

The Value of Recreational Angling For Grey Mullet
and the Case for Recreational-Only Status

A Position Paper by the National Mullet Club

4th September 2006



Cover picture: Leon Roskilly, who wrote the foreword for this paper, with a 7lb 12oz specimen thick lipped mullet from the River Medway in Kent. In common with the large majority of mullet anglers, Leon returned his fish unharmed to the water. Tagging has shown that the fish may well be caught again from the same area – a truly sustainable use of a fishery resource.

Foreword

By Leon Roskilly of the Sea Anglers' Conservation Network

One of the drivers for mullet anglers, many who return all the fish that they catch to the water, is the potential to catch especially large specimens.

The National Mullet Club issue certificates and trophies to mullet anglers reporting the capture of larger fish, and organises fish-ins around the regions where all fish are returned. The 'reward' to the mullet anglers taking part is photographs, reporting of captures in the Club magazine, and perhaps the possibility of obtaining a particular trophy for that year.

The competition nature of mullet angling (including individuals simply trying to beat their own 'previous best' record) results in anglers studying the species much more closely to understand the behaviour of mullet, and the marine environment that supports the mullet population.

So the larger fish become highly prized.

And because they are so prized, mullet anglers carefully return a (say) 6lb specimen in the realistic hope that it may be recaptured again at a higher weight: 7lb, 8lb, 9lb or even 10lb plus.

Evidence suggests that if larger fish are released after being caught, they may be caught again possibly several more times in the same area. The primary consideration in developing a recreational mullet fishery is to ensure a reasonable number of larger specimens are present. Very few mullet are taken by anglers "for the pot."

And yet mullet in UK waters take many years to reach specimen weight: 10, 15, 20, 25 years. When a 6lb fish is netted, maybe 15 or 20 years old, it will never become a prized specimen of 8lb plus.

And it will take nature one or two decades to produce another fish of that potential in that place.

When netted, an area that previously contained a mature population, including specimen sized fish, may slowly gain a new population of mullet, but it will be lacking those larger specimens in appreciable numbers for the next one or two decades. Even if the area is not netted again, the stock of larger fish may not regenerate in the remaining lifetime of many of the mullet anglers whose sport has been ruined for a very small return to the netsman.

The need is to conserve not only numbers of mullet available in bays, harbours and small estuaries but to provide a level of protection that will preserve mature populations containing a reasonable number of the prized larger specimens that are of the utmost importance to the serious mullet anglers.

Summary of Key Points of this Paper

- Mullet are sought by recreational sea anglers throughout the UK, including Scotland and rank as the fourth most important shore target species overall.
- Mullet are an important “gateway species” attracting many freshwater anglers and junior anglers into recreational sea angling.
- It is estimated that UK anglers spend £4.5 million per annum on mullet fishing compared to a commercial fishery valued at £800 000 p.a.
- On average anglers spend £21 – £25 to catch 1kg of mullet; their commercial value is around £1.70 per kg.
- Recreational mullet angling represents a greater economic return from the species while having a much lower impact on stocks. It is estimated that 90% of recreationally caught mullet are returned alive to the water.
- Mullet are vulnerable to commercial over-fishing. They are slow-growing, slow to mature sexually and only a proportion of the stock breeds in any one year. On average they do not reach sexual maturity until 44cm in length at 10 years old.
- NMC records stretching back 22 years show a gradual downward trend in catches by anglers
- NMC’s primary aim is Recreational-Only Status for mullet (in keeping with the assurance made in the Labour Party Charter for Angling 2005) as a means of reversing the downward trend in mullet stocks and of ensuring “Best Value” use of the mullet fishery.



NMC wants to see proper protection for mullet such as this 7lb 9oz specimen that is around 25 years old

1. National Mullet Club

1.1 The National Mullet Club (NMC) was founded in 1975.

1.2 The NMC aims are promote interest and efficiency in catching and the conservation of grey mullet of the three common species existing in Northern European waters, namely; **Chelon labrosus** (thick-lipped grey mullet), **Liza ramada** (thin-lipped grey mullet) and **Liza auratus** (golden-grey mullet).

1.3 NMC is affiliated to the National Federation of Sea Anglers (NFSA), the Sea Anglers' Conservation Network (SACN) and to the Marine Conservation Society (MCS)

1.4 The table indicates the geographical spread of NMC membership:

Area	% Membership
East Anglia, Essex, Kent	6
Sussex & Surrey	24
Hampshire & IOW	13
Dorset	10
Other South West	20
Wales	5
N. England & Scotland	8
Midlands	4
Overseas (CI, IOM, Eire...)	10

1.5 Some 90% of NMC members live on mainland UK and of these about one third (30% out of 90%) live in the area covered by the recent Invest in Fish South West report (Ref 1) which includes Dorset. It is very probable that NMC members are representative of the mullet angling population generally and thus that this one third fraction can form a reliable working assumption about the mullet angling population that will be used elsewhere in this document.

1.6 NMC only recognises mullet returned alive to the water in its trophy competitions and certificate scheme, and all mullet caught at NMC meetings must be returned alive. The sale of mullet on a professional or casual basis disqualifies persons from NMC membership.

2. Popularity of Recreational Mullet Angling

- 2.1 In common with other recreational sea angling organisations it is the case that NMC represents only a small fraction of its potential target membership.
- 2.2 There have been no comprehensive studies of the level of national participation in mullet angling
- 2.3 The recent Invest in Fish S.W. report (Ref.1) estimated that 8% of some 241000 recreational sea anglers in the South-West (about 19000 anglers) would list mullet in their top five target species.
- 2.4 Using the working assumption in section 1.5 would suggest an estimate in the region of 57000 recreational sea anglers on mainland UK with a similar level of interest in mullet.
- 2.5 Recreational mullet angling is most popular in the South-West and along the South Coast of England.
- 2.6 However, mullet are present and mullet angling practiced by NMC members at Torness in S.E. Scotland; Hartlepool; Suffolk and Essex; Kent, especially in the Medway area where there is a local Mullet Group; throughout Wales; Liverpool Docks; and at Ayr and in the Clyde Estuary in S.W. Scotland.
- 2.7 A recent NFSA survey (Ref 10) of the importance of different fish species by region concluded that mullet are the fourth most important target of shore anglers in the UK
- 2.8 Mullet angling is unique in attracting a significant following of coarse anglers to sea angling because the tackle and tactics used are so similar. There is a recent growing interest in fly-fishing for mullet that may similarly attract numbers of game anglers.
- 2.9 Often being highly visible and available in accessible environments, mullet are an important species in attracting junior anglers into the sport of sea angling and being catchable from quaysides, piers etc they form a realistic target for disabled anglers.

3. Mullet Angling Economics

3.1 The liF South West report (Ref 1) identified 54000 trips p.a. targeted at mullet with an average of 16.6 trips per annum per shore angling household directed at all species. Mullet would therefore represent the equivalent of 3253 average household annual expenditures which liF identified as £469 for shore-fishing households, giving a total mullet angling spend of £1.5million by South West sea anglers per annum. This under-represents the contribution of the small minority of private boat mullet anglers who would increase this figure marginally by spending more per annum than shore anglers.

3.2 A £1.5M S.W. total spend on mullet by recreational sea anglers may translate to a national total in the region of £4.5M using the working assumption in section 1.5.

3.3 liF quoted an average catch of 2.2 mullet per trip with an average mass of 0.6kg, giving an annual catch of $54000 \times 2.2 \times 0.6 = 71280\text{kg}$ and a value per kg of $\text{£}1\,500\,000 / 71280\text{kg} = \text{£}21$ per kg.

3.4 A survey of NMC membership in 2004 revealed an average annual spend specifically on mullet angling of £700.36 per member.

3.5 This expenditure breaks down into the following categories:

Direct Fishing Expenditure Tackle, Bait, Boat Expenses, Permits etc	48%
Travel Car Expenses, Public Transport	22%
Accommodation Hotel, Guest Houses, Camping	20%
Meals Pub Meals, Fast Food Outlets, etc	10%

3.6 The three year rolling average annual catch reported by members for 2002-2004 was 22.9 mullet of all three species per reporting member (see section 6.4). The average mass per fish was approximately 1.2kg giving an average annual total of approximately 27.5kg

3.7 Combining these data would suggest an average value of the mullet to the NMC member of approximately £25.50 per kg.

3.8 This value agrees acceptably with that calculated using liF data in section 3.3 above, and may not be untypical: less specialist anglers would spend less on mullet angling but would also catch less mullet.

4. Commercial Mullet Fishing Economics

- 4.1 The wholesale commercial value of mullet is typically £1.60 to £1.75 per kg (70p to 80p per pound) at Billingsgate (Ref 2) but may be less at local markets especially at times of surplus. NMC members have reported mullet used as pot bait, and even dumped where more valuable fish such as bass or sea trout have been the primary target.
- 4.2 The total recorded first sale value of mullet is in the region of £800 000 per annum, much from Scottish boats (Ref 3). However, the nature of the commercial fishery (see section 8.4) ensures that a substantial proportion of landings go unrecorded and disappear onto the grey market.
- 4.3 The commercial sale value of mullet is so low that few if any commercial fishermen can genuinely rely upon mullet for all or substantial part of their livelihood. Mullet fishing is often used as an "excuse" to carry on fishing for more valuable fish such as bass and sea-trout.
- 4.4 NMC regards commercial mullet fishing as a poor value over-exploitation of a common resource that would be much more effectively utilised by development of recreational mullet angling.



Mullet form an ideal introduction to recreational sea angling for youngsters because of the easy access to many venues. For the same reason they are an ideal target for disabled anglers.

5. Impact of Recreational Mullet Angling on Mullet Stocks

- 5.1 As calculated in section 3.3, data from the liF South West report (Ref 1) indicate a recreational sea angling capture by South West residents of about 72 tonnes of mullet per year.
- 5.2 NMC feels this figure may be about correct by default. The sampling method used by liF may well have overestimated the number of mullet trips (as mullet anglers are easily sampled as they generally fish by day in accessible locations). Set against this the 0.6kg average mass used seems very low at about half the NMC average, even allowing for regional variation.
- 5.3 Using the working assumption from section 1.5, 72 tonnes in the S.W. might convert to a national total of about 216 tonnes. There are other assumptions involved here regarding angler activity, catch rates and average mass of fish.
- 5.4 liF estimates a catch and release rate of 86% (and 14% retained) in the South West. Although good, in NMC's view this figure is significantly below the national average. In other areas of the country there is a much greater influence from coarse angling that has led to a greater uptake of catch-and-release angling for mullet.
- 5.5 liF also uses a blanket 10% mortality figure for released fish of all types. In NMC's view this is unduly pessimistic for mullet as the nature of their feeding and the tackle and tactics used mean they are very rarely deep-hooked; neither are they hauled up from deep water. Anecdotal evidence from NMC members suggests the accidental mortality rate may be 1% or less, essentially negligible.
- 5.6 In view of the above, NMC considers that the **national** mortality of mullet due to recreational anglers is probably considerably less than 30 tonnes per annum such as may be calculated by 14% of 216 tonnes and ignoring accidental mortality.
- 5.7 NMC would prefer recreational anglers to practice catch and release for mullet at all times and in all places; however, we believe the current level of angler exploitation of the fishery is entirely sustainable.

6 Catch Trends in Mullet Angling

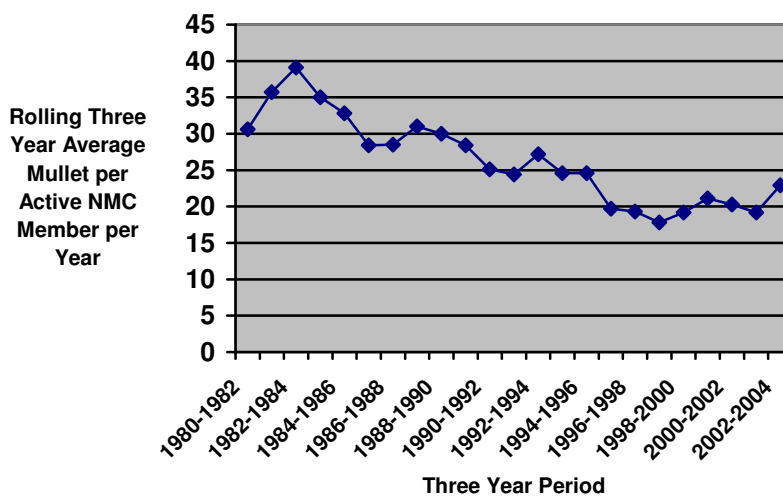
6.1 Anecdotal evidence from NMC members of long-standing is that mullet stocks have declined in many areas and members often have to travel further to obtain reasonable levels of sport.

6.2 The IiF South West report (Ref 1) found that 53% of anglers believed mullet stocks have declined compared to 11% who believed they have increased.

6.3 NMC members are encouraged to return monthly catch report forms. Generally between a quarter and a third of the membership do so. Aggregate annual data is compiled from these returns.

6.4 Annual "Mullet per Active NMC Member" data shows considerable year-on-year variability due to weather patterns affecting fishing effort during the summer/autumn mullet season and due to the variations in activity of a small number of particularly prolific members. A three year rolling average can be used to smooth over major variations without concealing long term trends.

6.5 The pattern of the rolling average, aggregating all three species of mullet, over the past 22 years is shown on the graph:



6.6 The main trend over most of this time period is clearly downward. Unusually high catches in 2004 (only) have caused the upturn in the three year rolling average in 2004.

6.7 The scale of the decline is almost certainly considerably **worse** than the graph suggests. The fall in catches has been mitigated by:

- An extension of the mainland season by approximately one month at either end due to recent milder winters
- Substantial improvements in tackle and angling techniques
- Anglers leaving formerly prolific venues and travelling further afield to find less badly affected venues.

7. NMC Tagging Survey

- 7.1 NMC conducted a low-intensity tagging survey of thick-lipped mullet between 1987 and 2000 with permission from (the former) M.A.F.F and the Marine Biological Association through whose offices the tags were returned.
- 7.2 The return rate was very low at barely more than 1%, with firm conclusions correspondingly difficult to draw.
- 7.3 Most returns were from short-term recaptures at or near the point of tagging, indicating fish remained in the same locality during the summer/autumn season.
- 7.4 Other recaptures were from the locality of the point of tagging the following summer/autumn season, indicating that at least a proportion of the mullet returned to that locality.
- 7.5 Two spectacularly long range recaptures were made of mullet tagged at Ayr in S.W. Scotland the following winters off the N.W. coast of France, and one such fish off Anglesey in the autumn presumed to be on its way south, on what is presumed to be a spawning migration.
- 7.6 Set against this, and from a much larger tagging sample, absolutely no evidence was found of fish from the English south coast crossing the English Channel. Similarly, no fish tagged in the Channel Islands has reappeared on the English coast. It is thought likely there is little if any cross-Channel mixing of stocks and that the English fish may simply move a relatively short way offshore to spawn. There was limited evidence of a westward movement along the English south coast during the autumn.
- 7.7 The migratory habits of mullet are complicated by their breeding regime, where only a proportion of the stock is believed to breed in any year. Thick-lipped mullet are thought to spawn on alternate years. It is likely that the spawning and non-spawning stock behave differently, but the tagging survey conducted was not sufficiently extensive or sophisticated to disentangle the differences.

8. Vulnerability of Mullet to Commercial Overfishing

- 8.1 Mullet are slow-growing fish. Thick-lipped mullet are thought to reach breeding maturity at about 40cm and at 9 years of age for males and 47cm and 11 years of age for females (Ref: 4a). Many mullet anglers regard a 5lb thick-lip as a good but achievable specimen; such a fish might be in the region of 55cm in length and nearing 20 years old (Ref 4b). (This growth rate data is quite old and may have been affected to a limited degree by recent warmer winters; it also does not take into account possible regional variations.)
- 8.2 NMC catch statistics in section 6.5 suggest mullet stocks are in gradual long-term decline and thus do not enjoy adequate protection at present. The removal of an already low MLS for mullet from 01/01/2000 is an example of such inadequacy.
- 8.3 The Marine Conservation Society recognises mullet to be under threat in its Good Fish Guide (Ref 5) and recommends that consumers avoid eating mullet.
- 8.4 The commercial mullet fishery is largely prosecuted using nylon monofilament nets deployed inshore, often by boats less than 10 metres whose catches are unrecorded, by fishermen who may be full-time professional but often are part-time or casual. Anecdotal evidence from NMC member suggests that virtually no area where recreational mullet angling takes place is safe from commercial attention, whether legal or illegal.
- 8.5 Inshore commercial fishing can have a disproportionate effect on mullet stocks in a local area as mullet are thought to become resident for the duration of the summer/autumn season (see section 7.3). Small estuaries and tidal creeks are particularly vulnerable. One netting of such a location in May could effectively end recreational mullet angling at that venue through to November.
- 8.6 Such damage could persist into following seasons (see section 7.4)
- 8.7 Large catches of mullet are occasionally made inshore in winter. For example, 3.5 tonnes of golden grey mullet were taken by seine net at Newquay in Cornwall in the 2004/05 winter (Ref 6). It is unclear if these are fish on a spawning migration or non-spawning fish tightly shoaled for the winter. Either way, such large catches are likely to have a severe impact on recreational mullet angling the following season(s) along whatever section of coastline the fish would have dispersed.
- 8.8 Overwintering/spawning mullet are vulnerable as a by-catch in the winter pair-trawl bass fishery active in the English Channel and SW Approaches.

9. Protection for Mullet Stocks

9.1 "Best Value" in the mullet fishery clearly lies with recreational sea-angling rather than commercial fishing. It may be the case (or may not) that by inclusion of grey market sales, total value of the commercial fishery matches expenditure by recreational anglers. But this is at the expense of what appears to be the gradual destruction of the resource which has a far higher unit value in the recreational sector, and which would otherwise use that resource sustainably.

9.2 Many of the proposals already made in the Bass Management Plan (Ref 8) and the NFSA's Gill Net campaign (Ref 9) would benefit mullet stocks. NMC is supportive of both of these initiatives and in particular supports the case for a netting prohibition to 1 nautical mile, known by anglers as "The Golden Mile" because of its importance to recreational sea angling.

9.3 NMC members expect the Labour government to deliver on the assurance in its Charter for Angling 2005 (Ref 7) that it will introduce a new Marine Bill including provision for "management of fish stocks such as ... mullet specifically for angling."

9.4 NMC's view is that there is a strong case for mullet to be designated as a "Recreational-Only Species" with a total ban on the commercial retention, transshipment, landing and sale of mullet.

9.5 In such circumstances, depending on NFSA policy, NMC would support the introduction of a recreational bag limit for mullet or for mullet to be designated a "Catch-and-Release Species", in effect a bag limit of zero.

9.6 If legislative powers do not currently exist to implement the measures outlined in 9.4 and 9.5, the proposed new Marine Bill will present the opportunity to introduce these powers.

9.7 In the absence of agreement on the above strategy, NMC would be prepared to discuss other models that give recreational anglers priority access to an improving stock of mullet. One such model could be:

- Immediate or phased introduction of a 50cm MLS for mullet to enhance the breeding stock and increase the population of larger fish of prime interest to anglers.
- Increases in minimum mesh sizes commensurate with the above MLS changes
- In the absence of a general netting restriction to 1 nautical mile, protection of particularly sensitive areas such as estuaries, harbours, warm water outfalls, etc. This restriction should include so-called hobby fishing by nets set from the shore and unpowered boats.
- Commercial mullet fishing outside these areas by license only; non-transferable licenses only available to bona-fide professional fishermen able to demonstrate historical involvement in mullet fishing.

- All commercial landings to be recorded; quay-side sales and back-door sales to pubs, restaurants etc to be prohibited.

9.8 In such circumstances it would be reasonable to introduce a recreational bag limit for mullet but not compulsory catch-and-release.

9.9 It is assumed that enforcement of such measures that are introduced would fall primarily on the revamped SFCs already announced by the Minister. It is essential that these bodies are constituted fairly with a balanced representation of recreational sea angling, commercial fishing and other stakeholder groups.

9.10 NMC welcomes recent measures to limit the pair-trawl bass fishery within the UK 6 and 12 mile limits and encourages all parties to continue to urge the EU to adopt similar measures throughout the fishery.



This mullet of over 8lbs may represent the pinnacle of this angler's mullet fishing career that has spanned many years and seen the expenditure of thousands of pounds on tackle, accommodation and transport. The fish was returned alive and if it evades nets may form a prized capture for other anglers in future. Its value to a netsman is likely to be a couple of pounds, or it may be cut up for pot bait.

10. References

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8. Bass Anglers Sportfishing Society: Bass Management Plan downloadable from the B.A.S.S. website <http://www.ukbass.com/>
9. National Federation of Sea Anglers: Gill Net Campaign
http://www.nfsa.org.uk/conservation/gill_net_ban.htm
10. NFSA survey results available from richard@rferre.fsnet.co.uk

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This document is available in electronic form at the NMC website
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