



Management Advice to the Castlemaine Fishery

2011



Iascach Intíre Éireann
Inland Fisheries Ireland

Management advice for the Castlemaine Harbour salmon fishery

May 2011

Executive Summary

- i) A commercial fishery in Castlemaine Harbour should be permitted in 2011.
- ii) Commercial salmon fishing should take place inside the Rivers Laune, Maine and Caragh.
- iii) The public draft net fishery should only take place in boxes A, B, C, D and E, as identified in the pilot study.
- iv) The management advice in relation to the methodology of prosecuting the fishery is that a multi strand monofilament draft nets are used, and they are deployed in the same manner as heretofore.
- v) Management further recommend that the TAC for Castlemaine Harbour should not exceed 1,162 fish, and the remaining 3,591 fish are to be divided between the private commercial fisheries in the Rivers Laune and Caragh. Should the 1,162 quota not be fully caught by the Castlemaine fishermen then net figure be reallocated to the private commercial fisheries.

Background

As part of the Genetic Stock Identification Project (ST-05-002) completed in 2005 juvenile salmon were collected from all five rivers entering Castlemaine Harbour and genetically analysed. Results indicated that all five rivers had genetically distinct salmon populations. Genetic analysis of the Rivers Emlagh and Behy salmon stocks showed that both stocks were distinguishable from other rivers in the area suggesting that, at least in some years, there was a discrete salmon stock entering the Rivers Emlagh and Behy. The Standing Scientific Committee considered that although small they were two unique and self sustaining populations. In addition the Rivers Emlagh, Behy and Maine were assessed as not meeting their Conservation Limits (C.L.).

In view of this information and in line with the Government decision to move to single stock fishing on stocks meeting and exceeding Conservation Limits by 2007 that commercial salmon fishing in Castlemaine Harbour was suspended.

In 2010 the Minister of State at the Department of Communications, Energy & Natural Resources allowed a pilot fishery to take in place inside Castlemaine Harbour and requested advice from Inland Fisheries Ireland (IFI) on:

“how a commercial salmon fishery could be operated on salmon stocks in the Castlemaine Harbour Special Area of Conservation in a sustainable manner, maximizing the opportunities for commercial fishing while ensuring that stocks are not over-exploited.”

A comprehensive monitoring programme covering all parts of the season (temporal) and all areas of the harbour (spatial) and facilitating genetic sampling of fish was prosecuted in Castlemaine Harbour during 2010.

Arising from this, two specific documents were made available and reviewed by the Standing Scientific Committee. Both of these documents are available as appendices to this Report.

- i) Report of the Pilot Salmon Fishery Operation in Castlemaine Harbour in 2010
- ii) Genetic Stock Identification of the Castlemaine Pilot Salmon Fishery 2010

Standing Scientific Committee

The Standing Scientific Committee have noted the following results;

“The two population samples from both the Behy and the Emlagh rivers included in the baseline of this study samples shows significant evidence of a high degree of temporal instability suggesting these rivers have a low population integrity.”

The Standing Scientific Committee acknowledged this new information and will not consider these rivers as discrete for the purpose of catch advice in 2011.

“The genetic report indicates that approximately 90% of the fish captured in the fishery derives from the rivers within Castlemaine Harbour / Dingle Bay area. Approximately 2.2% of the fish samples analysed (based in individual assignment) were from fish originating from Rivers outside Castlemaine Harbour / Dingle Bay. This figure could be lower if technical limitations to the assignment were taken into account.”

“Locations A and B which were the fishing locations outside Castlemaine Harbour at Cromane were more likely to take salmon from mixed stocks.”

Having reviewed the two reports, prepared following the pilot study in 2010, the Standing Scientific Committee advised the following;

- i) The fisheries should take place only on single stocks, which are meeting their conservation limits.
- ii) Fishing inside the Rivers Laune, Maine and Caragh is advised as this will reduce the possibility of intercepting fish from other rivers.
- iii) If it is not possible to operate the fisheries within these rivers then the fisheries should take place as close as possible to the rivers (i.e. the river mouths) or the estuaries of the individual rivers in order to reduce the possibility of intercepting fish from neighbouring and other rivers.

Provision of Management Advice

The Salmon Management Team in Inland Fisheries Ireland, comprising of Brian Sheerin, Head of Logistics, Dr Greg Forde Head of Operations, Dr Patrick Buck South Western River Basin District Director and Dr Ciaran Byrne, Chief Executive Officer met to consider the reports from the Castlemaine Harbour pilot study and the advice received from the Standing Scientific Committee.

Having considered the various reports and the scientific advice, the management advice for the Castlemaine Harbour / Dingle Bay for 2011 is as follows;

Fishery

- i) A commercial fishery in Castlemaine Harbour should be permitted in 2011.

Location of the Fishery

- ii) Commercial salmon fishing should take place inside the Rivers Laune, Maine and Caragh.
- iii) The public draft net fishery should only take place in boxes A, B, C, D and E, as identified in the pilot study.

Reasoning

The Standing Scientific Committee have indicated that if it is not possible to fish in the rivers fisheries should take place as close as possible to the rivers (i.e. the river mouths) or estuaries of the individual rivers.

The Standing Scientific Committee have also noted that the pilot study indicated that fishing out and further west in to Castlemaine Harbour will increase the likelihood of catching fish from a greater number of rivers, however the results from the Genetic Stock Identification project have suggested that “analysis of simulated fishery samples suggest that these apparent contributions from rivers outside Castlemaine Harbour may result from experimental error associated with mis-assignment from correct population of origin”. It was on this basis that the management advised fishing in boxes A to E.

Timing of the Fishery

- iv) It is proposed to operate a public draft net fishery within the defined mouth of the Caragh, Maine, Laune Rivers and in Castlemaine Harbour until the 31st of July 2011.

Reasoning

The Fishery is limited to the 31st of July, rather than the 14th of August, because in the executive summary of the Genetic Stock Identification report, it states that “fishing time may be more important than fishing area when considering management of these stocks”.

This may be of most importance in regards to the River Maine, the fishery with the lowest quota, as it appears the highest proportion of River Maine fish were caught over all areas in August (22.4%) as opposed to June(5.5%).

Method for Prosecuting the Fishery

- v) The management advice in relation to the methodology of prosecuting the fishery is that a multi strand monofilament draft nets are used, and they are deployed in the same manner as heretofore.

Reasoning

The Conservation Limit applied by the Standing Scientific Committee to establish the status of individual stocks is the “maximum sustainable yield” (MSY) also know as the stock level that maximizes the long-term average surplus, as defined and used by the International Council for the Exploration of the Sea (ICES) and the North Atlantic Salmon Conservation Organisation (NASCO). Thus, the catch advice provided by the Standing Scientific Committee has already factored in the precautionary approach, in addition the fishery is constrained by quota and timing, thus the management advice recommends that fishermen be permitted to use the most efficient methodology possible to harvest their quota of fish.

Division of the Fishery

- vi) Management recommend that the commercial TAC for the private and public commercial draft net fisheries taking place in the mouths of the Rivers Laune, Maine and Caragh and in Castlemaine Harbour is 4,753 fish.

Management further recommend that the TAC for Castlemaine Harbour should not exceed 1162 fish, and the remaining 3,591 fish should be divided between the private commercial fisheries in the Rivers Laune and Caragh.

Reasoning

Prior to the move to single stock fishing, on stocks meeting and exceeding Conservation Limits in 2007, the fishery in Castlemaine was managed on a District Basis, ie. a quota was allocated for the Kerry District and once the quota was filled fishing stopped. Following the move to single stock fishing, on stocks meeting and exceeding Conservation Limits, stocks are now managed on an individual basis.

In this regard, surpluses were set for each of the Rivers Laune, Maine and Caragh by the Standing Scientific Committee and the combined surplus for the three rivers considered individually is 7,547 fish. The original regulations prepared in late 2010 recommended a combined surplus for the three rivers considered individually of 7,149 fish. As the results of the Pilot Study and the Genetic Stock Identification report were not available at this point, this figure incorporated a precautionary management decision to reduce the surplus recommended by the Standing Scientific Committee on the River Maine by 398 fish.

However on consideration of the new information presented by the two studies and the scientific advice on the studies management were satisfied to use a combined surplus of 7,547 fish. When the surplus was recalculated for the three rivers taking into account the mixed stock fishery, the revised surplus was 7,238 fish.

Following the recent Fisheries District Committee meeting it was agreed that the Total Allowable Catch (TAC) for both the private and public commercial fisheries (excluding rod and line fisheries) on each of these rivers and Castlemaine Harbour would be;

River Laune; 4,060

River Caragh; 550

River Maine; 143

Total; 4,753 fish

This total must now be allocated between the private commercial fisheries in each of the rivers, Laune, Maine and Caragh and the public commercial fishery in Castlemaine Harbour.

For example the maximum number of River Maine fish which can be commercially caught in either the public commercial fishery in Castlemaine Harbour or the in the private commercial fishery in the River Maine is 143 fish. Similarly the maximum number of River Laune fish which can be caught in either the public commercial fishery in the harbour or the private commercial fishery in the river is 4,060 fish.

Thus using the precautionary principle the limiting factor is the low TAC for the River Maine. The TAC is 397 fish, of which 143 have been allocated to the commercial sector. In splitting the surplus (4,753) between the private commercial fisheries and public commercial fisheries we must ensure that no more than 143 River Maine fish are commercially exploited in total.

349 fish were caught in the pilot study up until the end of July in 2010 in Castlemaine Harbour. Using genetic identification techniques 243 or 69.9% of the fish were considered as having originated from the River Laune, 35 fish or 10.0% originated from the River Caragh and 43 or 12.3% originated from the River Maine.

As the proportion of River Maine fish caught in the pilot fishery up to the end of July was 12.3%, then by adopting the precautionary principle, 143 fish should represent 12.3% of the TAC for the Castlemaine Harbour Fishery, therefore the TAC for the Castlemaine Harbour public draft net fishery is 1162 fish ($143 = 12.3\% \rightarrow 1162 = 100\%$).

Therefore of the 4,753 fish available for commercial exploitation, a TAC of 1162 fish is recommended for public commercial draft net fishery in Castlemaine Harbour and the remainder, 3,591 fish are to be divided between the private commercial fisheries in the Rivers Laune and Caragh.

The 3,591 fish to be allocated as follows using previous defined methodology agreed at the Fisheries District Committee meeting, ie that 88% of the surplus (3,160) would be allocated to the River Laune and the remaining 12% of the surplus would be allocated to the River Caragh (431).

Summary Advice

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Final points

The presence of two other smaller rivers in the Castlemaine Harbour area which have salmon stocks is still unclear. The Standing Scientific Committee have agreed to base catch advice on only the larger rivers (Laune, Maine and Caragh) based on genetic evidence suggesting that the smaller rivers are not discrete and stable populations but they have reiterated that this situation should be examined in more detail.

Given that it was the distinct nature of the salmon stocks in these two rivers, and the fact that, in addition to the River Maine, they were below their conservation limits that the commercial salmon fishery in Castlemaine Harbour was closed, management also recommend that further work on the status of salmon populations in the two rivers be conducted.

The management advice presented in this document is based on the best information currently available, however the possibility exists that further new information may come to light which may alter the (science or) management advice being provided.

The pilot study in Castlemaine Harbour was completed following a specific request from the Minister of State at the Department of Communications, Energy and Natural Resources and the total cost of the project was in the region of € 40,000. This study was undertaken in exceptional circumstances and in the current climate Inland Fisheries Ireland does not anticipate being able to complete a similar study in other locations.

Finally it is important to note that officers from the Department of Agriculture, Marine and Food are preparing a Natura Plan for the Castlemaine Harbour for 2011 – 2016 and as part of this process Appropriate Assessments pursuant to Regulation 3 of the Statutory Instrument No. 346 of 2009 will have to be conducted. While it is too early to make any formal comment, the Inland Fisheries Ireland management team are of the belief that the output of the appropriate assessment process is unlikely to have implications for the management of the salmon fishery in Castlemaine Harbour.