



Central Fisheries Board
Protocol for a Salmon Survey in Waterford Estuary

June 2010



The Central and Regional
Fisheries Boards

Protocol for a Salmon Survey in the Waterford Estuary in 2010

Introduction

A proposal was made by the Waterford Estuary Fisherman's Association to the Minister of State at the Department of Communications, Energy & Natural Resources, to conduct a survey fishery in Waterford estuary in 2010. The Minister indicated his willingness to examine the proposal. The Southern Regional Fisheries Board and the Central Fisheries Board liaised with the Department in June 2010 regarding the implementation of such a study in the Waterford estuary in 2010. The proposal has two primary objectives;

1. To determine genetically the current extent of Irish river of origin salmon captured in Waterford estuary and to also determine the presence, if any, of salmon from other countries in the estuary.
2. To capture salmon over an extended period in summer and autumn to determine river of origin by genetic analysis within the Barrow / Nore / Suir river complex to provide a qualitative assessment of salmon stock abundance on the river Barrow where no stock estimate is currently available. A stock quantitative abundance estimate is available for the Nore and Suir rivers based on rod catch.

This current document sets out a specific Protocol for the operation of the survey which will be undertaken under the supervision of Inland Fisheries Ireland, South Eastern River Basin District, Clonmel with technical support from Inland Fisheries Ireland, Swords. A proposal for a survey, setting out the rationale and general proposal was drawn up by the Central & Southern Boards and should be read in conjunction with this Protocol.

Survey Fishery Locations

The objective of the survey is to determine the proportion of the salmon run temporarily and spatially destined for the Barrow, Nore and Suir over the main period of the salmon run. Five locations are proposed to determine the mixed stock nature of the salmon run at varying distances along the estuary. The exact locations of sampling will be determined by IFI Clonmel staff in consultation with local fishermen. Sampling over five discrete periods from June to late October period would allow the proportions of salmon from each river to be determined on a seasonal basis. Fishing during day light hours would be important from a health and safety perspective.

Due to the varying topography and tidal conditions prevailing in the five study areas, sample locations will be selected, in consultation with local commercial fishermen, using the following criteria;

- Safety
- Areas where nets can/cannot be deployed
- Tidal conditions
- Weather/exposed areas
- Obstructions

Fishing Times

Sampling at five locations over five periods, June/ early July, late July / early August, late August / early September, late September / early October and late October with a target of 40 salmon per site on each of the five occasions results in an overall target sample of 1,000 salmon.

Fishing will take place to attempt to catch the target of 40 salmon at each of five locations over five time periods. Fishing one day will allow sites 3, 4 & 5 to be sampled on one tide. Should this operation not succeed in reaching the target sample size, fishing may be attempted on subsequent days. Fishing at locations 1 & 2 on one day in the time period will also be undertaken and on subsequent days if the target sample size is not reached.

No fishing will take place if, for any reason, Fisheries Board staff are not available to take, record and collect samples.

Fishing Operation

Fishermen will provide a boat to undertake the survey of salmon stocks. An IFI officer will be present in this boat at all times. Officers in an IFI RIB will also be present at each fishing. Any salmon encountered in nets will be transferred to the RIB and sampled by the IFI officers and returned alive. Two large buoys will be placed at the end of survey nets to mark the net. The IFI RIB will liaise with any shipping traffic and ensure the survey does not interfere with navigation. Nets will be hauled if necessary so as not to disrupt navigation.

Fishing Records & Labeling

Data on date, location, fisherman, fishing method, location, tide, weather, etc. and catch will be recorded on a Survey Record sheet. (see Appendix 1).

The following labeling will apply. Fish will be coded initially based on site code, then fishing period and then fish number. For example 8 fish caught at site 3 during the first sampling period will be coded S1: Per 1: No1 to S1: Per 1: No8. The fish number will increase sequentially for each fishing period at each site, for example, the next period fish are captured at site 3, the fish number will S1: Per 2: No 9, etc.

The same numbering will be put on the genetic sample bottle and scale envelope as the record sheet for each individual salmon. Information on bye-catch, how the salmon were caught or meshed in the net, mesh size etc will be recorded.

Sampling

Two biological samples will be taken and retained from all salmon captured during the survey;

1. A tail punch sample, which will be preserved in alcohol (95% ethanol) in an individual container
2. A scale sample, which will be preserved in an individual envelope

Sample Label

A label should be attached to each sample container. A label should also be placed in the genetic sample bottle in case the outside label becomes illegible. This should contain the sample number, and if room allows, the date of sampling.

Field Notebook

The IFI staff member present responsible for taking the samples will keep a field notebook. In this will be recorded data on each sample taken – sample number, date, location, type of sample, who caught the fish, etc. Also anything about the sample and the sampling that may be needed for future reference or that may have been unusual. Recording information like this may be important to explain unusual lab results and also to doubly verify the authenticity of a sample.

Salmon Mortalities

Any salmon mortalities resulting from the capture methods will be immediately tagged using an IFI carcass tail tag. A genetic and scale sample will be taken in the normal way and processed the same as the samples for salmon released. The IFI officer will obtain a destruction order for the fish. Biological data on sex, length/weight and parasites will be collected and the ovaries will be retained from female fish for fecundity analysis.

APPENDIX 1

**Waterford
Estuary Fishing
Survey Record
Sheet**

Date	
Location	
Fishing Method	
Fisherman	
Fishing Period	
Fishing Start time	
Fishing Finish time	
Weather Conditions	
Tide	

Salmon Catch		GPS	Fork	Genetic	Scale
Total		Location	Length	Sample	sample
Fish Code No					
Fish Code No					
Fish Code No					
Fish Code No					
Fish Code No					
Fish Code No					
Fish Code No					
Fish Code No					

Bye-Catch	
Meshing	
Net damage	
Mesh Size	
Release information	

<u>General Comments</u>

Appendix 1a: Example of Completed Sheet

Appendix 1a:


Waterford Estuary Fishing Survey Record Sheet

Date	12/7/2010
Location	Site 3
Fishing Method	Survey net
Fisherman	Paddy Gargan
Fishing Period	Period 1 (early July)
Fishing Start time	10.00am
Fishing Finish time	6.00 pm
Weather Conditions	Slack winds
Tide	Ebbing tide

Salmon Catch	8 salmon	GPS	Fork	Genetic	Scale
		Location	Length	Sample	samp
Fish Code No	S1:Per 1: No 1	Xxxxxx	60.0cm	√	√
Fish Code No	S1:Per 1: No 2	Xxxxxx	56.5cm	√	
Fish Code No	S1:Per 1: No 3	Xxxxxx	66.0cm	√	√
Fish Code No	S1:Per 1: No 4	Xxxxxxx	72.4cm	√	√
Fish Code No	S1:Per 1: No 5	Xxxxxx	68.6cm	√	
Fish Code No	S1:Per 1: No 6	Xxxxxxx	55.1cm	√	√
Fish Code No	S1:Per 1: No 7	Xxxxxxx	69.8cm	√	
Fish Code No	S1:Per 1: No 8	Xxxxxxx	78.5cm	√	√

Bye-Catch	2 sea trout, 3 dog fish	
Meshing	salmon caught by teeth	
Net damage	No sign of net marks	
Mesh Size	3 fish caught in 3inch,	5 in 2 inch
Release information	Fish released unharmed	

<u>General Comments</u>



The Central Fisheries Board
Swords Business Campus,
Swords,
Co. Dublin,
Ireland.

Web: www.cfb.ie
Email: info@cfb.ie
Tel: +353 1 8842600
Fax: +353 1 8360060



**The Central and Regional
Fisheries Boards**