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Rates of Exploitation in Irish Waters

by

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Counters have been installed in a number of river systems in Ireland but the count obtained in many of these rivers is not a total count as under flood conditions there are escape routes other than the funnel or fish pass in which the counter is installed.

For the purpose of exploitation rates two river systems have been chosen i.e. River Shannon and River Corrib.

River Shannon: It is possible to get a complete count of all fish passing upstream in this river at Thomond Weir. This Weir spans the entire length of the river and there are a number of hatches where fish congregate and a visual count is made.

The data presented in Table 1 gives an indication of the rate of exploitation in a heavily fished estuary and the increase in exploitation rate in the 1960s compared with earlier years. The Shannon commercial fishery extends from Thomond Weir to about 50 miles downstream. In the upper tidal limits fish are taken in traps (Thomond Weir) further downstream in seine nets and stake nets and in the outer estuary in drift nets. There is a limit in the number of licences issued but due to improved techniques in fishing and more sophisticated gear the exploitation rate has increased. In the case of the River Shannon only the commercial catch is considered when calculating the exploitation rate as rod exploitation in the freshwater portion is very low - at a maximum 1%.

Also in the data presented no consideration is given to the escapement into the three major tributaries which enter the Shannon Estuary. Tagging experiments carried out from stake nets in the estuary showed that the contribution was not very high.

River Corrib: An electronic counter is installed in a barrage on the River Corrib upstream of the tidal and freshwater boundary. This counter gives daily records of all fish entering the freshwater portion of the river. In the tidal freshwater boundary traps are used for capture of salmon and further downstream there is a seine net. There was no other commercial fishing in Galway Bay prior to 1969 but in 1969 the area was opened for drift nets. The number of fish taken by drift nets in inner Galway Bay is included in the commercial catch as most of these fish are destined for the River Corrib. The exploitation rate for the River Corrib is given in Table 2. In 1971 due to the extreme drought conditions which prevailed in the west of Ireland the escapement into freshwater in the River Corrib was seriously affected when the escapement fell to 4,000 fish compared with an average of 16,000 for the previous years (1965-1970) and the exploitation rate was increased due to the fact that fish congregated in the tidal waters and had no chance of escaping upstream even at weekends when there is a prohibition on commercial fishing.

EXPLOITATION RATE FOR THE RIVER SHANNON (REVISED\*)

Year	Catch in Public Fishery	Total Run	% Exploitation Rate.
1952	20,240	28,286	71.6
1953	21,069	34,110	61.8
1954	20,067	30,288	66.3
1955	11,956	18,448	64.8
1956	12,922	22,324	57.9
1957	8,136	17,616	46.2
1958	18,141	33,121	54.8
1959	21,432	29,937	71.6
1960	17,537	23,286	75.5
1961	18,933	22,602	83.7
1962	41,885	55,079	76.0
1963	35,507	47,724	74.4
1964	26,371	37,367	70.6
1965	30,151	44,274	68.0
1966	20,982	28,109	74.6
1967	40,968	53,295	76.9
1968	41,588	54,280	76.6
1969	37,141	49,798	74.6
1970	38,697	47,849	80.9
1971	36,432	45,958	79.3

\*Reference -

Twomey E. Irish Salmon Home Waters Stocks and exploitation ICNAF Res. Doc. 70/32

EXPLOITATION RATES RIVER CORRIB

Year	Commercial Catch	Total Run	% Exploitation rate
1965	7,047	21,647	32.5
1966	7,499	16,614	45.0
1967	10,674	30,274	35.2
1968	8,357	40,157	20.8
1969	8,315	23,315	35.6
1970	6,081	17,829	34.1
1971	11,431	16,244	70.4