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ANNUAL MEETING - JUNE 1955

Report of the Scientific Advisers to Panel 5

The Scientific Advisers to Panel 5 held a meeting at St.John's, Newfoundland, on March 24, 1955. The following were present:

Canada	Portugal	United States
A.M.Fleming	M.J.O.Ruivo	J.R.Clark
J.L.Hart	(observer)	H.W.Graham
B.G.H.Johnson		G.F.Kelly
A.C.Kohler		C.C.Taylor
W.R.Martin	Spain	L.A.Walford (Chairman)
F.D.McCracken		J.P.Wise
H.D.Macpherson	A. Rojo	
J.E.Paloheimo	(observer)	
E.J.Sandeman		ICNAF
H.J.Squires		
T.N.Stewart		E.M.Poulsen
W. Templeman		

Haddock landings in 1954 were substantially higher than in 1953 in spite of a much decreased effort, owing to the 1952 year class, which produced the largest scrod catch in history.

United States biologists offered the following evidence to the Scientific Advisers of the Panel for their consideration on the question as to whether the study boat program might be discontinued after June 30, 1955.

They discussed the problem of estimating year class strength from the catch per day of 2-year old haddock from large mesh nets, and relating these estimates to those made similarly prior to mesh regulation. They defined the limits of accuracy for the period 1930 to 1949, described the effects of a tendency for small mesh vessels to fish concentrations of 2-year old haddock, and derived a suitable correction for this effect. The catches of 2-year old haddock by large and small mesh vessels were related. It was suggested that present data permits an estimate to be made of the strength of large year classes from large mesh vessel catches sufficiently accurately, on the basis of present data, to detect the effect of mesh regulation on yields of year classes of comparable strength before and after regulation. It was estimated that by the end of June, 1955, sufficient data would be available to reduce the error of estimate to 75 percent of its present value.

The Canadian biologists pointed out that -

(1) It would not be possible to test the effect of any regulation in Subareas 4 and 3 (see the Report on Subarea 4 - Doc.8).

(2) This puts the burden of demonstrating the effect of the mesh regulation on Panel 5.

(3) An increase in error in the measurement of year class strength would certainly depress, perhaps even completely obliterate, any demonstrable effect of the regulation.

(4) The method proposed by United States biologists would probably be satisfactory for measuring "supernormal" year classes, but not at all satisfactory for measuring "normal" and "sub-normal".

sized year classes.

(5) Canada would be willing to adopt a regulation in Subarea 4 only if an unequivocal test in Subarea 5 were continued.

(6) The United States has so far measured only two year classes since adoption of the mesh regulation.

(7) It would therefore be inadvisable to change the basis of this test until more year classes were measured.

United States biologists argued that -

(1) The 6 study boats constitute about 1/7 of the total fleet, which is a high enough proportion of the fleet to reduce significantly the effects of the regulation.

(2) Six boats provide a less satisfactory measure than the entire fleet. This refers to the fact that an estimate of the year class strength made from the catch of vessels using a small mesh would be based on six vessels, whereas an estimate made from the catch of vessels using a large mesh would be based on the whole fleet.

The group of advisers suggested that United States biologists study the validity of results obtained by reducing the number of study boats, engaging one or two to sample according to a planned pattern.

The group further recommended calling attention of the whole Commission to this problem, and urged the United States to apprise its haddock fishery people of the issue involved in continuing the study boat program.

The group noted a suggestion that continuation of the study program might be accomplished by subsidizing vessels for the purpose. This might be made a special project to be financed wholly or partly by the Commission, (cf. Art. VI, 1, Art. XI, 5).

In one area of New England there is a group of vessels which normally fish for both haddock and redfish. Redfish is their principal species but at certain seasons they land considerable quantities of haddock, in trips exceeding 5,000 pounds. However, the annual landings of haddock of individual vessels do not exceed 10% of landings of all species. These vessels leave port without prior knowledge of the availability of haddock so must carry small mesh. An annual exemption of 10% rather than a trip exemption of 5,000 pounds would prevent injury to this mixed fishery.

After considerable discussion the group decided that an annual 10% exemption would be unwise for the following reasons:

(1) It violates the principle that large mesh should be used when a vessel is fishing for haddock.

(2) It would open the door for a flood of requests for exemptions.

(3) Would allow vessels of one country to fish with small mesh alongside vessels of another country using large mesh.

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Necessity of mesh experiments on redfish was stressed.

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An error in the phraseology of the mesh regulation for Subarea 5 was noted. On page 14 of the 2nd Annual Report of the Commission, paragraph 1 line 18 should read "2 inches in 8 inches" instead of "2 inches in 9 inches".

The problem of conservation of yellowtail was discussed briefly, and U.S. biologists announced plans to undertake a research program to determine optimum age and weight at first capture and the effect of catching large quantities of small fish of this species.

The problems of redfish in the Subarea were discussed in the special meeting on this species which is recounted in a separate report. (Document No.10).

The United States research plans for the year are:

(1) Full time operation of Albatross II to conduct:

(a) quarterly surveys of the groundfish in Subarea 5.

(b) frequent plankton surveys for distribution and abundance of eggs and larvae of haddock, cod and other species.

(c) mesh selectivity experiments for haddock with meshes greater than 4½ inches and for redfish with various sizes of mesh.

(2) Continue a study, recently begun, on the biology of silver hake and yellowtail.

(3) Continue food studies of haddock and other groundfishes.

(4) Develop an underwater television camera as a tool for the study of mesh selectivity, fish behaviour and census of bottom feed.

(5) Continue study of the effect of mesh regulation of the haddock fishery in Subarea 5.

Canadian biologists urged that the United States undertake a biological study of cod in the Subarea.

Canada is not engaged in research in Subarea 5 except to make mesh selection studies on haddock in Pasamaquoddy Bay. These will be conducted in two different seasons to test whether seasonal differences in shape of fish produce differences in selectivity.

The Executive Secretary drew attention to the fact that some of the conversion factors in use between fresh and salt fish are less accurate than is necessary for Commission purposes. It is therefore desirable that the experiments on conversion factors, asked for in the Commission's recommendations, be carried out and reported as promptly as possible.

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