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International Council for  
 the Exploration of the Sea

C.M. 1974/ M:4  
 Anadromous and Catadromous  
 Fish Comm.

The Effect of Low Water Flow on the Eel Catches in the River Elbe

by

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In a former report (CM 1968/M 5) I have mentioned the close relation existing between water flow and the size of the eel catches from the River Elbe. During investigations carried out over many years on fishery with stow nets in this river it was found that good catches are yielded in years when the Elbe carries much water, but when it carries little water the catches are poor. We have constantly followed the course of eel fishery with stow nets. The question of how recent years, which were marked by drought, affected the catches, was of special interest. Table 1 represents the average water flow during the months of April to July inclusively. These are the months of the spring and summer fishing season. When comparing the figures with each other, it can clearly be seen that the water flow during the period after 1970 was by far below the normal water flow which had existed for many years. The same can also be applied to the water flow during the summer months, in this case, too, the values were below the average of the preceding years. In 1973 the water flow was extremely low. On the whole, it can be said that in the years 1971 to 1973 it was only about 60% of the normal water flow. It was, therefore, to be expected that also the eel catches would not be good. In column 5 of the table the average catch per stow net and day is given. While the average of the years 1956-1971 lay near 11,55 kg, the yield in 1971 was reduced to half and in the two following years to about 1/3. This is also very clearly demonstrated by the total catch as

shown in the last column. In good years it amounted to over 3000 kg, in the years with smaller water quantities to not even 600 kg per year. In order to show that the catch intensity remained unchanged the number of fishing days is given in column 4. As can be seen, no change has taken place.

Summarizing, the following can be stated: The extreme small water quantity during the past 2 years has had a very unfavourable effect on fishery in the River Elbe. This unfavourable effect is continuing as the water quantity of the Elbe is still very small.

year	Water quantity m <sup>3</sup> /sec average per annum	Water quantity m <sup>3</sup> /sec summer	fishing days	eel/ stow net/ day in kg	Total catch/ stow net in kg
1965	944	1030	168	20,88	3508
1966	1000	864	171	15,24	2606
1967	1060	739	168	12,22	2052
1968	841	611	196	7,44	1458
1969	803	673	161	12,93	2080
1970	816	804	155	12,71	1970
1971	689	517	149	6,62	987
1972	479	542	164	4,6	774
1973	453	457	148	4,0	596
	average 1926/70 722	average 1965/70 787		average 1956/71 11,55	

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