



The Central and Regional Fisheries Boards

An Príomh Bhord Iascaigh agus na Boird Iascaigh Réigiúnach

Annual Report 2001



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. The Board also supports, co-ordinates and provides specialist services to the seven Regional Fisheries Boards and advises the Minister on the performance by Regional Fisheries Boards of their functions.

The seven Regional Fisheries Boards have primary 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.



Shore Angling: Courtesy of Shannon Development

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Chairperson's Statement

I am pleased to present the 2001 Annual Report of the Central and Regional Fisheries Boards and the Fisheries Co-operative Societies.

This was an important year for the Inland Fisheries and Sea Angling Sector. In 2001 the final elements of the Tourism Angling Measure were successfully completed. This brought closure to the most significant period of investment and development in inland fisheries since the foundation of the State. I am pleased to report that we are now seeing the fruits of this investment all around the country. I am aware that the sector is now eagerly awaiting the roll out of the Tourism and Recreational Angling Measure under the National Development Plan which provides for investment of €30m in the development of tourism and recreational angling in the period to 2006.

During the year my Board established the Central and Regional Fisheries Boards' Liaison Group. This Group, which consists of representatives of each of the eight Fisheries Boards and the Chief Executive Officers, provides a platform where all Boards can meet for a general exchange of views on issues of mutual interest and consider major policy and strategic issues. I would like to thank my colleagues in all eight Boards for their contribution to this forum to date.

Environmental issues continue to be the single biggest challenge to inland fisheries. There is now grave concern at the damage poor environmental management is causing to our fisheries and their ecology. During the year a joint Protocol between the Fisheries Boards and the IFA was launched. The aim of the Protocol is to create greater awareness and an improved understanding of the role and obligations of the Fisheries Boards in environmental management as it affects fish life and also to develop improved communication between the Fisheries Boards and the farming community. I would like to congratulate all involved in the development and negotiation of this Protocol.

There is also growing concern at the current state of North Atlantic salmon stocks. This concern has been strongly voiced by all participant countries in NASCO. The Minister, Mr. Frank Fahey TD, introduced carcass tagging of all wild salmon in 2001. This will provide management and scientists with better information on salmon stocks.

The biggest challenge during 2001 was the Foot and Mouth Disease. The entire inland fisheries sector responded magnificently to this national threat. There was a clear recognition that protection of the farming community was paramount and there was clear evidence of the close bonds that exist between anglers and farmers in the manner in which the Fisheries Boards and anglers responded. In an unprecedented move the Fisheries Boards recommended to the Minister at a very early stage that all fishing should be suspended and the Minister responded accordingly. I am in no doubt that this generous and responsible approach from the Boards and anglers played no small part in successfully protecting our important agricultural sector from this deadly disease. I would like to congratulate all those involved.

Finally I would like to pay tribute to my fellow Board Members for their support and commitment to me and the industry. I would also like to pay tribute to the management and staff of all the Boards for their dedication and commitment during the year.



Bill McLysaght
Chairman
Central Fisheries Board



Bill McLysaght
Chairman
Central Fisheries board



John O'Connor
Chief Executive Officer
Central Fisheries board



Comment of Chief Executive Officer

2001 has seen the Central and Regional Fisheries Boards respond to a number of key customer demands, both internal and external. Responding to our customers' demands is clearly recognised as a priority by the Fisheries Boards. In this regard, towards the end of the year the Central Board created a new post of Director of Marketing to, inter alia, work with the Regional Fisheries Boards and Bord Fáilte to develop a national marketing strategy for the sector. The new position will bring an even more focused approach to corporate and industry issues from a customer perspective, and is part of an ongoing institutional strengthening in response to change.

A major Human Resources review of the eight Fisheries Boards concluded with the publication of the consultant's report in December. The report raised a number of important issues on how the Inland Fisheries Service is equipped to respond to staff and customers alike, and will inform management on how we can best deliver on our remit moving forward. In a similar vein, the Fisheries Boards initiated a facilitative process with management and staff to deliver an appropriate partnership model for the service in line with the Government's Strategic Management Initiative for the Public Service.

In addition, in line with the requirements of the PPF, management and unions developed a comprehensive set of specific targets and performance indicators for the Fisheries Service as part of its modernisation programme. The 'Equal Opportunities Policy' & 'Respect and Dignity at Work Policy and Grievance Procedure' produced during the year represent progressive HR policies and procedures which aim to ensure the development of a working environment free of barriers and supports staff to achieve their full potential.

A number of key initiatives were implemented to service industry through the course of the year. In particular, an Inter-Board Liaison Group was established to facilitate closer co-operation, co-ordination and understanding between all Fisheries Boards by providing a forum for a general exchange of views and to consider major policy and strategic issues. While each Board is statutorily independent there is an acknowledgement that delivery to the sector can best be achieved through co-operation and the development of closer working relationships between all Boards.

2001 also saw the establishment of a National Recreational Angling Forum. This follows an initiative by the Central Fisheries Board and the Irish Sports Council. The Forum is chaired by Peter Wilson, former Director of Dublin Zoo. The core aim of the forum is to provide a mechanism through which the recreational angling sector and its National Representative Bodies can co-operate and co-ordinate on issues of common concern particularly when interfacing with State Agencies and Government Departments. We look forward to working closely with the Forum.

The wild salmon carcass tagging scheme came into force on the 1st January 2001. The purpose of the scheme is to provide improved information on catches of wild salmon. This will in turn inform managers and scientists in developing appropriate strategies to address the decline in Irish stocks of North Atlantic salmon. Compliance with the new regulations was generally high. However, to date the number of anglers who returned their logbooks is disappointing.

The Tourism Angling Measure was successfully completed in 2001, and the service eagerly anticipates the launch of the new Tourism and Recreational Angling Measure in 2002 to build on the solid foundations and expertise developed during the TAM programme.

In the detailed report that follows you will have an opportunity to see the significant achievements made by all eight Fisheries Boards during 2001 which will serve the industry well in the future.

Finally, I would like to express my appreciation and thanks to my Board and the staff of the Central and Regional Fisheries Boards for their dedication and loyalty in striving to deliver on our remit in the face of real challenges in these changing times. Our continued work in the conservation, development, management and promotion of the resource will ensure that this generation will not be found wanting in ensuring that our great natural resource is passed on in the best condition possible to the next generation.



John O'Connor
Chief Executive Officer

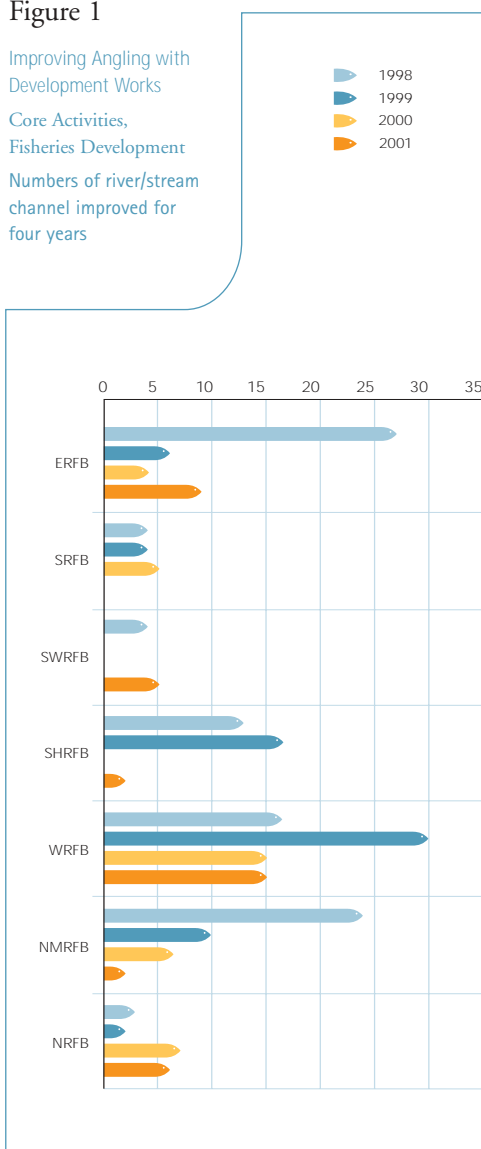


Core Activities

Fisheries Development

Figure 1

Improving Angling with
Development Works
Core Activities,
Fisheries Development
Numbers of river/stream
channel improved for
four years



General

Between 40% and 50% of all monies budgeted for fisheries development nationally is expended on repair and maintenance of existing facilities. In 2001 both development and maintenance work were curtailed in the early part of the year by the Foot and Mouth Disease (FMD) crisis and consequent restrictions on access to farmland.

Game Fisheries Development

Forty two streams/ivers were enhanced in 2001 at a cost of over €195,000. Over 30km of channel were developed by the improvement of habitat. Improvements include bank protection and instream works such as weirs and channel realignment.

The effectiveness of all TAM development projects was again monitored in 2001. All projects are continuing to prove successful with evidence of an increase in both juvenile salmon and trout (and adult trout in larger channels) in the post works phase.

New angling pools created under the programme again yielded good returns to anglers.

Coarse Fisheries Development

The coarse angler brings a vast array of equipment and bait to the water's edge. Therefore, facilities such as access and car parking are essential in developing a coarse angling market. In 2001 over 130 additional angler spaces were created. These were complemented by stiles, platforms and footbridges as well as new/improved car parking facilities.

The coarse fish hatchery in Roscrea fish farm began supplying the Regional Fisheries Boards (RFBs) with coarse fish in 2001. This activity complements the existing natural coarse fisheries within the Regions by increasing stock sizes and species diversity.

Sea Angling Development

In 2001 the primary developments included the provision and/or improvement of signposting to shore angling areas and sea angling centres.

Core Activities

Fisheries Development - Targeted Programmes

Salmonid Surveys

Under the SWRFB fisheries catchment management initiative for the River Laune a comprehensive survey of fish stocks in the river tributaries was undertaken in summer 2001. Juvenile salmon were recorded at numerous sites, while trout were well distributed throughout the entire catchment. This survey complemented a broad assessment of the status of fish stocks in Lough Leane, Killarney, carried out in 1999, under the Department of the Environment and Local Government catchment management initiative, and a survey of fish stocks in the Flesk catchment carried out in 2000.

A preliminary survey of the Avoca catchment, which has been severely damaged by mining since the 1800s, was undertaken in 2001 through an ERFB funded fisheries catchment management programme. This study identified fish stock survey requirements in addition to heralding the commencement of a water quality monitoring programme for the catchment. Tools including GIS and the use of aerial imagery, together with heavy metal analysis are being used to model this catchment. The fish stock survey is scheduled for 2002.

A fish stock survey of the River Feale, Co. Kerry, was undertaken in 2001 to assess the current status of juvenile salmonid stocks, as concern had been expressed regarding the number of salmon present during the prime angling season. Electro-fishing was undertaken at sites previously sampled in 1988 and 1992. Juvenile salmon densities recorded in 2001 were among the highest recorded for an Irish river and higher than those recorded in previous years. Salmon entering the river late in the angling season may be contributing significantly to the large stock of juveniles recorded.

Sea Trout/Sea Lice Monitoring Programme

The Central and Regional Fisheries Boards continued to monitor estuaries for prematurely returning lice infested sea trout in 2001. Sampling was carried out on 15 rivers and a total of 464 sea trout were examined for lice infestation.

As in previous years, there was a significant relationship between the level of infestation and the distance to the nearest salmon farm. Highest sea lice levels were recorded on fish from the Owenshaugh River in Kenmare Bay, the Eany River in Donegal Bay and Crana River in Lough Swilly, all bays containing high densities of farmed salmon. Sea trout from the Eany and Crana were also among the highest lice infested fish recorded in 2000. Infestations of sea trout by sea lice on the west coast in 2001 were lower than those recorded in previous years. Lower lice infestation is believed to be related to improved sea lice management on west coast salmon farms in 2001.

Water Quality Plan for fisheries discharging into Donegal Bay The CFB, in conjunction with the NRFB, has been contracted by Donegal County Council to supply baseline fish stock data for a water quality management plan for seventeen fisheries discharging into Donegal Bay. Salmonids were recorded in the majority of the channels. All of the waters have been rated in terms of their fisheries value or potential and this work has facilitated the compilation of a valuable database. A separate in-depth study of fish stocks in Loughs Unshin and Nambrackalaun (Abbey River catchment) was also carried out for Donegal County Council.

Waterways Ireland

The Central Fisheries Board was contracted by Waterways Ireland in 2001 to continue a programme of water quality monitoring, aquatic plant management and coarse fisheries development on the Royal and Grand Canals, the Shannon Erne Waterway and the River Barrow Navigation.

A regular schedule of water sampling and analysis was carried out at 187 sites. In addition to this, CFB staff responded to reports of pollution and fish kills. The results indicate that overall water quality is good. Fewer nutrient threshold breaches were recorded in 2001 as compared to 2000.

The aquatic plant survey of the waterways facilitated the development of an aquatic weed management programme. The spread of the invasive species *Azolla filiculoides*, a non-native species which can choke waterways, was monitored along the Barrow Navigation.


A total of 3.9 tonnes of mixed coarse fish species including pike, bream, perch, roach, rudd, tench and carp were introduced into the waterways in 2001. A large number of these fish were individually tagged to monitor their growth and survival. These fish will contribute to the quality of the angling product in these waterways.

Urban Flood Relief Schemes

OPW prioritised a series of channels for which scheme design work was initiated and for which Environmental Impact Statements (EIS) were to be compiled. The CFB was requested to undertake fisheries surveys in connection with the EIS programme. This involves survey work to compile a profile of the current status of all fish species present, an assessment of the likely impacts of the proposed scheme on both the fish populations and instream and bankside habitat and a specifying of mitigation measures necessary to offset any damaging aspects of a proposed scheme.

The following were the principal items of relevance to fisheries in 2001:

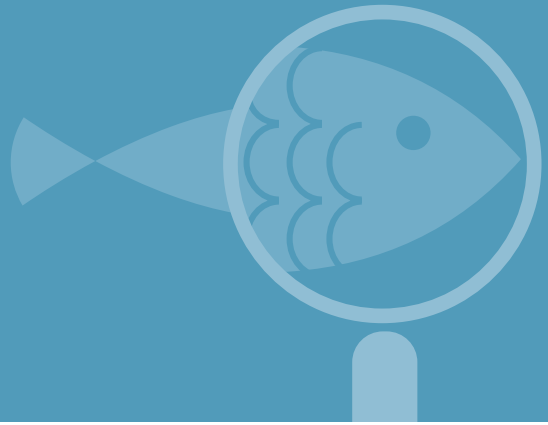
- Fisheries EIS reports submitted in regard to schemes in Clonmel (River Suir) and Waterford (John's River).
- On-going liaison in regard to schemes in Cappamore, Kilkenny, Clonmel and Waterford, with OPW and officers of the relevant Regional Fisheries Board.
- CFB was requested to undertake investigations over a two-year period on the status and conservation of lamprey species in the Kilkenny City flood relief scheme. This investigation was requested in Autumn 2001 and was scheduled to commence in Spring 2002.



*A total of 3.9 tonnes
of mixed coarse fish...
...were introduced into
the waterways in 2001*

Core Activities

Fisheries Development - Applied Scientific Research



Assessment of the Role of Sea Lice as a Marine Mortality Factor in Irish Salmon Stocks

The CFB, supported by the WRFB, NWRFB, NRFB and the Marine Institute, undertook a survey of salmon post-smolts off the West Coast during May 2001. The purpose of the survey was to determine if salmon post-smolts could be captured at sea in good condition with minimal scale loss to examine for levels of sea lice infestation. This work has been undertaken successfully in Norway using a FISH-LIFT aquarium attached to the cod-end of a pelagic trawl adapted to fish on the surface and high levels of juvenile sea lice have been recorded on salmon post-smolts. Until the adoption of this technique it has not been possible to-date to determine if Irish salmon post-smolts entering bays with salmon aquaculture suffer increased marine mortality due to sea lice infestation as salmon post-smolts, unlike sea trout, do not return to freshwater. Only by capturing salmon post-smolts at sea can the extent of sea lice induced marine mortality of salmon be determined.

Two tows were made in Killary Harbour on 8th and 21st May and 128 salmon post-smolts were captured along with 25 sea trout. Salmon post-smolts were live in the aquarium and in good condition with minimal scale loss. No sea lice were recorded on these salmon post-smolts and the fish may have only very recently entered the Killary. Five micro-tagged salmon smolts were captured without lice between Inishturk and Clare Island. Important information on the movement of sea trout at sea was gained from the capture of sea trout up to four miles offshore from Blacksod Bay and Bertraghboy Bay. In total, 155 salmon post-smolts and 29 sea trout were captured during the survey. The survey was successful at capturing live salmon post-smolts at sea with minimal scale loss to examine for sea lice infestation levels. It will serve as an important tool in assessing the impact of sea lice as a marine mortality factor on salmon post-smolts in years when sea lice levels are high on marine salmon farms in spring.

Acid Rain

Monitoring of fish populations in three lakes, Glendalough Upper, Maumwee Lake (Corrib catchment) and Lough Veagh, which had been assessed previously in 1989, was repeated in

In total, 155 salmon post-smolts and 29 sea trout were captured during the survey

2001, at the request of the EPA. This is part of a long-term study on the impact of acidification processes on poorly buffered lakes in Ireland. Fish population composition was similar although densities varied since the 1989 study.

Experimental Drainage Maintenance (EDM) Programme

The aim of this study is to examine the environmental impacts both of current channel maintenance work carried out by OPW and of experimental maintenance digging carried out under the EDM programme. The programme permits the development of a long-term database of fisheries information and maintenance impacts of value to both OPW and to the Fisheries Boards. A long-term aim of the programme is the development of guidelines for incorporation of environmentally sensitive strategies into routine channel maintenance.

The programme in 2001 was the final one in the 5-year remit and a Management Summary was submitted to OPW. It is envisaged that this will be available on the CFB website in summer 2002, following agreement with OPW.

OPW also requested CFB to undertake a further 5-year series of investigations in this project - to cover the period 2002-2006. While the investigative and inspectorial elements will remain important parts of this project, OPW have also requested that a training programme on environmentally-sensitive maintenance be developed and delivered to its machine drivers. This will cover strategies to retain elements of the river corridor habitat and strategies to incorporate 'experimental' digging work into normal maintenance. Roll-out of this programme will commence in 2002 and will involve liaison with officers of the Regional Fisheries Boards who have local involvement with OPW channel maintenance.

Core Activities

Angling

The terrible spectre of Foot and Mouth Disease and the threat it posed to the national economy united the angling fraternity in Ireland. Anglers willingly ceased operations to enable the government agencies tackle the problem. Many operators lost heavily due to the enforced cancellation of early bookings but by mid-season the situation had eased considerably.

Coarse and Pike Angling

The restrictions imposed as a result of Foot and Mouth Disease seriously affected the general early season coarse angler trade from the U.K. There was a noted late season pick up in trade from the British market and the fishing was generally excellent.

Pike angling was very good throughout January and into February (before the FMD crisis) with pike to over 30 lbs recorded on the Rivers Bann, Suck and Barrow. The good fishing continued after the crisis in late summer. In November there were excellent catches of pike taken principally in the Shannon and Erne catchments.

Bream catches were scarce throughout the upper Shannon and in much of the Erne catchment. There were, however, great catches of bream at all the coarse fish centres in the Lower Shannon, Inniscarra Lake in Cork and in Lough Muckno in Monaghan. All coarse angling centres recorded good catches of roach and hybrids to both home and visiting anglers throughout the shortened season.

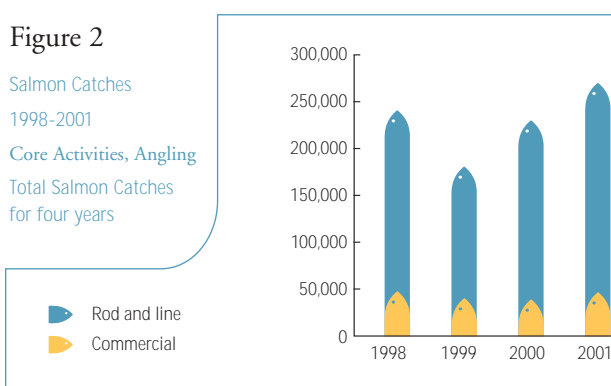
It was a good year for tench anglers. Specimens over 6 lbs were recorded in Drumconrath, Shannonbridge, Mullingar and all over County Clare. Big catches of tench were regularly taken on the Royal Canal around Mullingar.

Carp are established as a target species for both home and foreign visitors even though we have only a small number of fisheries in the regions at present.

New Irish records for roach and roach-bream hybrids were recorded on the Lagan Canal in County Down.

Figure 2

Salmon Catches
1998-2001
Core Activities, Angling
Total Salmon Catches
for four years



Game Angling

The spring salmon season was dominated by the outbreak of FMD. All fishing ceased by Ministerial Order at the end of February. A limited number of fisheries re-opened on the 23rd March and the ban was lifted on 11th May. In angling terms, it would appear that only a small number of river systems performed satisfactorily. The cause of the poor fishing was a lack of fish.

The grilse fishing fared only marginally better with about a dozen river systems reporting good fishing. Two features of the grilse season are worth noting. The first is the high percentage of fish averaging 3 lbs and under; the second was the sharp decline in the run of summer grilse (late July-August) on some major fisheries. This resulted in reduced angling activity as the season progressed. The estimated catch for the season is 36,490 fish.

Sea trout fishing on the majority of the west coast fisheries was poor, with a few notable exceptions. However, several east coast rivers reported good sport. Lough Currane in County Kerry provided all the specimen sea trout from 6 lbs to 9 lbs during the year. Four of the developed big brown trout loughs - Corrib, Mask, Carra and Melvin - reported good or very good fishing. During the mayfly period, huge numbers of trout were recorded on Lough Corrib. Other lakes (Conn, Arrow, Ennell, Sheelin) were deemed to be poor or unsatisfactory.

The limited information available from a small number of brown trout rivers appears to indicate that the quality of the fishing is holding up well with some notable exceptions where stocks are in decline. A feature of many brown trout rivers is overgrown banks. Many good trout rivers have a major problem with excessive instream vegetation in summer.

Core Activities

Angling - continued

Sea Angling

Despite the early loss of business due to the Foot and Mouth crisis, bookings from the UK and Holland remained brisk and the recent upturn in home business continued. This was welcomed as many previously vacant dates were filled by Irish nationals.

Boat angling was generally good with cod fishing being exceptional on the south coast. Wreck fishing too was excellent with the coalfish record falling to a fish of 29 lbs and the best pollack in 90 years of 19 lbs coming from a wreck off Courtmacsherry. Top story of the year was the capture of the largest fish ever taken on rod and line in these islands. This was a massive bluefin tuna of 440 kg which fell to local angler Adrian Molloy while fishing near Rathlin O' Beirne Island on Donegal Bay. More in-depth detail of the 2001 boat angling season can be seen in the charter boat logbook returns in Appendix 8.

Despite a fairly good start to the winter season in Wicklow and Cork, shore angling was generally quiet. While the bass situation appears to have stabilised, ongoing monitoring and protection needs to be maintained and increased to ensure stocks remain at an acceptable level.

Marine Sport Fish Tagging Programme

Over 60 charter skippers and several dedicated individual anglers took part in the 2001 Marine Sport Fish Tagging Programme. In 2001, 1,582 fish including blue shark, tope, monkfish, common skate, ray and bass were tagged and released. Since 1970, 33,346 fish have been tagged and released under the programme. The Conservation Prize (for the skipper tagging the most fish) was won by John Deady, skipper of "Kerry Coleen" of Fenit, Co. Kerry.

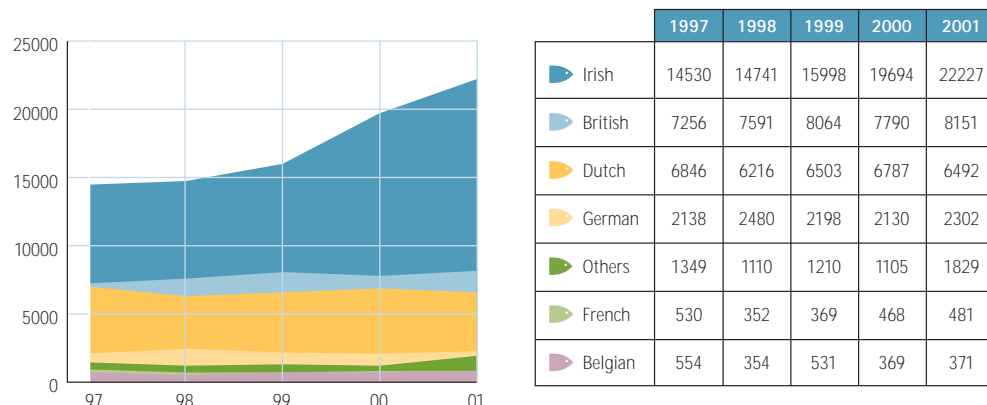
The Marine Sport Fish Tagging Programme would not be possible without the dedicated co-operation and help of participating charter skippers and anglers. The Boards would like to express a sincere word of thanks to all for all for their voluntary efforts to date.

Irish Specimen Fish Committee

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. The Central Fisheries Board actively supports the activities of the ISFC and recognises the importance of verification and publicising the capture of large rod caught fish in Irish waters particularly from the scientific and angling promotion perspectives. In excess of 550 claims were received in 2001 and four new Irish records were established. The roach and

Figure 4

Origin of Sea Anglers
using Charter Boats
Core Activities, Angling
Number of Anglers
chartering sea angling
boats 2001

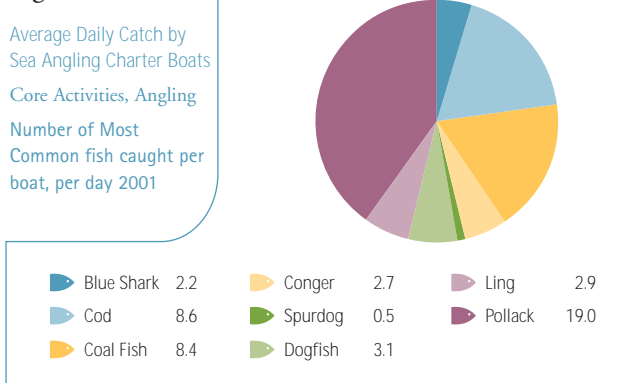


roach-bream hybrid records were broken in Northern Ireland, while on the marine side, the bluefin tuna record established in 2000 was smashed by an enormous fish of 440 kg by Adrian Molloy off the Donegal coast. Large numbers of specimen coalfish were taken during the year with carp, river pike, tench, lake brown trout, sea trout and spurdog also prominent in the listings. In fact, a new coalfish record of 29 lbs was also established over a wreck several miles out of Courtmacsherry. Infrequently recorded species like scad, undulate ray and torsk were also claimed this year. Weight revisions and the addition of two new species to the listings (albacore and bluemouth) were also features of the year's work. The Awards will be presented to successful anglers in early 2002 in Dublin and in Holland.



Figure 3

Average Daily Catch by
Sea Angling Charter Boats
Core Activities, Angling
Number of Most
Common fish caught per
boat, per day 2001



Angling Promotion

The primary objective of the CFB and RFB angling staff is to promote angling as a leisure pursuit and to develop the tourism potential of the resource.

During 2001 angling guides and maps were produced to promote and provide information on the Irish angling product. These included newsletters for the Erriff, Galway and Moy fisheries and angling guides for Lough Arrow, Dublin and Ireland's Northeast.

Angling journalists from home, the UK and further afield were assisted by Fisheries Board staff and a number of articles on Irish angling were written. Television crews were facilitated in the production of angling (and environmental) programmes which included the BBC, Northern Ireland production "Coast to Coast", a ZDF TV production for German television, a Point Alvin Oy Television production for Finnish television and a Bord Fáilte promotional video.



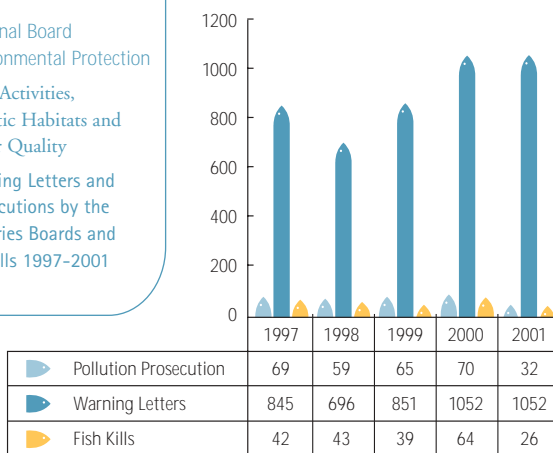
Core Activities

Aquatic Habitats and Water Quality

The protection and preservation of freshwater ecosystems is a primary function of the Fisheries Boards. Drainage, road-building and urbanisation are adversely impacting on the physical structure of many channels, while improved living standards, industrial development and intensification in agriculture have increased nutrient losses to rivers and lakes, thereby, contributing to habitat destruction and pollution

Figure 5

Regional Board
Environmental Protection
Core Activities,
Aquatic Habitats and
Water Quality
Warning Letters and
Prosecutions by the
Fisheries Boards and
Fishkills 1997-2001



Over the past thirty years these physical and chemical pressures are directly responsible for substantial changes in plant, animal and fish communities in rivers and lakes throughout the country. Despite the efforts of the Boards, the OECD in a recent review of Ireland's performance on the environment delivered the following criticism:

"Although systems for monitoring river and lake water quality are well developed, information on aquatic ecosystems is not routinely collected, reflecting the focus of stream and river management on water quality. To achieve ecological objectives, and particularly to support trout and salmon fisheries, a broader approach is needed, including collection of information on habitat factors such as light, bank and hydraulic conditions, aimed at halting the current gradual decline in river ecosystem health" (OECD 2000).

The Fisheries Boards have been emphasising this fact for some years (Champ 1996 and 2000).

Details on the composition, abundance and age structure of fish fauna are now required to substantiate the designation of Special Areas of Conservation (SAC's) for juvenile salmon under the Habitats Directive 92/43/EEC and as indicators of the quality status of rivers, lakes and estuaries under the Water Framework Directive 2000/60/EC. The delivery of this information, which in the past was undertaken intermittently, will now become a specific objective of the Fisheries Boards. Statistics on the productive potential of river systems is also a fundamental requirement for the sustainable development of salmon stocks.

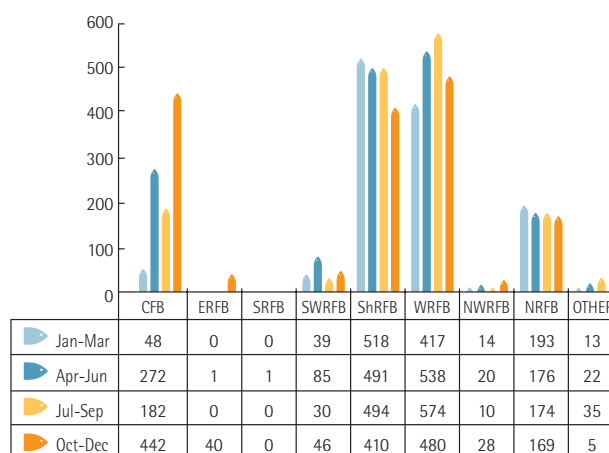
It is the policy of the Fisheries Boards to deliver the necessary information to satisfy these statutory requirements.

Laboratory

During 2001 the Central and Regional Fisheries Boards continued to monitor selected surface waters (rivers and lakes) for nutrients and other parameters. Samples were also tested from the four main canal systems in conjunction with Waterways Ireland. Approximately 5,700 samples were analysed for nutrients in 2001.

Figure 6

Environmental Protection
Core Activities, Aquatic Habitats and Water Quality
Number of Water Samples Tested in the CFB
laboratory, their original and seasonal





Participation in the EPA laboratory intercalibration programme continued and certification status was maintained.

The CFB's reference database of chemicals in surface waters was expanded with further measurements of trace elements and heavy metals. Approximately 2,000 samples were analysed for an average of 15 trace elements (30,000 individual determinations). A catalogue of results for trace elements in surface waters from 1998 - 2000 is being compiled for publication.

The specialist analytical facility at CFB is providing a support service to the Regional Fisheries Boards and in particular to the Eastern Regional Fisheries Board in its Catchment Management programme for the Avoca system. Concentrations of heavy metals were found at some sites in the Avoca river downstream of mine leachate (see attached figures). The aluminium level in the Aughrim river is somewhat elevated. Locations where harmful levels of trace elements may occur will be identified, thereby facilitating optimum development of the remaining channels.

Long-term Lake Monitoring Programme

2001 was the thirtieth year of this long-term lake monitoring programme. This programme uses annual average values for chlorophyll (a green pigment contained in plants), phosphorus and water clarity to categorise lakes. Once again no lake showed any dramatic change in the principal water quality indicators relative to previous records. Open lake data indicate Lough Arrow remains the most enriched of the Western Lakes (mean chlorophyll 9.6 mg/m³). This lake is mildly eutrophic and demonstrates a tendency for slightly higher algal production post 1995. Conn (north basin) is also slightly eutrophic while the south basin projects the symptoms of a moderately enriched (mesotrophic) waterbody (average chlorophyll values of 8.4 and 6.4 mg/m³ respectively). However, trends in fish populations indicate a higher level of enrichment in this lake. Corrib upper, Mask and Corrib lower remain in the moderately enriched category - the latter maintaining the improvement in quality evident since the late 1980s. Lough Carra also demonstrates the symptoms of a mesotrophic lake (both basins) reflecting a reversal in trend for the south (Twin Island basin), average chlorophyll 3.6 mg/m³ in both cases compared to 2.9 mg/m³ and 7.2 mg/m³ respectively for north and south basins in 2000.

Summer chlorophyll values indicate Lough Lene is also mesotrophic maintaining mean chlorophyll values less than 5.0 mg/m³. Lough Derravaragh, slightly eutrophic in 2000 (11.4 and 16.9 mg/m³ chlorophyll north and south basins respectively), showed some improvement in quality in 2001 (chlorophyll values 7.2 and 9.0 mg/m³ north and south basins).

Open lake chlorophyll (5.1 mg/m³) remains relatively low in Lough Garadice, which signifies the mesotrophic condition and an improvement relative to 2000. Lough na Bac and Annamakerrig Lake are slightly eutrophic (chlorophyll 13.3 mg/m³ and 12.4 mg/m³ respectively). Loughs Sillan (20.0 mg/m³) and the Eonish basin (21.4 mg/m³) of Lough Oughter, are eutrophic while the Lavey Lake (30.0 mg/m³), Oughter at the Chalets (33.5 mg/m³) and White Lake (Ballybay) 32.4 mg/m³ are all hypertrophic or highly enriched.

Lough Sheelin, although still eutrophic, registered a small improvement in water quality in 2001 (average chlorophyll 19.3 mg/m³ relative to 23.8 mg/m³ in 2000). There was also a slight improvement in water clarity (average 2.6 metres versus 1.8 in 2000) and this facilitated an expansion in the rooted plant community (charophytes) growing on the lake bed. However, the total phosphorus content of Lough Sheelin remains excessive (average 33.0 mg/m³). A netting survey, conducted in March 2001, confirmed continuing poor stocks of brown trout in Sheelin.

As part of the EPA Research, Technological, Development and Innovation (RTDI) project and the Lough Melvin/Bundrowes Catchment Management Programme, a comprehensive fish stock survey was conducted on Lough Melvin in July/August. This survey was carried out in conjunction with the Northern Regional Fisheries Board. The Department of Agriculture and Rural Development (DARD) Northern Ireland also conducted a hydro-acoustic assessment of fish stocks concomitant with the Fisheries Boards netting survey. The lake continues to support a good stock of brown trout, ferox, sonnaghan, and gillaroo sub-species and salmon were encountered. When last surveyed in 1986 Melvin contained a small stock of rudd. Roach have since gained access to this lake and significant numbers of that species and rudd-roach hybrids are now present.

Fish Stocks And Water Quality Relationships

This EPA RTDI funded research project will investigate the statistical relationship between fish stocks and EPA Water Quality Ratings. The restrictions imposed during the Foot and Mouth outbreak caused minor rescheduling of the work programme but otherwise the project proceeded according to plan in 2001. A total of 88 sites were surveyed for the project, by the CFB and the four University partners (UCD, UCC, NUIG and UU). The project also drew heavily on fish stock assessment surveys (96 sites) conducted by the Central and Regional Fisheries Boards as part of fisheries catchment management programmes on the River Laune, Lough Melvin and projects conducted in the Rosses, Feale, Boyne, Moy, Robe and Sheelin catchments. An experiment was also initiated on the Robe and Liffey catchments to investigate salmonid egg survival in December 2001.

Fish Kills

There was a substantial reduction in fish kills reported by the Regional Fisheries Boards in 2001 (26) compared to 2000 (64), of which 25 and 56 respectively were directly related to pollution. This is a substantial improvement relative to recorded incidents in each of the past six years (see Fig. 6). While the Foot and Mouth Disease restrictions curtailed access to waters prior to May this is not thought to have had a significant influence on the reduction; cooler weather and higher water levels in July and August 2001 relative to 2000 may have helped. The principal causes of the fish kills are presented on a Regional basis, in Appendix 2. Agricultural sources accounted for or were suspected in 11 incidents. Silage effluent and silage/slurry mix were the main causative agents in these cases. Unscheduled emissions from industry caused four incidents, private drainage was at fault in one incident, eutrophication was responsible for five incidents with ongoing mortalities again a feature in Lough Oughter, Co. Cavan for much of the summer. The most serious incident amongst the five for which the precise causal factor is unknown, was an ongoing series of mortalities reported in Lough Currane, Co. Kerry between July and September. Much effort was expended by the South Western Regional Fisheries Board trying to establish the cause of the repeated mortalities on this otherwise clean lake without success. This system is scheduled for comprehensive investigations in 2002 in a further attempt to establish the cause of the fish mortalities in 2001.



Core Activities

Catchment Management

Catchment Management continued to advance steadily in 2001. Notable achievements include the formulation of a National Catchment Management Strategy and the undertaking of new Catchment Management initiatives throughout the country, including the Owenmore, Owenduff, Glenamoy, Avoca, Nore and a Catchment Management Fish Counter initiative on the River Maigue. Several other catchment areas also benefited from financial and subsequently technical assistance as part of the overall Catchment Management process. The six pilot Catchment Management continued to evolve and advance. Public awareness on the concept of Catchment Management also pervaded through 2001.

GIS - Geographical Information System

A Geographical Information System is a computer based system used for storage, retrieval, mapping, analysis and output of geographic data. One of the things GIS does very well is to provide a spatial framework for projects that cover large areas and involve the interactions of many diverse groups with a common interest. For this reason GIS is recognised as an integral management tool for the Fisheries Service.

The development of the GIS within the Fisheries Boards continued through 2001. Training programmes for the Central Fisheries Board and Regional Fisheries Boards were successfully completed by the participating Fisheries Board staff.

Catchment Management Research and Technical Assistance

The Central Fisheries Board, in conjunction with the Regional Fisheries Boards carried out valuable research and survey work on the River Laune, Lough Melvin and the River Barrow. The Central Fisheries Board also completed an important Conservation Species Project in 2001.

Inland Fisheries Environmental Forum

Set up in 2000, the assembly of the Inland Fisheries Environmental Forum (IFEFF) was repeated through 2001, formally meeting in April and assembling again at the IFEFF Inland Fisheries Seminar in November. The Forum provides a platform for strategy review, co-ordination and the exchange of information between a number of key stakeholders on all water

quality issues as they impact on the fisheries resource. The IFEFF is a core element of the Water Quality Action Plan announced by the Minister in 1997

IFA & Fisheries Boards Protocol

Following the finalisation of a code of practice between the farming organisations and the fisheries Boards in 2000, a document titled 'Protocol - on roles and responsibilities of fisheries boards staff and farmers' was launched in June 2001. The Protocol is essentially a common sense set of guidelines aimed at ensuring that the valuable resource of our inland fisheries is preserved for future generations.

The Regional Fisheries Boards

Eastern Regional Fisheries Board

The Board continued its investment in Catchment Management projects including the development of the Geographical Information System and training in Catchment Management skills. An aerial survey of the Avoca Catchment was also undertaken, as well as fish stock assessment in selected areas of the Avoca catchment.

Southern Regional Fisheries Board

Fisheries development works were undertaken on the Rivers Barrow and Nore, including instream and bankside works, to enhance habitat and increase the salmonid potential of the catchment. Provision was also made for structures to assist the passage of fish over obstacles on the River Dinin, as well as the development of a carp pond on the River Barrow - as part of the overall coarse fisheries development. Development of the Geographical Information System and training on Catchment Management techniques was also conducted.

South Western Regional Fisheries Board

Catchment Management forms an integral part of the Board's fisheries management development strategy and as such Catchment Management programmes were in continual operation in the South Western Regional Fisheries Board. The River Laune Catchment Management Plan has been in operation for two years. Initiatives on the Bandon/Cork harbour Catchment Management plan were well underway in 2001. Development of GIS also continued in the Region.

Core Activities

Catchment Management - continued

Shannon Regional Fisheries Board

The Mulkear Catchment Management Programme entered its third year of operation in 2001, a year which also saw the finalisation and publication of the Catchment Management Plan following a public consultation process. Much investment went into research on trout genetics, project equipment, the publication of promotional literature and catchment sign posting. The Shannon Board also installed a fish counter on the River Maigue.

Western Regional Fisheries Board

The installation of a weir on the Bunowen River and the stepping of a weir on the Kylemore river tributary was instigated, to enable sea trout to run upstream of an impassable waterfall. Construction work on the Cong Salmon Hatchery also continued, as did the Board's consultative approach with regard to Catchment Management.

North Western Regional Fisheries Board

The North Western Regional Fisheries Board appointed a Catchment Management Project Officer in October 2001. Catchment Management was largely pursued in the Owenmore, Owenduff and Glenamoy catchments. A further phase of bank protection work was carried out as part of the Board's efforts to rehabilitate the river in conjunction with local landowners. Electrofishing surveys were conducted and an aerial survey of the Owenmore and Owenduff catchments undertaken. A fish counter was also acquired for the Munhin River.

Northern Regional Fisheries Board

Catchment Management in the Northern Board focused to a considerable extent on Lough Melvin and the Eske and Eany catchments. Since the appointment of a Catchment Manager in 2000, a major programme of habitat, water and fisheries assessment has been commenced in association with the CFB and various cross-border agencies. In Donegal, extensive development and habitat enhancement works on the Eske and Eany culminated in the completion of Catchment Management Angling Centres on both rivers in 2001.



Core Activities

Protection

The Central and Regional Fisheries Boards are responsible for the implementation and policing of the Fisheries Acts and Orders. The Boards' areas of responsibility include inland waterways and also extend to the twelve mile limit at sea. These regulations and areas of responsibility ensure the protection and conservation of our fisheries resource.

The Boards also receive co-operation and assistance from other agencies in implementing fisheries regulations. These agencies include the Naval Service, Aer Corps, Garda Síochána, Department of Communications, Marine and Natural Resources and Department of Defence. As a group these agencies are called The Strategic Partners in Fisheries Protection.

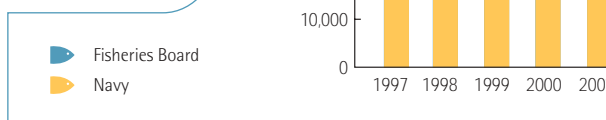
The Fisheries Boards use a strategy of maintaining the maximum visible presence as a deterrent to would be offenders. Some of the methods deployed in policing the fisheries resource include;

- Sea patrols in all Regions using the Boards' Large Patrol Vessels
- Inshore Rigid Inflatable Boat patrols
- Sea patrols with the Naval Service
- Surveillance flights with the Aer Corps
- Co-operation and assistance with Garda Síochána
- Vehicle patrols day and night for illegal fishing
- Inspections at fishing competitions
- Inspections at fisheries
- On the Spot fines
- Verbal warnings

While the protection of salmon constitutes a major part of the Boards' activities, the Boards also discharge their statutory duties to those other species defined under legislation. The range of species for which the Boards have a statutory responsibility includes salmonids, bass, molluscs and various coarse fish.

Figure 7

Protection Activity by the Fisheries Boards and the Navy
Core Activities, Protection
Meters of Net seized for Five Year Period ending 2001



The Regional Boards expended considerable effort in estuarine and inland areas to ensure compliance with legislation. The maximum visible presence was maintained throughout the season to deter illegal activity and regular reviews were undertaken during the season to ensure optimum service delivery.

The two large protection vessels, Bradan Beatha and Cosantóir Bradan, were on patrol for 315 days in 2001. During the course of the season each vessel covered approximately 11,000 nautical miles maintaining a presence along the coastline. Their mobility and flexibility combined with their sustained patrolling capability complements the activities of the 30 RIBs (Rigid Inflatable Boats) located in the Regional Boards.

The Boards would like to thank the Naval Service, Aer Corps and Garda Síochána for their continued support in the protection of fisheries.

Core Activities

Protection - continued

In 2001 the Naval Service undertook 48 days of Naval Patrols and 18 Maritime Surveillance flights were undertaken by the Aer Corps. In addition the Aer Corps also provided 14 Light Aircraft Patrols to assist in local surveillance, survey work and pollution monitoring.

Table 1. Summary of Protection Activities

	2000	2001
No. of Incidents Prosecuted	116	147
RFB Sea and Inland Boat Patrols (manhours)	16,682	11,775
No. of CFB Patrol Vessel Days	307	315
No. of Naval Patrol Days	56	48
No. of Aer Corps Maritime Patrols	9	18
No. of Aer Corps Light Aircraft Patrols	12	14
Meters of Illegal Net Seized*	44, 969	37,112

* This figure is the total for all agencies i.e. Regional Boards, Fisheries Patrol Vessels and Naval Service.

The Wild Salmon Carcass Tagging Scheme

The year 2001 saw the successful introduction of the Salmon Tagging Scheme. This provides for the fixing of a tag to all retained wild salmon caught by anglers and commercial fishermen. The aim of the Tagging Scheme is to provide a means of collecting accurate nominal catch statistics and estimates of salmon stock exploitation for successful management of the resource.

The Fisheries Boards reviewed the Tagging Scheme during the 2001 season in order to identify any necessary amendments of the Tagging Scheme Regulations for the Department of Communications, Marine and Natural Resources.

Work commenced on establishing quotas for the commercial sector in late 2001. It is anticipated that the 2002 season will see the introduction of this vital conservation measure.

On the Spot Fines

As part of the conservation measures approved by the Minister a system of On the Spot fines for failure to comply with the wild salmon tagging regulations was brought into force in 2001. Information leaflets were designed and printed for the sector.

Salmon and Sea Trout Rod Licences

Rod Licences were re-designed in order to facilitate the integration of the logbook and licence into the same book for issuing for the 2002 season.

This served to:

- Lessen the work load for rod licence distributors
- Reduce the size and information required in the logbook
- Reduce costs associated with the printing of licences and logbooks.

National Salmon Commission

The National Salmon Commission was established in March 2000. This group is made up of representatives of the Commercial fishing and angling sectors, Fisheries Boards, Fish Dealers, Marine Institute bodies, ESB and representatives nominated by the Minister. The functions of the Commission are to assist and advise the Minister in relation to the conservation, management, protection and development of the national salmon resource, and, in particular, to make recommendations to the Minister on any scheme in relation to the management, development and conservation of stocks of wild salmon or sea trout and in particular the tagging of such fish, and on the setting of a national total allowable catch and quotas for the taking of salmon.

During 2001 the Commission made a valuable contribution to the development of the Wild Salmon Carcass Tagging Scheme. Secretariat to the Commission is provided by the CFB.



Central Fisheries Board

An Príomh-Bhord Iascaigh

CENTRAL BOARD MEMBERS

Chairperson	Bill McLysaght
	Paula Carroll
	Marian Corcoran
	Dr. Alan Craig
	Eamonn Cusack
	Lal Faherty
	Dr. James J. King
	Gerry Marry
	Paddy Byrne

AUDIT COMMITTEE

Chairperson	Bill McLysaght
	Marian Corcoran
	Lal Faherty
Chief Executive Officer	John O'Connor
Director of Finance	Nuala O'Byrne

In addition to the many services provided by the Central Fisheries Board to the Regional Fisheries Boards set out in this report, the following projects were also undertaken by the CFB.

Juvenile Fish in Estuarine Waters

A one-week survey was undertaken in Cork Harbour in September 2001 using beach seining to examine the structure of fish communities at a range of sites. Netting was carried out at 32 sites in a range of habitats and yielded 29 species. The most commonly-encountered species included sprat/juvenile herring, flounder, gobies, mullet, atherines and the 15-spined stickleback. Three species of pipefish were recorded as well as two of wrasse. This project was a joint undertaking involving staff from the Research, Sea Angling and Protection areas within the CFB and staff from the SWRFB. Use was made of one of the LPVs as a floating stores and laboratory and as a mother vessel from which forays were made to the shoreline. This strategy proved to be most useful in periods of inclement weather.

Rare and Endangered Fish Species

This title refers to those '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 Duchas- the Heritage Service, 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 staff working in this area and is due for publication in 2002.

A series of investigations was carried out on a pilot basis in the south-east, working with staff of the Eastern and Southern Regional Fisheries Boards and focusing on lamprey, shad and smelt. The lamprey investigations included an assessment of extent of spawning by sea lamprey in the Suir, Nore and Slaney and fyke netting for upstream autumn-migrating river lamprey. Studies on shad received close support from commercial netmen working in estuaries, who provided shad by-catch to officers of Regional Boards. Marine-caught material was also made available through contacts and support from officers of

Central Fisheries Board

continued

BIM and the Marine Institute. Sampling for juvenile shad in estuaries using beach seining did not yield any of the target species but were of value in providing information on extent and distribution of juvenile smelt in some of the estuaries in the south-east.

It is hoped to expand the programme of 2001 up from pilot scale. This will require close networking with officers of Regional Boards who have contact with commercial netmen in the estuaries. It will also require liaison with the different agencies based in the commercial fishing ports. 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 the different agencies and individual netmen on the pilot scale operations in 2001 is gratefully appreciated.

Title Research Unit

The Unit continued to attract commercial projects, mainly from Dúchas and local Authorities. The most exciting of these was the project on the Shannon Callow Lands and the River Barrow. The information gleaned from these projects will be helpful to local fisheries management.

Valuable research into the ownership of the River Laune, the Lower Caragh, Carramore Lake and the Garavogue River was undertaken which provided much needed clarity.

Tourist Angling Measure

The year 2001 provided the opportunity for all remaining project promoters to complete their respective work programmes. This resulted in over €15M being spent under the programme by the end of the year, with in excess of 150 projects being fully completed.

In late 2001 preparatory work began for the launch of the new Tourism and Recreational Angling Measure (TRAM), a €30M programme for the further development of angling in Ireland.

Central Fisheries Board Fish Farms

The Board has two fish farms situated at Roscrea, Co. Tipperary and at Cullion, Mullingar, Co. Westmeath.

The facility at Cullion is mainly used to hold the Board's brown trout and rainbow trout broodstock. The production of future stocks depends on the broodstock which are unique strains of fish. Some ova from the broodstock and ova from Lough Owel fish are incubated on this fish farm and are stocked out as unfed or as feeding fry. Approximately 800-1000 brood fish of each species are held for stripping.

The fish farm at Roscrea has brown trout and rainbow trout rearing facilities as well as a modern coarse fish farm which was built with funding under TAM.

During the year, circa 250,000 lbs of trout were produced for stocking. Some fish are stocked into Regional Fisheries Boards' waters but the majority were sold for stocking to Angling Clubs, Associations and private individuals. In total approximately 1.04 million fry, 106,000 one year old fish and 150,000 two year old fish were produced. A fish farm health management plan continued to be implemented to preserve the health status of the fish stocks.

The new coarse fish farm went into production with the successful spawning of wild carp in January. Their normal spawning time is June-July. The growth and survival rates of the carp were excellent, much better than anticipated. Over 100,000 small carp (15-20 grams each) were stocked out into enclosed lakes in conjunction with the Regional Fisheries Boards. At the end of the year, 30,000 (45 grams) fish and 3,000 (180 grams) fish were held over for onrearing in 2002.

Over 100,000 small carp (15-20 grams each) were stocked out into enclosed lakes in conjunction with the Regional Fisheries Boards

Central Services

Human Resources

Employee Relations/Change Management

The application of the Boards' human resource policies and practices and the skills of their staff continue to perform a vital role in promoting the strategic aims and objectives of the Fisheries Boards. This was evidenced in the manner in which staff played a major role in successfully implementing the Wild Salmon Tagging Scheme during the year.

The local bargaining clause under P2000 (2%) was implemented for all groups who had concluded PCW restructuring agreements, and staff also benefited from the 2nd Phase of PPF (5.5%), together with the pre-budget amendment (2%), during the year.

Considerable inputs were made by the HR Department to the HR study of the Fisheries Service, conducted by the external consultants, Cap Gemini, Ernst & Young. In late December, the Consultant's report (3 documents) was issued.

The HR Department continued to work closely with the senior management of the fisheries service in advancing the HR agenda and ensuring a consistent and co-ordinated approach to developing and implementing HR policies & practices.

An Equal Opportunities Working Party, comprising of management and staff representatives, completed its deliberations and produced documents titled Equal Opportunities Policy and Respect and Dignity at Work Policy and Grievance Procedure. A copy of both documents was distributed to all staff and it is intended to hold familiarisation training in each Board on these policies and procedures, together with other appropriate training for staff and management, early in the new year.

The use of Joint Union/Management working groups continued to work progressively in the resolution and finalisation of a range of HR issues.

Constructive Participation

Against the background of Partnership 2000 (P2000) and Programme for Prosperity and Fairness (PPF), agreement was reached with the Unions to engage an external facilitator with particular terms of reference to assist in developing an appropriate partnership model for the Fisheries Service. The consultation process with the Boards began in December. Using this approach, the

objective is to create a partnership model in which all stakeholders are appropriately involved in the decision making process which facilitates organisational changes and enhances service delivery.

Training & Development

In recognition of the successful investment in training and development in 2000, the CFB/RFBs increased the national training & development budget to €254K in 2001. Despite set backs earlier in the year on the delivery of training programmes, arising from the operation of restrictions during the Foot & Mouth Disease outbreak, the training plan was amended and a range of focused and prioritised training & development interventions were delivered for all Fisheries Boards' staff. During 2001, the main training initiatives were : Conflict Resolution, Front-Line Management Development, Health & Safety training, Team Building skills and a range of I.T. training.

Various staff attended seminars and conferences appropriate to their disciplines and financial assistance was provided to staff to undertake relevant 3rd level studies.

Safety, Health & Welfare

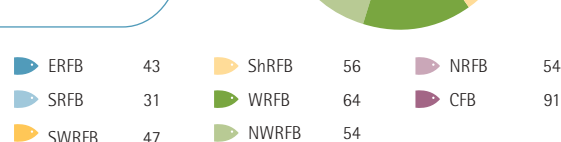
Safety continues to be a priority and is one of the CFB/RFBs core operating principles. As part of a national Health & Safety Work Programme, the following initiatives were delivered across the service during the year : Generic Safety Statements were completed and are now in place in all Boards, Risk Assessment documents and Site Specific Statements are at various stages of preparation/finalisation across the service, national safety training was organised and delivered, safety committees were established and are in place in all Boards.

Figure 8

Distribution of Staff in the Fisheries Boards

Central Services,
Human Resources

Staff Numbers in the
Fisheries Boards



Central Services

Finance and IT

The finance department of the CFB is responsible for the financial operations of the CFB as well as providing specialist support, co-ordination and advice to the Regional Fisheries Boards. Each year the CFB co-ordinates and submits an exchequer grant application for all 8 Boards to the Department of Communications, Marine and Natural Resources (DOCMNR). In 2001, an enhanced budgetary process was implemented to assist in the compilation of group budgets for the year 2002 on. This process was completed in July of 2001 and detailed submissions were submitted to the DOCMNR. It is expected that progress will continue in 2002, with the launch of full programme based budgets.

In 2001, the Fisheries Boards received an exchequer grant of €19.5m of which pay costs amounted to €14.0m or 72% of the total grant received. In addition nearly €1m was allocated to national based programmes which were co-ordinated by the CFB.

The finance department also acts as a central payroll bureau for all 8 Fisheries Boards. In 2001 we processed more than 20,000 payroll transactions for weekly, fortnightly and monthly salaries. In addition, we successfully supported the implementation and processing of the P2000 and the PPF, together with a number of significant additional agreed pay adjustments. The finance department also successfully migrated a large number of staff from a weekly processed salary with manual cheque payments, to a fortnightly pay path process.

During 2001, the finance department undertook an intensive review of policies and procedures and significant progress was made in relation to the enhancement of general financial approval processes, cash management and debtor and creditor control.

In addition, a full review of the financial management information prepared by the finance department was undertaken and not only were enhanced monthly reporting procedures successfully implemented, but a significant reduction in the reporting cycle was targeted and achieved.

Significant preparation and planning for the Euro changeover in 2001, which was co-ordinated by the CFB, ensured a successful changeover to the new currency was achieved for all Boards.

The finance department is also tasked with the co-ordinating role for the strategic development plans at national level as well as at divisional level for the CFB. The development of a national 5 year strategic plan commenced in late 2001 and a further 8 individual strategic plans for all Boards are being developed in line with the national strategy.

In 2001, the CFB implemented a "key performance" business planning process and reported on progress to the Board of the CFB on a quarterly basis. Late in 2001, the business planning process commenced for 2002 with an enhanced "bottom-up" approach to the development of the plans.

A further function of the finance department is to provide IT support, advice and technical assistance to the CFB and the RFBs. In addition the department has developed a very popular website for inland fisheries. This website has had a very successful first year online. It has become one of the foremost online Irish angling resources available today. Over 41,000 individuals viewed almost 200,000 pages and nearly 800 queries were received from anglers and non-anglers requesting information on Irish fish, angling and environmental matters.



Eastern Regional Fisheries Board

Bord Iascaigh Réigiúnach an Oirthir

EASTERN REGIONAL BOARD MEMBERS

	EASTERN BOARD
Chairperson	John Chambers
Salmon Rod	Kieran Caffery Roddy Minogue
Draft Net	Brendan Long Leo Boyle Edward McCormack Patrick Fanning
Drift Net	Martin Costigan
Other Salmon Net	-
Eel Licence	Anthony Wilde
Oyster Licence	-
Rated Occupier	John Murphy
Trout Angler	Stewart McGrane
Coarse Angler	John Chambers
Sea Angler	Hugh O'Rourke
IFT Life Member	Patrick J Coneff
Staff Representative	Kevin O'Brien
Ministerial Appointees	Carmel Lynn John Higgins Mary Kelly Quinn* Pauric Kelly* Eleanor Mayes* Des Taylor

*ceased to be Board member after October 2001

General

The Board had a successful year in 2001 and continued to make progress on developing and conserving the Region's fisheries. The introduction of the Salmon Carcass Tagging Programme was successfully implemented in the Region. Almost 100% returns were made by commercial netmen. The response from anglers has been disappointing but this improved following a number of reminders. The onset of Foot and Mouth Disease in early Spring had a negative effect on field activity in the Region with access to many fisheries denied for part of the season.

The Region's Fisheries

Angling in the Region experienced a very slow start due to the Foot and Mouth disease outbreak. Most fisheries were closed until June and the season was seriously curtailed for game and coarse fishing with economic losses for all involved in the angling industry in the Region.

Coarse Angling

A number of specimen roach/bream hybrids were captured on the Monalty and Na Glack lakes in the Carrickmacross area. A number of successful coarse angling competitions were held at various venues.

Game Angling

Generally salmon angling was poor, most notably on the Rivers Liffey and Boyne. After the restriction was lifted trout angling was reported as good throughout the Region.

Sea Angling

Sea Angling had a good season with many specimens reported and a number of successful competitions such as the Winter Beach Festival in Wicklow and the Rosslare Small Boats Festival. Increasing numbers of warm water species were caught and charter boat skippers reported modest sea angling catches during the summer months, particularly on the Wicklow and Wexford coasts. Bass fishing was satisfactory at Mizen Head with fish in excess of 5lbs being caught.

Eastern Regional Fisheries Board

continued

Aquatic Environment

Infrastructure development increased throughout the year as roads and houses were built, thereby placing extreme pressure on the Region's watercourses. 43,000 houses were built in the Greater Dublin area and approximately 2-3km of rivers and streams were lost due to culverting. More than 2,200 brown trout were salvaged from streams affected by motorway/housing development and by flood relief works in the Dublin area.

This continuing boom also resulted in an increase in the number of planning applications monitored by the Board's environmental staff. 900 inspections were made in the Region relating to specific planning applications and a number were made relating to Integrated Pollution Control (IPC) licences and the Waste Management Act.

639 reports of an environmental nature were received at the Board's offices and investigated during 2001. One of the biggest oil spillages occurred at Palmerstown in Dublin in August with 20,000 litres of heavy crude oil entering the Liffey. The Board worked closely with local authorities in assessing the impact on fish stocks and the clean up operations.

Catchment Management

A Catchment Management programme was initiated on the Avoca in 2001. The Avoca catchment is 250 square miles in area and runs through a magnificent scenic valley in Co. Wicklow. For 230 years mining was a dominant activity in the catchment. Today almost 10kms of river has been very seriously polluted principally caused by leachate from the old copper mines. The objective is to restore the Avoca River to a salmonid fishery which is capable of sustaining trout and salmon stocks, through the catchment management approach.

The Minister for Communications, Marine and Natural Resources allocated £100,000 to the Board for investments in projects supporting the principles of catchment management. Some of this funding was used to undertake an aerial survey of the Avoca catchment that will be an integral part of the Board's GIS programme. An initial fish stock assessment programme was also carried out on nine of the Avoca's tributaries



Fisheries Development/Management and Improvement of Fisheries

Spawning enhancement took place on a number of rivers and tributaries in the Region. Electro-fishing surveys and salvage works were undertaken throughout the Region and fish stocks were monitored on more than 30 rivers.

The Board improved a number of its fisheries and provided ancillary services for a number of angling venues. A car park was constructed at Galloncurra Lake and angling stands were put in place on the canal at Oldbridge on the River Boyne. Access was improved at Ballyhoe Lake, while an angling centre was completed at Toberona and structures were put in place on the River Dee and at other locations throughout the Region.

The Board's Fisheries continue to increase in popularity with a large number of permits issued for the River Dee, Emy Lake, Lough Bracken and the River Boro. There were approximately 10,500 rod days on the Board's waters this year with €7,618 revenue generated. 6,500 brown trout and rainbows were released into Emy and Bracken Lakes during the angling season and in general anglers were satisfied with the returns from these fisheries.

Eastern Fisheries Development Society

The EFDS met 10 times in 2001. The Society received applications for grant in aid from 8 angling clubs and associations. Grant in aid totalling €2,539 was allocated to agreed and vouched development works.

Eastern Regional Fisheries Board

continued

Aquatic Environment

Infrastructure development increased throughout the year as roads and houses were built, thereby placing extreme pressure on the Region's watercourses. 43,000 houses were built in the Greater Dublin area and approximately 2-3km of rivers and streams were lost due to culverting. More than 2,200 brown trout were salvaged from streams affected by motorway/housing development and by flood relief works in the Dublin area.

This continuing boom also resulted in an increase in the number of planning applications monitored by the Board's environmental staff. 900 inspections were made in the Region relating to specific planning applications and a number were made relating to Integrated Pollution Control (IPC) licences and the Waste Management Act.

639 reports of an environmental nature were received at the Board's offices and investigated during 2001. One of the biggest oil spillages occurred at Palmerstown in Dublin in August with 20,000 litres of heavy crude oil entering the Liffey. The Board worked closely with local authorities in assessing the impact on fish stocks and the clean up operations.

Catchment Management

A Catchment Management programme was initiated on the Avoca in 2001. The Avoca catchment is 250 square miles in area and runs through a magnificent scenic valley in Co. Wicklow. For 230 years mining was a dominant activity in the catchment. Today almost 10kms of river has been very seriously polluted principally caused by leachate from the old copper mines. The objective is to restore the Avoca River to a salmonid fishery which is capable of sustaining trout and salmon stocks, through the catchment management approach.

The Minister for Communications, Marine and Natural Resources allocated £100,000 to the Board for investments in projects supporting the principles of catchment management. Some of this funding was used to undertake an aerial survey of the Avoca catchment that will be an integral part of the Board's GIS programme. An initial fish stock assessment programme was also carried out on nine of the Avoca's tributaries



Fisheries Development/Management and Improvement of Fisheries

Spawning enhancement took place on a number of rivers and tributaries in the Region. Electro-fishing surveys and salvage works were undertaken throughout the Region and fish stocks were monitored on more than 30 rivers.

The Board improved a number of its fisheries and provided ancillary services for a number of angling venues. A car park was constructed at Galloncurra Lake and angling stands were put in place on the canal at Oldbridge on the River Boyne. Access was improved at Ballyhoe Lake, while an angling centre was completed at Toberona and structures were put in place on the River Dee and at other locations throughout the Region.

The Board's Fisheries continue to increase in popularity with a large number of permits issued for the River Dee, Emy Lake, Lough Bracken and the River Boro. There were approximately 10,500 rod days on the Board's waters this year with €7,618 revenue generated. 6,500 brown trout and rainbows were released into Emy and Bracken Lakes during the angling season and in general anglers were satisfied with the returns from these fisheries.

Eastern Fisheries Development Society

The EFDS met 10 times in 2001. The Society received applications for grant in aid from 8 angling clubs and associations. Grant in aid totalling €2,539 was allocated to agreed and vouched development works.

Angling Support and Promotion

Despite the Foot and Mouth outbreak and the catastrophic events of September 11th, angling tourism performed reasonably well in the Region during 2001. The Boyne Valley and Fishing in Dublin angling guides were reprinted due to demand from visitors. 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. Two junior angling clubs were set up as a result of this Initiative.

The Board conducted a number of successful angling promotions 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. Several groups of out of State journalists from the UK, France, Holland and U.S.A visited the Region during 2001 and editorial features appeared in overseas publications. A coarse angling video was made by a UK tour operator featuring World Champion, Bob Nudd fishing on Lough Ramor and a video was made for showing on satellite TV entitled 'Coast to Coast' which featured the Edenderry Canal.

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.

A community programme continued in the Region which involved field trips to spawning grounds and the board's hatchery in Virginia. An open day was also held in the hatchery which attracted large numbers of people and resulted in an angling television programme.

Fisheries Protection/Fisheries Conservation and Enforcement
The demand for the traditional role of the Fisheries Board in enforcing fisheries laws has reduced over the past year. An overall reduction in illegal fishing with fewer detections was noted also. 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.

Sea patrols were well serviced in the Region especially with the purchase of a new seven metre Red Bay inflatable. The Air Corps gave their assistance in patrolling the Region which enabled us to gather information and monitor pollution and illegal activity. A number of prosecutions were initiated in 2001.

Commercial Fisheries

The salmon catch was 4,339 and the commercial sea trout catch was also approximately 4,000 of which 1,737 were tagged. This is in line with a continuing declining trend over the last ten years or so.

Initial Glass eel surveys were undertaken on the Boyne and on Lady's Island in Wexford in order to establish techniques to trap adequate numbers for transporting to inland waters. It is anticipated that this work will continue in 2002.

Safety, Health and Welfare at Work

Safety continued to be of paramount importance within the Board and it participated in drafting the safety statement for all of the Boards. Safety courses were attended by staff and all equipment used for the Board's work is of a high standard and meets all safety regulations. The safety working group met three times during the year. All staff attended a partnership course. A male and female member of staff were appointed as equality representatives.





Southern Regional Fisheries Board

Bord Iascaigh Réigiúnach an Deiscirt

SOUTHERN REGIONAL BOARD MEMBERS

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

Board

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

Staff

Mr. Colman Kelliher, Assistant CEO, retired and the Board employed two new Fisheries Officers to bring it up to its total compliment of staff.

Publications

The Board issued two newsletters:

- (a) Barrow News
- (b) Blackwater News

General

The national salmon carcass programme commenced nation-wide and it was implemented smoothly in the region. Compliance with the new scheme by commercial fishermen and dealers was excellent while anglers' returns were extremely slow (only 50% returned). The data from commercial fishermen was received on time and therefore the programme could be deemed to be quite successful considering it was the first year.

The Foot and Mouth Disease (FMD) crisis closed down fisheries until well into June. Trojan efforts by staff members working in close co-operation with the farming community ensured no outbreak occurred in this part of the country. Under Catchment Management the Board completed a number of significant fisheries development projects on the upper Barrow region and on the Clodiagh river at Portlaw weir. The Barrow Steering Group met only three times during 2000 because of the FMD crisis and members transferred experience and knowledge to each other on the different aspects of the river Barrow.



The Region's Fisheries

The Blackwater is now the most prolific salmon river in the country. Even though the anglers' returns are incomplete, it is reasonable to assume that over 20,000 salmon in total were captured (based on drift nets catching 14,332 salmon). The counters at Ballyduff and on the Suir at Kilsheelan are still inoperable and this is a cause of serious concern to the Board and we have asked the Marine Institute, which is Responsible for the National Salmon Counters Programme, to rectify the situation as a matter of priority.

Catches on the Barrow, Nore and Suir by the snap net fishermen exceeded 5,000 salmon while the drift net fishermen captured 12,351 salmon. Good runs were reported on the Barrow, Nore and Suir and these rivers, although not performing to potential, are consistent over the past couple of years.

Environmental Quality

The assessment of planning permissions is now a major part of the environmental management of the catchment. The increase in development has seen the Board highlight the inadequacy of sewerage treatment plants in Callan, Thomastown, Portlaoise, Fermoy, Mallow and Urlingford. Objecting to planning permissions and appealing decisions of local authorities is done on the precautionary principle and the Board staff are endeavouring to work hand in hand with the Local Authorities to find satisfactory environmental solutions. Large scale road developments are now increasing with liaison about culverts and bridges across rivers and streams ongoing. Local Authorities, contractors and engineers co-operate with the Board during all these works. Vetting of new forestry projects continues with owners and contractors continually being advised on completing works in an environmentally friendly manner in relation to fish and aquatic life.

Southern Regional Fisheries Development Society

The Society met on a number of occasions during the year. Their on the ground activities were limited during the year due to FMD. However, it undertook a number of instream and bank development projects involving investment in excess of €100,000.

The Board is represented in the Society by its Development Inspector, Tom Sullivan.

Fisheries Protection

The Southern Board has almost 21 of its staff involved in fisheries protection. Illegal activity is more marked in the upper catchments and ongoing monitoring and patrolling keeps this anti-social activity in check. The coastal and estuarine areas are generally in compliance but patrols by Board staff augmented by the CFB Large Patrol Vessels, the Naval Service and the Air Corps ensure that compliance is generally high. There is an ongoing problem in certain areas with fixed engines being seized.

Promotion

The Board staff attended an angling promotion event in Cork. Material of good quality is in short supply and efforts are being made to enhance the printed literature for the coming season. No direct overseas promotion was carried out, but the Board works closely with the Central Fisheries Board, the County Tourism Committees and with the two main Regional Authorities SERTA and MERTA.

Commercial Fisheries

In relation to eels the Board has set up a sub committee to develop a policy. Dr. Karen Creed a member of the Board's staff has carried out a major population survey on eel numbers. The report is due to be published in early 2002.

The Board issued 396 commercial salmon licences and 14,560 salmon were caught in the Blackwater estuary while 17,392 were caught in the Waterford estuary.



South Western Regional Fisheries Board

Bord Iascaigh Réigiúnach an Iardheiscirt

STH. WESTERN REGIONAL BOARD MEMBERS

	STH. WESTERN BOARD
Chairperson	Ellen Godfrey
Salmon Rod	Conor O'Mahony David Forde
Draft Net	-
Drift Net	Thomas O'Rourke Padraig O'Shea*
Other Salmon Net	Jack Howard Denis C Teahon
Eel Licence	-
Oyster Licence	Joseph Tansley
Rated Occupier	Ellen Godfrey
Trout Angler	Tom Sweeney John O'Hare
Coarse Angler	Richard Whitley
Sea Angler	William Emery
IFT Life Member	Jeremiah Keating
Staff Representative	John Harte
Ministerial Appointees	Mary Bawalda John Harrington James Doyle John Lucey Mary O'Connor Annette McNamara

*Died December 2001, replaced by John O'Shea

General Introduction

The Board had a very successful year in 2001 and continued to make headway in developing the Region's fisheries. The presence of a Foot and Mouth Disease (FMD) threat posed additional challenges for the Board and while many of the Region's fisheries were closed at the beginning of the angling season, the majority were open in the latter part. The commencement of the Salmon Carcass Tagging Programme similarly posed logistical challenges. However these were overcome through the co-operation of the anglers, the commercial sector and the excellent work of staff.

The Region's Fisheries

Coarse Angling

Inniscarra Lake, jointly managed by the ESB and the SWRFB had a very successful year. Even though the FMD crisis impacted on the numbers of visiting UK anglers, indications are that visiting tourist numbers overall showed growth.

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 continues to function well in the management of the fishery.

Pike angling on the River Lee system was high quality throughout the year and two pike weighing over 20 lbs. were recorded. The average pike on the Lee system is between 4 - 8 lbs. Flyfishing for pike is gaining popularity.



Sea Angling

The region hosted the 2001 European Boat Championships in Cahirciveen. The event proved to be extremely successful. Sea angling overall throughout the year was high quality with growing numbers of anglers coming from mainland Europe.

The quality of bass fishing was particularly high in 2001 and fly fishing for bass is becoming popular.

Game Angling

The quality of game angling in the Southwest throughout the season was high. The Kerry Blackwater and the River Laune fished extremely well. The average salmon catch on the Kerry Blackwater was approximately one fish per rod day which must make the river one of the best in the country.

Mountain lough fishing for free rising wild brown trout is gaining in popularity with visiting anglers.

Aquatic Environment

Two-hundred and sixteen reports of an environmental nature were received at the Board's offices and investigated during 2001. 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 fisheries officers, anglers and Board members.

The nature of the reports were sourced to:

Agriculture	(23%)
Gravel Extraction/Drainage	(26%)
Local Authorities	(13%)
Industry	(9%)
Eutrophication	(6%)
Miscellaneous	(20%)
Planning	(3%)

Three fish kills were recorded in the region during the year. One minor kill was associated with the discharge of silage, another with river drainage. The cause of the remaining fish kill is unknown.

During the year, the Board's Fisheries Officers carried out 417 farm inspections over 6 river catchments. Two-hundred and four warning letters were issued in follow-up.

Five appeals to An Bord Pleanála were initiated during 2001. Two further appeals were made to the EPA on decisions to grant Integrated Pollution Control (IPC) Licences.

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. While a number of aspects associated with catchment management generated considerable discussion throughout the year, co-management is now well set to become the management tool of choice for fisheries managers.

The Laune catchment management initiative, which commenced in 1999, continues to break new ground. In addition a new catchment management initiative commenced on the rivers and coastal areas of county Cork.

Fisheries Development

Following the TAM programme the Board undertook a number of small-scale development projects and initiated a post-TAM infrastructure maintenance programme.

Angling Support and Promotion

The Board had a very successful year on the marketing and promotional side producing a number of publications.

Three trade shows were attended in 2001, one in the USA, the UK (game and coarse) and Holland (sea angling). These shows resulted in a number of firm bookings and generated considerable interest. Unfortunately a number of these bookings had to be cancelled as a consequence of the Foot and Mouth Disease threat.

South Western Regional Fisheries Board

continued

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

Fisheries Protection

Through the work of the Board's Protection Staff a number of prosecutions were initiated and a substantial quantity of illegal fishing equipment was seized in 2001. The new 'On the Spot Fines' system proved effective. A very encouraging sign in 2001 was that the general public is becoming more aware of the true value of the Region's fisheries resources.

Cork region	
Total nets seized	32 nets
totalling	3,045 m
Seizures of fish	14 fish
Seizures of equipment	38 items
Prosecutions initiated	45 cases

Kerry region	
Total nets seized	40 nets
totalling	3,703 m
Seizure of fish	61 fish
Seizures of equipment	2 items
Prosecutions initiated	7 cases

The Board's Mobile Protection Unit proved to be a considerable deterrent to illegal fishing activities in 2001 and a number of cases for illegal fishing are pending. The Unit was well received by the general public and anglers.

South Western Regional Fisheries Development Society

The South Western Fisheries Development Society met on number of occasions in 2001.

Management of the Boards Fisheries

The Board's 13 managed Rainbow trout lakes had a very successful year, notwithstanding the FMD crisis, that saw the majority closed for some period in 2001. In all five lakes remained closed for the season. Approximately 50,000 rainbow trout were stocked into the lakes. The Creel Census forms indicated that people enjoyed fishing the lakes, especially from a family perspective and that a number of fish were caught weighing over 15 lb. The Bye-law controlling fishing on these lakes proved extremely useful in the management of the Fisheries.

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

The five winners of the Creel Census draw who each received €25 are:

Michael Ludwig, USA
Mark Keleghan, Blessington, Co Wicklow
Eric Kerleau, Baltimore, Co Cork
Siobhan Gardner, Cork
Oliver Corr, Dungannon, County Tyrone

Commercial Fisheries

Catches of salmon and sea trout as compiled from commercial salmon license holders' logbooks.

	Draft nets	Drift nets
SALMON		
Cork	3,708	36,287
Kerry	5,129	23,224
SEA TROUT		
Cork	113	540
Kerry	65	220



Shannon Regional Fisheries Board

Bord Iascaigh Réigiúnach an Sionainne

SHANNON REGIONAL BOARD MEMBERS

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

General

The Board reacted quickly to the FMD crisis, in establishing angling guidelines based on recommendations set out by the "Expert Group". A list of recommended suitable fisheries for angling was issued whilst the restrictions were in place. This information was disseminated via the Boards Web Site and the mainstream media. We maintained this information service throughout the crisis advising local and tourist anglers.

Angling Review for 2001

Coarse Angling

Bags in excess of 100lbs of bream were taken from Lough Derg and an incredible 1000lb catch of bream was reported between three anglers in one session in September. November was a particularly good month for pike anglers, most notably in the Shannon and River Suck. Forty-three anglers took part in the second leg of the Dublin Pike Anglers winter league on the Suck and at Shannonbridge on the Shannon. A total of 73 pike were taken, 19 doubles and four over the 20lb specimen weight.

Game Angling

Salmon Angling was fair during 2001. The River Fergus fished well in April, over 30 fish reported caught. Grilse began arriving on the Lower Shannon in mid June and good results were reported for both Plassey and Castleconnell. The lack of rain throughout most of the summer kept water levels low in spate rivers such as the Mulkear resulting in small catches. Small grilse (2lbs to 4lbs) were noticeable this year however three specimen salmon were reported from the Shannon, including a 21lb wild salmon taken at O'Brien's Bridge.

Despite the FMD and water quality problems brown trout angling continued to be very popular, with a number of angling clubs, in association with the Board, running courses to increase the number of anglers on the water. Local anglers caught two specimen trout in Lough Ree, at the end of April, while a specimen trout weighing over 12lbs, was caught on the Shannon at Athlone. Good angling was reported in September from Loughs Sheelin, Owel, O'Flynn and Ennell. Improvements in trout angling on the River Inny along a number of stretches were noted this year.

Shannon Regional Fisheries Board

continued

Sea Angling

Sea anglers fishing from charter boats reported fair angling during the summer. Shore angling also produced good fishing. Noted species were cod, red gurnard, John dory and pollack. With a fine spell in May anglers reported good mackerel fishing off the Rosses and Dunlickey, Co Clare. Spur dog were reported in the Doolin area with lots of pollack off the reefs. A red gurnard of 2lbs was caught off Loop Head by Albert de Gier (NL) using baited feathers in August. Dutch anglers caught two specimen three bearded rockling in the Shannon Estuary. A Specimen ballan wrasse of 5.67lbs was produced at Ross Co Clare

Shannon Regional Fisheries Development Societies

The Upper and Lower Shannon Fisheries Development Societies held regular meetings in 2001. A number of angling clubs carried out stream rehabilitation works with assistance from the Fisheries Development Societies.

Aquatic Environment

Reversing the decline in water and habitat quality, which is adversely affecting fish stocks and the enhancement of angling tourism, was the major priority of the Board during the period of this report and progress was made.

The expansion in the economy and the implementation of the NDP, brought about a considerable increase in planning applications coming to the Board's attention. These ranged from single dwelling housing to complex motorway developments. The Board made recommendations and applied constraints to many of these to ensure that the impact on the aquatic environment was minimised.

Despite the expenditure of €80m on sewage treatment facilities in the Region some remain over loaded while others are not managed to their optimum. The Board has brought these issues to the notice of the Authorities concerned and has sought limits to proposed expansion.

Damage caused by agricultural waste continued. Slurry spreading during inappropriate periods is a persistent problem, while excessive use of chemical fertiliser continues to over enrich our waters.

The development of a hydroelectric scheme at Tarmonbarry Weir was monitored closely by the Board. To prevent damage to both salmon and coarse fish comprehensive measures were put forward to the Planning Authority. The construction of the hydroelectric scheme will be subject to the provision of 10mm screens on the turbines.

The largest fish kill of 2001 occurred on the River Shannon in Limerick City. Estimates suggest that at least 10,000 smelt (a Red Data Book species requiring protection), 2,000 trout and 1,000 salmon perished in the incident. Despite intensive investigations the Board was unable to identify a cause, although high aluminium levels were recorded in the gills of smelt sent to Scotland for analysis.





Catchment Management Process

The Mulkear Catchment Management Plan was finalised and published following consultation with the stakeholders and the public. A process has now been put in place to further the agreed aims of the stockholders. It is the intention of the Board to extend the process to other suitable catchments.

Fisheries Enhancement

A number of projects were undertaken to further enhance the Board's fisheries and their facilities, in association with the Angling Clubs. Surveys were carried out on a number of fisheries to ascertain present fish stock levels. Maintenance work was undertaken on structures constructed under the TAM Programme.

Over 1,000,000 trout were stocked out in 2001 to offset the damage caused by pollution in the short term.

Predator control programmes continued on a small number of wild trout waters in accordance with scientific advice from the Central Fisheries Board. Many of the pike and other coarse fish removed were transferred alive to other suitable lakes in either the Shannon or Eastern Region.

Enforcement

A new salmon tagging system was introduced to enable better management of the stocks. Generally compliance was good and the merits of the programme was recognised by commercial netmen and anglers.

While illegal salmon fishing is falling generally, the Board continued to be concerned at the levels of illegal fishing in the lower Shannon and discussions were held with the ESB, the fishery owner, to seek ways to address it. The LPVs and RIBs patrolled the Region's coast and estuaries and fishing vessels were boarded and inspected. Salmon Dealers and Hotels were also inspected.

Patrols were also carried out in the main Shannon catchment to check for violations of other fisheries laws, particularly the pike and coarse fish byelaws.

Biodiversity

Biodiversity is an important element of the fisheries environment. During 2001 the Board investigated a number of unusual fish species which occur in the Region;

- Smelt, a small fish popular with pike anglers as bait which lives along the coast and in estuaries, but returns to rivers to spawn. The greatest spawning was found to be in the tailrace of Ardnacrusha Dam,
- Croneen, a type of brown trout from Lough Derg, which run the Little Brosna River,
- and the three species of Lamprey in Ireland, all of which occur within the Shannon Catchment.

Promotion and Educational Measures

To develop angling tourism staff attended promotions at home and abroad and assisted over 20 tourist coarse angling matches, which are of economic benefit to local communities.

As part of the Board's Education and Youth Programme presentations were given to schools and assistance provided for the Angling Clubs to encourage the dissemination of fisheries information particularly to the young.

The Website

Our website continued to grow in size and popularity. The site was regularly updated, providing angling information, information on fish, their habitat, fisheries publications, catchment management and other fisheries related issues. Over 300,000 individuals visited the site.

Liaison and Interagency Work

The Board continued to work in tandem with the other seven Fisheries Boards, State Bodies, Local Authorities, Board Fáilte, Shannon Development and other groups to further the fisheries interests.

Staff Support and Development

The Board continued its programmes to support and develop the staff and their skills through training, safety programmes, provision of resources and engaging in a major HR Strategy Review with the other Boards.



Western Regional Fisheries Board

Bord Iascaigh Réigiúnach an Iarthair

WESTERN REGIONAL BOARD MEMBERS

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

Notable Achievements in 2001

During the year the Board undertook the complete refurbishment of Aasleagh Lodge in Leenane, Co. Galway as a first class angling guesthouse to compliment the Erriff fishery. It is hoped that the Lodge will be a flagship for the Board in terms of standards and quality of service delivery. The Lodge was officially opened by the Minister for the Marine and Natural Resources, Frank Fahey T.D. on Monday 5th November 2001.

Lough Corrib is now without doubt the single greatest wild brown trout fishery in Europe. Following the recent development work, the lake produced its best season in living memory. As angling pressure continues to increase, consideration of moderate catch management regulations is required, particularly during the mayfly period.

The extended catwalk at the Galway Fishery was officially opened by the Minister for the Marine and Natural Resources, Frank Fahey T.D. on Saturday 20th October 2001. This new facility will add a new section of river to the fishery which was previously inaccessible.

The Board restored the weir at Carr's Pool, on the Bunowen river under the catchment management programme. It is hoped that a fish counter can now be facilitated at the site in due course.

A store was constructed at Cong Salmon hatchery during the year to enable the proper storage of fish feed and equipment. Much of the construction work was done by Board staff.

Staff

Safety and training of the staff remains a priority and several courses were run for staff during the year including on safe boating practices, fire fighting manual handling and safety in general. The Board recruited several new contract staff during the year. In the latter part of the year the Board commenced the process of filling all vacancies. This process is due to be completed early in 2002.



Protection

The Board had very good co-operation in relation to the new salmon tagging regulations from the commercial salmon sector.

The Board continues to rely on Rigid Inflatable Boats for the carrying out of protection at sea. In addition to salmon protection at sea, the Board is very actively involved in the protection of the extensive molluscan fisheries in the Region. The increased incidence of detection of undersized scallops and oysters is a matter of concern and additional effort is being made to deter the taking of undersized shellfish.

Bye-laws

The conservation of sea trout Bye-law was renewed for the year (Bye-law No. 775 of 2001) in an effort to reduce exploitation of sea trout. The salmon and trout conservation Bye-law was also re-introduced (No 778, of 2001).

Aquaculture

The Board remains concerned about salmon farms and the proliferation of sea lice from these facilities and their adverse effects on wild sea trout fisheries. In line with Board policy, the Board appealed 10 licences issued by the Department for fish farm expansions in Kilkerrin Bay. Subsequently, in an effort to negotiate a solution and in order to ensure the proper separation of generations, the Board withdrew its objections to the offshore smolt sites associated with these applications.

The Board remains focussed on ensuring that lice levels on marine salmonid farms are such that they do not have any effect on the wild sea trout fisheries of the region. Lice control must remain the constant priority of regulatory management and practice.

Development

In the latter portion of the year the Minister for the Marine and Natural Resources, Mr. Frank Fahey, T.D. launched a catchment management programme for the River Robe. This was aimed at certain specific projects in each region, particularly in the West. In addition to giving financial assistance to several of the local angling Clubs for projects in association with the Regional Fisheries Board, the Minister also grant aided the Board for catchment management work on the Bunowen river.

It has been estimated that in order to complete the Corrib System Development Programme a further €7.6 million would be required over the duration of the next programme. As a result of the development programmes many rivers are much improved with a large number of additional salmonids being produced as a result of the upgraded habitat. It is hoped that, in the coming years, the excellent work commenced under the Operational Programme for Tourism can be continued.

Aquatic Environment

The Board continued its regular water quality monitoring and analytical programme in 2001. As part of the Corrib System Development Programme the Board continued with the comprehensive water quality sampling programme on Lough Corrib and its feeder streams.

Overgrazing and erosion remain a major problem in the Region and there is now a very serious need for all the relevant catchments to be managed collectively on a catchment management approach.

The Board is also very concerned about the possible introduction of the Zebra Mussel to the Great Lakes in the West. In view of the success of Corrib and Mask in 2001, it is anticipated that an even greater number of boats will be moved between lakes in the coming season. 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.

Hatchery

The Board's hatchery at Cong has had significant problems caused by silt and more particularly diatoms from its water source in Lough Mask. While at different times of the year the diatom blooms are dominated by different species the greatest problem is with the newly hatched alevins. The Board continues to work to find a solution to the problem with the introduction of advanced filtration systems.

Western Regional Fisheries Board

continued

The salmon ranching programmes continued for Cong (Lough Corrib) the Bunowen River (Louisburgh) and the Ballynahinch System in conjunction with the owners co-operative. In addition the hatchery reared smolts and parr on a contract basis.

FAS Programmes

The Board continued with its FAS schemes and during the period two staff members were dedicated to the supervision of FAS schemes on a full time basis. Schemes continued in Louisburgh and Oughterard.

Angling Information/Promotion

The Board continued to answer a diverse number of angler enquiries over the period. In the region of 4,305 angler enquiries were catered for in 2001.

There are still very poor runs of sea trout in Connemara. A limited recovery occurred in Bertraghboy bay during the year with significant runs of finnock into the Ballynahinch and Gowla fisheries. This was following a period of exceptional lice control in the adjacent salmon farms in Bertraghboy bay when ovigerous lice levels in the critical period averaged 0.02 per fish. Unfortunately the degree of lice control in Kilkerrin bay was not as good and after July virtually no sea trout entered the system.

The reversal of the collapse in sea trout stocks remains the number one priority for the Board.

Western Regional Fisheries Development Society

In 2001 the Society finally completed the Audit of all outstanding years for the accounts for the Society. The Department in return forwarded the Society with matching funds for the four years totalling €71,113. The Society put in place a full application and auditing procedure for angling clubs seeking funding and grant aid was paid in respect of verified works for the outstanding years.

The Society will be forwarding accounts for 2001 to the Department early in 2002 and again will be seeking matching funds for this amount which will be in the region of €20,000

Commercial Catches - Salmon/Eels/Molluscs

Commercial salmon fishing in the Galway Fishery remained suspended in 2001. The commercial drift net salmon catch for the Ballinakill District was similar to the previous year but this was the first year when the figures were based on carcass tag usage. Historically assessments were made by Fisheries Board staff which were based on dealers registers, hotels and guesthouses and interviews with individual fishermen. The drift net catch in Galway showed a significant increase over the catch the previous year. Draft net fishermen in Ballinakill were recorded as catching significantly less fish in 2001 over the estimated catch in 2000.

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





North Western Regional Fisheries Board

Bord Iascaigh Réigiúnach an Iarthuaiscirt

NTH. WESTERN REGIONAL BOARD MEMBERS

	NTH. WESTERN BOARD
Chairperson	John Walkin
Salmon Rod	Seamus Henry Declan Turnbull
Draft Net	John Munnelly
Drift Net	Michael Waters Henry Gaughan J. J. O'Donnell
Other Salmon Net	-
Eel Licence	John Hughes
Oyster Licence	Paddy Quinn
Rated Occupier	Peter Layden
Trout Angler	Finian Dodd Francis Taffe
Coarse Angler	John Hargadon
Sea Angler	John Walkin
IFT Life Member	-
Staff Representative	Padraig Traynor
Ministerial Appointees	Ann Geary Jimmy Maloney Anthony Ferguson Ann Campbell Brendan O'Mahony Mary Gallagher McBride Mary Hensey

General

The Board successfully implemented the Wild Salmon Carcass Tagging Scheme and made significant progress in developing fisheries catchment management plans for three river systems in the Bangor Fisheries District. The contributions of all stake holders to the success of both programmes is acknowledged. Despite the impact of the FMD crisis in early 2001, the number of salmon anglers who fished in the Region compared favourably with recent years. In late April, Minister Fahey officially opened the Ridge Pool Angling Centre. The Board continued to develop small managed trout lakes and two additional fisheries were opened in 2001. In association with the Institute of Fisheries Management and The Irish Char Conservation Group, the Board sponsored a very successful seminar which focused on Irish char populations and highlighted the extinction of this sensitive species from Lough Conn. The Board supported the Rhine Restoration Project with the provision of salmon ova. The status of the Region's major trout lakes, Loughs Conn, Cullin and Arrow was a cause for serious concern due to declining trout numbers. In all three cases the problem was attributed to excessive inputs of nutrients. Mature zebra mussels were recorded in the Garravogue River and Lough Bo and larval stages of the species were found in one area of Lough Gill.

The Region's Fisheries

The total commercial salmon catch for the region, based on log book returns, was 43,585 salmon, including a drift net catch of 41,513 and a draft net catch of 2,072 fish. Based on analysis of salmon dealers' registers, the catch was, for the third consecutive year, amongst the lowest on record. The estimated rod catch was 9,738 salmon. The salmon rod catch reflects the impact of the FMD crisis and the introduction of reduced bag limits on Moy Fishery beats.

Brown trout fishing on Lough Conn was very poor with the second lowest catch on record. At Lough Arrow, angling was also very poor and algal blooms significantly exacerbated the situation. As usual, the smaller stocked lakes proved popular with anglers. Sea trout catches were down, reflecting FMD restrictions and a decrease in the number of anglers fishing the Moy Estuary. Sea and shore angling continued to be popular.

North Western Regional Fisheries Board

continued



Aquatic Environment

Surveys of Loughs Conn and Cullin have confirmed that Lough Cullin can no longer be regarded as trout fishery and that Conn is no longer a quality trout fishery. Furthermore, a massive expansion in the roach population was recorded in both lakes. Major changes in the fish populations are believed to reflect nutrient enrichment. Lough Arrow is also enriched and, at times, algal blooms made fishing almost impossible. Because of these problems the Board, though pro development, was obliged to object to, or appeal, a number of developments. Arising from its policy, progress is now being made to redress the situation in a number of areas:

- Replacement of the Crossmolina Sewage Treatment Plant
- Fast tracking of improvements to the Castlebar Sewage Treatment Plant
- Formation of Technical Committee for Lough Arrow to identify the source of the water quality problems.

Catchment Management

The most notable development was the appointment of a Fisheries Catchment Manager to drive the process in the Owenmore and Owenduff catchments. In order to facilitate the management process and provide accurate data, a fish counter was purchased for the Munhin River, the outflow from Carramore Lake. It is planned that the counter will be operational by late spring 2002. The Board acknowledges the support of Mayo County Council which provided a purpose built structure to accommodate the equipment. The use of GIS, as a management tool, was also advanced in both the Bangor and Moy catchments. A research programme on the Owenmore and Owenduff catchments was commenced which included fish stock assessment, aquatic habitat inventory and environmental monitoring at twenty sites. The data collected will be incorporated into the Board's GIS as will an aerial photographic survey of the two catchments.

Fisheries Development

Significant improvements to angling facilities were completed at a number of small lakes including Loughs Doon, Clogher, Muck and the River Moy. The works at Lough Muck were undertaken as a joint Board/local community project. Instream fisheries enhancement works were completed on the Grange River in association with FAS. To combat Lough Arrow's declining mayfly hatches, a large number of mayflies were collected and released at the lake. Juvenile trout were also taken from Lough Conn feeder streams and stocked into the lake thereby improving recruitment. Trout ova collected from spawners in the Lough Arrow catchment were planted out in two of the lake's feeder streams. Predator management programmes at designated game fisheries continued. Wherever possible, pike were released into designated coarse fisheries. The introduction of non-destructive electrofishing equipment significantly increased the efficiency of these operations in both rivers and lake margins.

North Western Fisheries Development Society

The Management Committee of the North Western Fisheries Development Cooperative Society held its inaugural meeting, during which, the Board's Chief Executive Officer presided over the election of Chairman.



Angling Support and Promotion

An Angling Guide to Lough Arrow was published in May. The new guide, which is printed on waterproof paper, includes comprehensive angling information as well as a detailed map of the lake. The Board sponsored a number of angling competitions, most notably, the Lough Arrow International Angling Festival, which attracted a large number of overseas angling journalists. Throughout the year, the Board's Angling Officer dealt with a large number of enquiries and disseminated promotional material. A weekly angling report was also produced, during the season, for distribution to the local, national and international press. The Board facilitated numerous angling journalists and provided logistical support to a German film crew working at Lough Conn. Two short television pieces were also made on the Moy Fishery. Board personnel attended several promotional events including the CLA Game Fair. The Region was promoted internationally through its participation in the Game Angling Ireland West marketing group. Safety cover was provided for a number of sea angling festivals and logistical support was also provided for several trout angling competitions.

Fisheries Protection

Staff effectively enforced the Salmon Carcass Tagging Scheme and implemented the new "On the Spot Fines". Arising from the enforcement of the tagging regulations, Board personnel came into much closer contact with the commercial netmen which was a very positive development. Despite staff shortages, the Board committed personnel to sea duty on the Large Patrol Vessel which, again, proved to be an efficient and effective deterrent. Protection staff monitored spawning activity preventing winter poaching. The Region's oyster fisheries were also patrolled and the activities of eel fishermen were monitored.

Management of Board Fisheries

Despite the late start due to the FMD crisis, the Board's fisheries, in general, were very successful. Management of the Ballin Lough fishery was transferred to the Board by the Marine Institute and, despite a late start due to the FMD crisis, the fishery produced 1,784 trout of which 1,216 were returned alive. A total of 7,143 rod days were recorded on Board managed fisheries. This represented a very significant increase on the number of rod days recorded in 2000 and helped to offset a decline in angling on the major lakes associated with declining

water quality. The Moy Fishery accommodated 4,084 anglers of which 2,641 (65%) were non nationals. As a conservation measure, the Board reduced the bag limit on Moy Fishery beats from five salmon to three. Despite this, the fishery returned its highest catch since 1996. As a result of enhancement works, the lower beats fished considerably better than in recent years.

Commercial Fisheries

The Board issued 154 commercial salmon fishing licences. The total commercial salmon catch, based on logbook returns, was 43,585 salmon with an estimated weight of 115 tonnes.

Seventy three oyster dredge licences were issued in the Region's three oyster fisheries, Achill, Clew Bay and Belmullet. The total catch was 53 tonnes; 9 tonnes from Achill; 11 tonnes from Clew Bay and 33 tonnes from Belmullet.

Twenty two eel fishing authorisations were issued and the total reported eel catch was 15.3 tonnes. Long lines accounted for 12 tonnes and fyke nets returned 3.3 tonnes. The Board commenced an elver monitoring and transport programme on the Moy and 13kg of elvers were captured and transported upstream to Lough Conn. The region's commercial eel fishermen have welcomed this initiative aimed at improving elver recruitment.

Aquaculture

The Board maintained its pro-mariculture policy where there was no threat to wild fisheries, and continued to oppose the expansion of fin fish aquaculture. The Board opposed licence applications for new fin fish sites and significant expansions to existing fin fish operations. In late September, several thousand rainbow trout, weighing in excess of 2kg each, escaped from a fish farming facility in Clew Bay and very quickly impacted the inflowing rivers. The Board was concerned that the presence of these escapees could have major implications for wild fisheries and could seriously devalue the angling product. In an effort to reduce the impact of this escape on wild fisheries, Board personnel removed in excess of 1,000 rainbow trout escapees from the Newport River alone.



Northern Regional Fisheries Board

Bord Iascaigh Réigiúnach an Tuaisceart

NORTHERN REGIONAL BOARD MEMBERS

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

General

The Wild Salmon Tagging Scheme was launched on the 1st January with the first salmon of the year being caught and tagged on the River Drowse. Compliance with the new regulations was generally excellent with the majority welcoming the move towards increased monitoring and conservation. The outbreak of FMD at the start of the year put considerable pressure on staff. In general anglers were very co-operative. Two angling centres were completed at the Eske and Eany rivers in Donegal. Two major cross-border initiatives, the Erne Salmon Management Programme (funded under EU INTEREG) and the Erne Eel Enhancement Programme (funded under EU Peace & Reconciliation measure) were completed and Final Reports printed.

Aquatic Environment

In Donegal water quality remains generally very good although periodic algal blooms have been noted on lakes Atercan, Melvin and Rooskey. Monitoring carried out by the EPA indicates that some pristine rivers in Donegal have deteriorated slightly. The Melvin/Drowes system was sampled bi-monthly and results indicate that water quality deteriorated from mesotrophic to slightly eutrophic during the year. A nutrient management budget is being developed to identify the key sources of enrichment. No fish kills were recorded for the year.

The Erne Catchment

The majority of the main lakes in the upper Erne Catchment are now classed as eutrophic or hyper-eutrophic. Several fish kills were recorded through the year. Insufficient slurry storage facilities and remote pumping of slurry onto waterlogged pastureland has exacerbated nutrient runoff to adjacent watercourses. A serious fish kill on the Bunnoe River in July killed approximately 4,500 fish along 3-4 miles of river. Arising from Board investigations a prosecution was secured and a claim lodged with the circuit court to seek remediation for the fishery.



The Region's Fisheries

Coarse Angling

A series of coarse angling competitions was held in 2001 including the NCCFI All Ireland Coarse Angling Championship held in Lough Oughter, Co. Cavan and the Kingspan Pike Final on the Shannon-Erne Waterway. Perhaps the highlight of the year was the British King of Clubs where over 5 tonnes of coarse fish were caught and released by 200 rods during the 3 day event.

Game Angling

Salmon angling returns were slightly down compared to previous seasons, although this was partly due to the late start to angling due to the FMD scare. Although the Minister re-opened fisheries on the 11th May, a number of fisheries did not receive many anglers until June. One notable fish was a 25 lb salmon from the Glen River. Sea trout catches were again low on many systems. An exception was the River Lackagh, which recorded one of the best seasons for sea trout in recent years. The Erne estuary produced few large sea trout, but finnock were abundant. Despite the FMD outbreak, angler numbers on the Owenea and Eany fisheries increased in 2001 due to excellent water levels throughout most of the season. The biggest fish for both the Owenea and Eany rivers was 14 lb. Grilse weights were up, with fish averaging 5 lb for the Owenea and 6 lb for the Eany from June to September.

Sea Angling

Sea angling in Donegal remains underdeveloped. Efforts are being made through the Chartered Skippers Association to develop the resource throughout the county. Emphasis is being placed on the provision of licensed, custom-fitted, quality sea angling vessels and the marketing of the angling product. Significant strides have been made in the identification of shore angling venues. Car parking, notice boards and sign posting have been improved throughout Donegal over the past two years. Further development is planned under the NDP. The widely advertised landings of bluefin tuna over 1000 lbs have generated intense interest in the development of a 'big game fishery' in Donegal. Undoubtedly a unique opportunity exists to establish a high profile recreational fishery provided the requisite legislation can be put in place. The Northern Board advocates a strict policy of 'catch and release' for bluefin tuna.

Catchment Management

Key issues which are currently being addressed include

- (i) Development of a nutrient budget for the Lough Melvin
- (ii) Fish stock assessment of L. Melvin and its tributaries
- (iii) Bi-monthly water and plankton sampling of L. Melvin
- (iv) Compilation of water quality, land use and fisheries data into a GIS
- (v) Intensive field surveys were undertaken in conjunction with the CFB to fulfil the fisheries element of the Donegal Bay Catchment Project, which is due for publication in 2002. Collation of historical data was also completed.

Fisheries Development

Angling centres at both the Rivers Eske and Eany were completed providing greatly improved facilities. A small hatchery was commissioned at the Eske centre to provide unfed fry (stripped from L. Eske salmon) for stocking out to the Lowerymore river, where installation of a salmon pass has opened up 6 km of ideal spawning and nursery habitat. The board intend to close the hatchery after salmon begin to utilise the area for spawning. Detailed surveys were carried out on several fisheries within the Donegal and Cavan-Monaghan areas to (i) identify potential venues for future development, and (ii) to determine the current condition of existing fishing structures previously installed by the Northern Board.

Maintenance work was carried out in a number of locations in Cavan-Monaghan and on the Eske, Eany and Owenea rivers in Co. Donegal where many structures had become dangerous. Where possible, synthetic structures are used to minimise maintenance costs. However, an annual budget for essential maintenance and repair of fishing structures is urgently required.

The Board are anxious that the Erne Water Quality Management Plan developed in 1997 be implemented as a matter of urgency.

Northern Regional Fisheries Board

continued

Northern Regional Fisheries Development Society

The NRFDS removed the requirement for share certificates to be purchased on a compulsory basis. Angling share certificates are currently sold on a purely voluntary basis by the co-operative.

Angling Support and Promotion

Staff in the Cavan district promote coarse angling through active support and organisation of several coarse angling competitions throughout the season. Preparatory work including clearing of swims, installation of pegs, administrative support and catch weigh-ins are all provided. A series of seminars and visits to local schools throughout the region was carried out during the year encompassing angling, catchment management and environmental issues.

Fisheries Protection

The Board's fisheries protection programme consists of 3 parts:

- (1) Offshore patrols by Naval vessels and surveillance aircraft
- (2) Patrols on board the LPVs
- (3) Inshore patrols using 6 & 7 m Sea Rider RIBs

Illegal fishing using fixed nets set from the shore account for the majority of nets seized during the year. The Board continues to devote a large proportion of its resources to the protection of spawning stocks in the rivers and is pursuing local initiatives which will lead to greater support within the community for the protection of local fish stocks raising their value as a community resource for both employment and recreation and clearly identifying poaching as an anti-social activity within coastal communities.

Management of Board fisheries

After two years work the Northern Board are reaching the final stages in the production of their proposal for the development and management of angling in Donegal. This is a consultative document outlining the Board's plan for the management and protection of 8 owned state fisheries in the county. One of the main aims of the plan is to provide sufficient funds from the sale of permits to fund additional temporary fisheries officers for each of these 8 fisheries during the angling season.

Commercial Fisheries Report

The Board staff are to be congratulated in their implementation and supervision of the Wild Salmon Carcass Tagging Programme. The Board also wishes to thank the Central Fisheries Board for its assistance during the critical period leading up to the introduction of this scheme. Commercial fishermen adopted the new carcass-tagging regime in its entirety and complied fully with the regulations and the law. Data from the commercial logbooks allowed a detailed analysis to be carried out on each fisherman's catch in relation to the sale of the fish through dealers and private sources. This has allowed the Board for the first time to obtain a profile of each fisherman's fishing effort and to identify the quantities of fish which are sold through dealers and private outlets. Salmon catches for the year 2001 were slightly up on the previous year for both drift and draft net fisheries.

Aquaculture

There are a number of large aquaculture sites on the coast of Donegal. The main sites for shellfish are Dungloe Bay, Trawbereagh Bay, Mulroy Bay and Lough Swilly. The main sites for finfish are Inver Bay, McSwines Bay, Mulroy Bay and Lough Swilly. The Board has serious concerns in relation to the impact of increased sea lice levels on wild sea trout and salmon stocks. Recent reports suggest that the third and fourth highest sea lice levels in Ireland occurred in the NREB area. Further investigation of sea lice levels on wild smolts in Donegal is planned for 2002 using a modified trawl net developed by the CFB. The Board were also concerned at the long-term implications of escape events on the wild stock structure.

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.	9	0	5	5	15	2	6	42
Investment In Instream/Spawning Enhancement	Value €	52,000	0	19,000	5,000	59,000	37,000	23,000	195,000
Length of River and Stream Developed	km	11.4	0	2.5	2	10	1.2	5	32.1

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.	9	2	3	3	2	4	4	27
Investment in Angling Facility Enhancement	Value €	123,825	47,625	25,400	40,000	78,740	14,605	75,726	405,921
Angling Pools Created	No.	52	0	0	0	1	5	0	58
Stiles, Footbridges, Platforms, Etc.	No.	10	0	13	10	38	10	16	97
Additional Fishing Spaces Created	No.	60	30	62	45	10	5	60	272

Surveys		Eastern Board	Southern Board	Sth. Western Board	Shannon Board	Western Board	Nth. Western Board	Northern Board	Total
Salmonid Surveys	No.	68	0	12	4	8	5	0	97
Coarse Fish Surveys	No.	2	1	1	5	0	0	0	9
Other	No.	0	0	0	2*	0	2**	0	4
Investment in Fishery Surveys	Value €	45,720	15,240	-	-	6,350	39,370	0	106,680

* Bass Survey and Smelt survey

** Zebra Mussels

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.	10	4	3	2	0	1	6	26
Fish Kills Caused By Agriculture	No.	5	1	1	0	0	1	3	11
Fish Kills Caused By Industry	No.	2	1	0	0	0	0	1	4
Fish Kills Caused by Eutrophication	No.	2	1	0	0	0	0	2	5
Fish Kills Caused By Local Authority		0	0	1	0	0	0	0	1
Other	No.	1	1	1	2	0	0	0	5
Pollution Inspections	No.	548	470	633	1,560	70	148	376	3,805
Warning Letters	No.	77	310	204	180	40	39	202	1,052
Pollution Prosecutions Initiated	No.	5	3	1	19	2	0	2	32

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.	119	148	266	2,465	2,400	77	924	944	7,343
Samples Tested by Regional Board Laboratory	No.	22	105	96	23	1,850	0	155	0	2,251
Samples Tested by C.F.B. Laboratory for The R.F.B.	No.	41	1	200	1,913	2,009	72	712	0	4,948
Samples Tested Externally	No.	57	43	24	529	15	5	57	0	730
Total Samples Tested	No.	119	148	266	2,465	2,400	77	924	5,892	7,343
Average No. of Determinands Tested	No.	7	7	7	6	13	4	36	20	13

Appendix 3

Fish Stocking

Fish Stocking	Eastern Region	Southern Region	Sth. Western Region	Shannon Region	Western Region	Nth. Western Region	Northern Region	Total
Brown Trout Stocked	50,000	360,500	0	540,000	5,000	214,450	2,500	1,172,450
Salmon Stocked	0	0	0		30,000	0	1,097,000	1,127,000
Rainbow Trout Stocked	0	1,500	50,000	6,500	0	15,650	0	73,650
Coarse Fish Stocked/Transferred	7,250	20,500	0	41,550	200	178	32,000	101,678

BROWN TROUT CFB STOCKING TO REGIONAL BOARDS – 2000

REGION	OVA	FRY	Summerlings	AUTUMN Fingerlings	1+	2+	Total
EASTERN	200,000	0	0	29,000	0	5,200	234,200
NORTHERN	0	212,000	0	0	0	1,250	213,250
NORTH WESTERN	0	250,000	24,000	0	0	5,850	279,850
SHANNON	0	490,000	0	18,000	0	32,100	540,100
SOUTHERN	20,000	340,000	24,000	0	0	1,500	385,500
WESTERN	0	0	0	0	0	5,050	5,050

RAINBOW TROUT CFB STOCKING TO REGIONAL BOARDS – 2000

REGION	1+	2+	Total
EASTERN	1,500	0	1,500
NORTH WESTERN	600	1,200	1,800
SHANNON	6,500	50	6,550
SOUTH WESTERN	42,000	0	42,000
SOUTHERN	0	1,500	1,500

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	3,077	3,782	5,347	2,144	2,907	9,712	5,756	32,725

Commercial Licence Issues	Eastern Board	Southern Board	Sth. Western Board	Shannon Board	Western Board	Nth. Western Board	Northern Board	Total
Salmon								
Drift Net	16	250	149	86	105	121	154	881
Draft Net	181	7	80	100	21	8	91	488
Snap Net	0	138	0	0	0	0	0	138
Trap	0	1	0	0	0	0	0	1
Other	8	0	3	73	0	25	43	152
TOTALS	199	396	232	259	126	154	288	1,660
Eels	32	30	0	28	22	22	46	180
Molluscs	121	0	0	0	52	73	21	267

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	24	6	7	3	59
Rod Days	No.	10,500	0	-	50,000	2,917	7,143	1,783	72,343
Revenue	€	7,618	0	-	49,000	126,836	175,007	37,363	395,824

Appendix 5

Salmon Catch 2001

COMMERCIAL SALMON AND SEA TROUT CATCHES, 2001

Region	Licence Type	District	No. of Salmon	No. of sea trout (over 40cm)
WESTERN	DRAFT NET	GALWAY	72	0
	DRIFT NET	GALWAY	5,685	0
	TOTAL	GALWAY	5,757	0
	DRAFT NET	BALLINAKIL	1,472	0
	DRIFT NET	BALLINAKIL	6,733	0
	TOTAL	BALLINAKIL	8,205	0
	DRIFT NET	CONNEMARA	3,290	0
	TOTAL	CONNEMARA	3,290	0
	TOTAL	WESTERN	17,252	0
EASTERN	DRAFT NET	DROGHEDA	2,136	180
	TOTAL	DROGHEDA	2,136	180
	DRAFT NET	DUBLIN	12	488
	DRIFT NET	DUBLIN	44	121
	TOTAL	DUBLIN	56	609
	DRAFT NET	DUNDALK	1,191	374
	TOTAL	DUNDALK	1,191	374
	DRAFT NET	WEXFORD	956	574
	TOTAL	WEXFORD	956	574
	TOTAL	EASTERN	4,339	1,737
NORTHERN	DRAFT NET	BALLYSHANNON	4,423	57
	DRIFT NET	BALLYSHANNON	11,248	4
	TOTAL	BALLYSHANNON	15,671	61
	DRAFT NET	LETTERKENNY	2,593	58
	DRIFT NET	LETTERKENNY	21,789	13
	LOOP NET	LETTERKENNY	70	0
	TOTAL	LETTERKENNY	24,452	71
	TOTAL	NORTHERN	40,123	132

ROD AND LINE SALMON CATCH, 2001 (ESTIMATE)

Region	No. of Salmon
East	1,635
South	8,421
South West	3,900
Shannon	3,800
West	3,797
North West	9,738
North	5,199
TOTAL	36,490

Region	Licence Type	District	No. of Salmon	No. of sea trout (over 40cm)
NORTH WEST	DRAFT NET	BALLINA	37	0
	DRIFT NET	BALLINA	26,889	9
	TOTAL	BALLINA	26,926	9
	DRAFT NET	BANGOR	2,035	26
	DRIFT NET	BANGOR	7,849	8
	TOTAL	BANGOR	9,884	34
	DRIFT NET	SLIGO	6,775	3
	TOTAL	SLIGO	6,775	3
	TOTAL	NORTH WEST	43,585	46
SOUTH WEST	BAG NET	CORK	113	0
	DRAFT NET	CORK	3,788	113
	DRIFT NET	CORK	36,287	540
	TOTAL	CORK	40,188	653
	BAG NET	KERRY	112	0
	DRAFT NET	KERRY	5,129	55
	DRIFT NET	KERRY	23,224	165
	TOTAL	KERRY	28,465	220
	TOTAL	SOUTH WEST	68,653	873
SHANNON	DRAFT NET	SHANNON	6,715	264
	DRIFT NET	SHANNON	20,646	21
	TOTAL	SHANNON	27,361	285
SOUTHERN	DRAFT NET	LISMORE	196	3
	DRIFT NET	LISMORE	14,332	362
	SNAP NET	LISMORE	32	0
	TRAPS	LISMORE	0	0
	TOTAL	LISMORE	14,560	365
	DRIFT NET	WATERFORD	12,351	541
	SNAP NET	WATERFORD	5,041	246
	TOTAL	WATERFORD	17,392	787
	TOTAL	SOUTHERN	31,952	1,152
FOYLE	DRAFT NET	Half	6,750	-
	DRIFT NET	Half	4,738	-
	TOTAL	FOYLE	11,488	-

Grand Total **244,753** **4,225**

Appendix 6 & 7

Fisheries Protection & Fisheries Boards Publications

Protection and Surveillance	Eastern Board	Southern Board	Sth. Western Board	Shannon Board	Western Board	Nth. Western Board	Northern Board	Total
Short Boat Patrols (ManHours)	872	2,500	696	928	4,048	1,875	856	11,775
Meters of Net Seized	998	3,532	6,748	2,113	3,608	4,960	10,973	32,932
Boats Seized	0	1	0	0	0	0	0	1
Prosecutions Initiated	6	15	52	3	7	15	33	131

FISHERIES BOARDS PUBLICATIONS

Author	Date	Title	Journal/Publisher	No.	Pages
David Byrne		Fishing In Ireland's North East (Brochure)	Graphichaus		18
David Byrne		Fishing in Dublin (Brochure)	Graphichaus		19
Drogheda District Staff		River Boyne Faunal Sampling Report 2001	ERFB		75
WRFB	2001	Erriff Fishery Newsletter 2000	WRFB		4
WRFB	2001	Galway Fishery Newsletter 2000	WRFB		4
NWRFB	2001	Annual Report 2000	NWRFB		22
NWRFB	2001	The Moy Fishery Newsletter 2000	NWRFB		4
NWRFB	2001	Lough Arrow Angling Guide	NWRFB		6
M. Matthews, D.Evans, R. Rosell, C. Moriarty & I.Marsh	2001	The Erne Eel Enhancement Programme	(Final Report/Northern Regional Fisheries Board)		348
R.G. Mathers & K. Crowley (eds.)	2001	The Erne Salmon Management Programme	(Final Report/Northern Regional Fisheries Board)		202
D. Evans, M. Matthews & C. McClintock	2001	First record of Pomphorhynchus laevis (Acanthocephala) in fish from Northern Ireland.	Journal of Fish Biology	(in press)	
D. Evans, M. Matthews & C. McClintock	2001	The spread of the eel swimbladder nematode Anguillicola crassus through the Erne system, Ireland.	Journal of Fish Biology	59	1416-1420
M. Matthews, D. Evans & C. Moriarty	2001	Development of a glass eel fishery on the Erne estuary, Ireland.	Proceedings of the 31st Annual Study Course of the Institute of Fisheries Management		89-100
Fitzmaurice, P. and Green, P.	2001	The Wanderings of Irish Tope	The Irish Scientist	9	
O'Grady, M.F.	2000	Salmonid Riverine Habitat Restoration in the Republic of Ireland	In: Nijland, H.J. and Cals, M.R.J (Eds), River Restoration in Europe. Conference on River Restoration in Wageningen, the Netherlands.		237-242
O'Grady, M.F. (Ed)	2001	Taking Stock. Managing Salmon and Trout. How Science Can Help.	Papers Publishing, Cheltenham. Salmonid 21C.		24
O'Grady, M.F.	2001	Salmonid Riverine Habitat Restoration in the Republic of Ireland	In: Herz, M. (Ed), Protection and Restoration of Salmonid Habitat. Proceedings of a workshop held in the University of Maine, October 15 2001.		82-87
CAFFREY, J.M. and NEYLON, S.J.	2001	Angler surveys on Ireland's Inland Waterways	In: Water and our Environment. 11th Irish Environmental Researchers' Colloquium. Dublin City University. Book of Abstracts		80
CAFFREY, J.M. and McLOONE, P.D.	2001	Coarse fishery creation in cutaway bogs	In: Irish Raised Bogs. Conservation, utilisation and after-use. Irish Peatland Conservation Council, Portlaoise, September 2001. Abstract.		
CAFFREY, J.M. and McLOONE, P.D.	2001	Coarse fishery creation in cutaway bogs	In: Water and our Environment. 11th Irish Environmental Researchers' Colloquium. Dublin City University. Book of Abstracts		82
CAFFREY, J.M. and HOEY, E.N.	2001	Carp management in Decoy Lake	In: Water and our Environment. 11th Irish Environmental Researchers' Colloquium. Dublin City University. Book of Abstracts		79
CAFFREY, J.M. and FARRELL, K.	2001	Coarse fish population management in Irish canals	In: Water and our Environment. 11th Irish Environmental Researchers' Colloquium. Dublin City University. Book of Abstracts		81
CAFFREY, J.M.	2001	Non Boating Leisure Activities on Irish Heritage Canals	World Canals Conference, Waterways Ireland, Dublin.		
CAFFREY, J.M.	2001	The Tench (Tinca tinca)	Fisheries Ireland News. Central Fisheries Board, Dublin.		8
CAFFREY, J.M.	2001	Management of Giant hogweed (Heracleum mantegazzianum) in an Irish River catchment.	Journal of Aquatic Plant Management	39	28-33
BOYLAN, C.W. and CAFFREY, J.M.	2001	The introduction of Giant hogweed into North America: phenology and prognosis for spread.	Exotics in North America. Abstract.		
Gargan, P.G., Stafford, J. and O'Maoileidigh, N.	2001	The relationship between salmon rod catch, stock size, rod exploitation and rod effort from the Erriff Fishery, western Ireland.	In: 'The Interpretation of Rod and Net Catch Data, Proceeding of an Atlantic Salmon Trust Workshop Lowestoft, Nov 2001. Ed R.Shelton.		68-75

Appendix 8

Central Fisheries Board Deep Sea-angling Logbook Statistics, 1978-2001

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
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
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
Angling days covered in sample (boat days)	938	1404	1213	1069	1234	811	795	868	1160	1298	1535	1763	2177	2371	2725	3053	3749	3961	4073	5039	5006	5167	5569	5842
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
Ground angling days covered in sample	704	1173	1045	943	1132	648	654	794	1020	1150	1396	1525	1925	2051	2448	2694	3430	3416	3736	4628	4676	4720	5207	5462
Rod days covered in sample	4668	6196	5751	5479	6202	4024	4006	4414	6759	7145	8319	9999	13212	14662	16248	18589	23591	24967	26135	33203	32844	34873	38343	41853
NO. OF ROD DAYS PER NATIONALITY																								
(% of total)																								
Dutch	2056	2765	2214	1949	1851	1028	587	948	1947	1655	1579	2020	2319	3335	3821	4961	4782	5436	6688	6846	6216	6503	6787	6492
(%)	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
German	757	967	1432	881	1607	645	573	413	464	486	491	696	657	762	1148	1378	1656	1770	1457	2138	2480	2198	2130	2302
(%)	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
British	490	992	781	935	739	453	531	738	957	1340	1809	2496	3571	3481	3637	3669	5509	6004	5882	7256	7591	8064	7790	8151
(%)	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
Irish	800	825	767	1051	1514	1429	1468	1615	2028	2486	3061	3422	4664	4548	5829	7002	9754	9797	10109	14530	14741	15998	19694	22227
(%)	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
French	304	297	253	173	246	207	329	195	523	494	599	442	857	1003	685	445	570	537	435	530	352	369	468	481
(%)	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
Belgian	125	133	149	142	21	69	74	80	317	186	315	325	499	671	507	459	412	436	316	554	354	531	369	371
(%)	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
Others	136	217	155	348	224	193	444	425	524	485	465	589	645	862	621	675	950	1022	1246	1349	1110	1210	1105	1829
(%)	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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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

Appendix 9

Marine Sport Fish Tagging Programme

TAG AND RECAPTURE OF MARINE SPECIES UP TO DECEMBER 2001

Species	No.s Tagged to Dec. 2001	No.s Recaptured to Dec. 2001	% Return	Days at Liberty	Distance Travelled (Miles)	Numbers Tagged in 2001
BLUE SHARK	16,719	668	3.99%	2-2399	0-4250	527
PORBEAGLE SHARK	61	7	11.47%	71-3,947	89-2300	3
THRESHER SHARK	1	0	0%	-	-	0
TOPE	3,554	279	7.85%	28-5,538	0-2185	334
MONKFISH	1,020	187	18.33%	0-4525	0-720	2
COMMON SKATE	536	81	15.11%	10-3,275	0-120	49
LONG NOSED SKATE	3	0	0%	-	1	0
WHITE SKATE	21	1	4.76%	975	3	0
BLONDE RAY	305	14	4.59%	26-1,871	0-45	59
UNDULATE RAY	973	52	5.34%	0-2,676	0-60	46
THORNBACK RAY	7109	250	3.51%	0-2190	0-80	519
PAINTED RAY	241	11	4.56%	13-1398	0-20	23
HOMELYN RAY	283	11	3.88%	294-1373	0-72	10
BASS	1805	56	3.10%	0-1373	0-88	10
MULLET	311	5	1.60%	0-275	0-200	0
FLOUNDER	287	30	10.40%	0-738	0-3.5	0
STING RAY	26	0	0%	-	-	0
BULL HUSS	26	3	11.53%	103-1499	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
						1582

Total No of Fish tagged to Date - 33,346



Appendix 10

A Glossary of Abbreviations

BIM	Bord Iscaigh Mhara
CFB	Central Fisheries Board
CM	Catchment Management
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
RTDI	Research, Technological, Development and Innovation
RIB	Rigid Inflatable Boat
SAC	Special Area of Conservation
SERTA	South East Regional Tourism Agency
ShRFB	Shannon Regional Fisheries Board
SRA	Salmon Research Agency
SRFB	Southern Regional Fisheries Board
SWRFB	South Western Regional Fisheries Board
TAM	Tourism Angling Measure
TRAM	Tourism and Recreational Angling Measure
UDN	Ulcerating Dermal Necrosis
WRFB	Western Regional Fisheries Board



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