22	4,664	4,548	5,829	7,002	9,754	9,797	10,109	14,530	14,741	15,998	19,694	22,227	22,738
(%)	17.4	13.31	13.34	19.18	24.41	35.51	36.64	36.58	30	34.79	36.7	34.22	35.3	31.01	35.88	37.67	41.32	39.23	38.68	43.76	44.88	45.87	51.37	53.13	50.1
French	304	297	253	173	246	207	329	195	523	494	599	442	857	1,003	685	445	570	537	435	530	352	369	468	481	518
(%)	6.51	4.79	4.4	3.16	3.97	5.14	8.21	4.4	7.73	6.9	7.2	4.42	6.49	6.84	4.22	2.39	2.41	2.15	1.66	1.59	1.07	1.06	1.22	1.14	1.16
Belgian	125	133	149	142	21	69	74	80	317	186	315	325	499	671	5.07	459	412	436	316	554	354	531	369	371	331
(%)	2.68	2.15	2.5	2.6	0.34	1.71	1.84	1.81	4.69	2.6	3.7	3.3	3.78	4.61	3.12	2.47	1.7	1.72	1.2	1.67	1.08	1.53	0.96	0.88	0.72
Others	136	217	155	348	224	193	444	425	524	485	465	589	645	862	621	675	950	1,022	1,246	1,349	1,110	1,210	1,105	1,829	2,014
(%)	2.91	3.5	2.69	6.35	3.61	4.8	11.08	9.6	7.75	6.7	5.5	5.89	4.88	3.9	3.8	3.63	4.02	4.01	4.76	4.06	3.38	3.46	2.88	4.37	4.41

NO. OF:																									
Anglers per boat, per day	4.98	4.41	4.74	5.12	5.03	4.96	5.03	5.08	5.09	5.5	5.4	5.67	6.06	6.18	5.96	6.09	6.25	6.28	6.41	6.58	6.56	6.74	6.88	7.16	6.91
Blue shark per boat,per day (Shark Angling)	2.75	2.5	2.61	1.34	1.68	3.73	2.74	1.56	2.6	1.86	1.84	2.1	3.6	2.86	2.45	4.18	3.16	2.75	3.51	3.84	2.27	1.84	1.59	2.19	1.14
Cod per boat, per day	0.52	0.88	1.61	0.79	1.97	1.66	1.47	1.23	1	3.05	3.93	2.24	0.45	2.12	3.25	2.08	2.6	3.35	2.49	3.03	2.89	4.16	5.67	8.55	5.07
Coalfish per boat, per day	1.5	4.35	5.47	2.86	4.9	2.21	8.3	11.5	18.14	10.57	14.7	13.88	9.68	9.36	7.28	10.1	8.51	7.71	7.27	7.42	5.85	6.19	7.72	8.38	9.87
Conger per boat, per day	1.78	1.46	1.7	1.75	1.86	1.58	2.66	1.75	2.2	3.11	2.4	2.52	3.16	2.86	2.62	2.75	2.29	2.38	3.7	3.22	3.03	3.15	2.56	2.69	2.43
Spurdog per boat, per day	4.23	1.45	1.9	1.87	2.43	1.94	1.47	0.6	1.03	0.4	0.22	0.05	0.12	0.02	0.12	0.86	0.88	0.94	0.66	0.96	0.62	0.23	0.2	0.48	0.63
Lesser Spotted Dogfish per boat, per day	4.12	2.33	4.27	4.71	5.46	4.83	6.33	7.7	7.6	9	4.93	6.17	5.23	3.56	4.75	5.1	4.13	4.15	3.73	3.41	4.37	3.47	2.88	3.1	3
Ling per boat, per day	1.25	1.2	1.24	1.33	1.68	2.34	3.01	1.95	2.13	1.95	2.02	2.74	1.9	2.04	2.78	2.79	2.5	3.05	3.52	3.25	2.76	2.66	2.39	2.85	2.78
Pollack per boat, per day	6.36	6.43	7.56	5.35	13.35	10.12	15.04	14.2	13.1	10.5	12.54	13.8	15.54	16.87	17.17	18.53	13.73	12.2	12.4	15.51	18.85	16.73	19.26	19.02	19.37

NO. OF:																									
Cod per angler, per day	0.1	0.16	0.3	0.16	0.36	0.33	0.23	0.22	0.17	0.51	0.62	0.43	0.08	0.36	0.49	0.31	0.43	0.53	0.38	0.43	0.4	0.3	0.44	1.17	0.73
Coalfish per angler, per day	0.3	0.81	0.91	0.56	0.89	0.45	1.35	2.07	3.1	1.77	2.32	2.7	1.72	1.62	1.21	1.52	1.39	1.22	1.11	1.09	0.81	0.92	1.11	1.15	1.43
Conger per angler, per day	0.36	0.27	0.31	0.3	0.34	0.32	0.43	0.31	0.39	0.52	0.38	0.49	0.56	0.49	0.39	0.41	0.37	0.37	0.56	0.46	0.42	0.46	0.37	0.37	0.35
Spurdog per angler, per day	0.85	0.27	0.35	0.37	0.44	0.39	0.24	0.12	0.17	0.07	0.03	0.01	0.02	0	0.02	0.13	0.14	0.14	0.1	0.13	0.08	0.03	0.02	0.06	0.09
Lesser Spotted Dogfish per angler, per day	0.83	0.43	0.77	0.93	1	0.97	1.03	1.38	1.32	1.51	0.78	1.2	0.93	0.62	0.72	0.77	0.67	0.66	0.57	0.49	0.61	0.51	0.41	0.42	0.43
Ling per angler, per day	0.25	0.22	0.23	0.26	0.31	0.47	0.49	0.35	0.36	0.33	0.32	0.53	0.34	0.35	0.42	0.42	0.41	0.48	0.54	0.46	0.38	0.39	0.34	0.39	0.4
Pollack per angler, per day	1.28	1.19	1.37	1.06	2.44	2.04	2.45	2.5	2.2	1.76	1.98	2.68	2.76	2.92	2.6	2.79	2.24	1.95	1.9	2.24	2.63	2.48	2.78	2.67	2.67



Appendix 9

Publications

Author	Date	Title	Journal/Publisher	No.	Pages
Buck, P.J.	2002	A Holistic Approach to Inland Fisheries Development - Consideration of the Social Aspects	Environmental Institute, UCD.		5
Byrne, David	2002	Fishing In Ireland's South East (Brochure)	Select Print		18
Byrne, Maureen	2002	River Boyne Tributaries Electrofishing Surveys	ERFB		18
Caffrey, J.M., Monahan, C. & Tierney, D.	2002	Factors Influencing the Distribution of Aquatic Plant Communities in Irish Canals	In: Proceedings of the 11th EWRS International Symposium on Aquatic Weeds in Moliets, France.		
Caffrey, J.M. & Monahan, C.	2002	Control of Myriophyllum verticillatum in Irish Canals by Turion Removal	In: Proceedings of the 11th EWRS International Symposium on Aquatic Weeds in Moliets, France.		
Caffrey, J.M. & Walsh, T.	2002	Distribution and Growth of Dace in Ireland	In: 21th Irish Environmental Researchers Colloquium. University College Cork. Book of Abstracts		
Caffrey, J.M., Walsh, T. & McLoone, P.D.	2002	Coarse Fishery Creation in Irish Cutaway Bogs	In: Symposium on Inland Fisheries Management & Aquatic Environments. The Effects of Fishery Management on Freshwater Ecosystems. Windermere, UK		
Drogheda District Staff	2002	River Boyne Faunal Sampling Report 2002	ERFB		58
O'Grady, M., Gargan, P., Delanty, K., Igoe, F., & Byrne, C.	2002	Observations in relation to changes in some Physical and Biological Features of the Glenglosh River following bank Stabilisation	CFB & Trout Unlimited In: Proceedings of the 13th International Salmonid Habitat Enhancement Workshop", Westport, Co Mayo, Ireland September, 2002 Ed. M. O'Grady		
O'Grady, M., Delanty, K. & Igoe, F.		Enhancement of Brown Trout Spawning and Bursery Habitat in the Lough Ennell Catchment, Co Westmeath, Ireland			
Gargan, P., O'Grady, M., Delanty, K., Igoe, F., & Byrne, C.		The Effectiveness of Habitat Enhancement on Salmon and Trout Stocks in Streams in the Corrib Catchment			
King, J.		Mitigating for Fish and Habitat: Fisheries – Engineering Interactions in Flood Relief Schemes in Ireland, 1996 – 2002			
O'Brien, Ronan	2002	Population Estimates in Dundalk District	ERFB		
O'Grady M.F.	2002	Salmonid Riverine Enhancement in Ireland Past, Present and Future	RDS Occasional Papers in Irish Science and Technology No. 26		
O'Grady M.F.	2002	The Habitat Enhancement Programmes required by the Salmonid Fisheries in the Republic of Ireland	In: Symposium on Inland Fisheries Management & Aquatic Environments. The Effects of Fishery Management on Freshwater Ecosystems. Windermere, UK		
NWRFB	2 Dec	Strategic Development Plan 2002-2006	NWRFB		68
NWRFB	2 Dec	Executive Summary - Strategic Dev. Plan 2002-2006	NWRFB		6
NWRFB	2 Feb	Moy Fishery Newsletter 2002	NWRFB		4
NWRFB	2 May	Annual Report 2001	NWRFB		36
NWRFB	2 Nov	Catchment Management Leaflet	NWRFB		6
SHRFB	Nov	Draft Mulkear Catchment Management Plan	SHRFB		
SRFB	2002	Barrow News	SRFB	500	4
SRFB	2002	Blackwater News	SRFB	120	4
WRFB	Jan '02	Erriff Fishery Newsletter 2001	WRFB		4
WRFB	Jan '02	Galway Fishery Newsletter 2001	WRFB		4
WRFB	May '02	Lough Corrib Game Angling Map	WRFB		16
WRFB	Jun '02	Code of Practice - Corrib System	WRFB		2
WRFB	Dec '02	Erriff Fishery Newsletter 2002	WRFB		6
WRFB	Dec '02	Galway Fishery Newsletter 2002	WRFB		4

Appendix 10

A Glossary of Abbreviations

BIM	Bord Iascaigh Mhara
CFB	Central Fisheries Board
CM	Catchment Management
DARDNI	Department of Agriculture and Rural Development (Northern Ireland)
DOCMNR	Department of Communication, Marine and Natural Resources
DOELG	Department of the Environment and Local Government
EDM	Experimental Drainage Maintenance
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ERDF	European Regional Development Fund
ERFB	Eastern Regional Fisheries Board
ESB	Electricity Supply Board
EU	European Union
FAS	Training and Employment Authority
FMD	Foot and Mouth Disease
GIS	Geographical Information Systems
HR	Human Resources
IFA	Irish Farmers Association
ILC	Irish Land Commission
ISFC	Irish Specimen Fish Committee
IT	Information Technology
LPV	Large Patrol Vessel
NASCO	North Atlantic Salmon Conservation Organisation
NDP	National Development Plan
NRFB	Northern Regional Fisheries Board
NWRFB	North Western Regional Fisheries Board
OPW	Office of Public Works
PCW	Programme for Competitiveness and Work
PR	Public Relations
REPS	Rural Environment Protection Scheme
RTDI	Research, Technological, Development and Innovation
RIB	Rigid Inflatable Boat
SAC	Special Area of Conservation
SERTA	South East Regional Tourism Agency
SESE	Social, Environmental and Scientific Education
ShRFB	Shannon Regional Fisheries Board
SPHE	Social, Personal and Health Education
SRA	Salmon Research Agency
SRFB	Southern Regional Fisheries Board
SWRFB	South Western Regional Fisheries Board
TAC	Total Allowable Catch
TAM	Tourism Angling Measure
TRAM	Tourism and Recreational Angling Measure
UDN	Ulcerating Dermal Necrosis
WFD	Water Framework Directive
WRFB	Western Regional Fisheries Board

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