

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES  
=====Report of Meeting of Panel 1 - Amsterdam, October 10, 1951.

1. A meeting of Panel 1 was held at the Institute for the Tropics, Amsterdam, on October 10, 1951. The Commissioners for the contracting governments, Denmark and the United Kingdom, were present supported by advisers. Observers were also present from France, Iceland, Norway, Portugal, Spain, United Kingdom, United States of America, Food and Agriculture Organization of the United Nations and the International Council for the Exploration of the Sea. Mr. Lienesch of the host government and the Acting Executive Secretary of the Commission were in attendance. A complete list of the participants in the meeting is contained in Appendix 1 to this report.
2. The agenda adopted by the meeting is contained in Appendix 2 to this report.
3. Short statements were made by Denmark and the United Kingdom concerning the research hitherto carried out in Sub-area 1 and of the research contemplated in the future. These accounts were followed by observations on the same subject by the observers present. Among the reports the following items may be included:
  - (a) cod:
    - (i) Great changes in abundance resulting from large fluctuations in year-class strength have been apparent. The 1931, '32, '34, '36 and '42 year-classes have dominated the fishery and that of 1947 promises to be very large.
    - (ii) Cod now occur abundantly far to the north on the Greenland coast in sharp contrast with a very low abundance of cod in the Greenland area thirty years ago. A continuous study of such long-term trends in the fishery is essential as a basis for prediction.
    - (iii) In such northern waters fluctuations in year-class strength appear to be related to changes in water temperature. Continued hydrographic research is of the greatest importance to an understanding of changes in the fishery.
    - (iv) Poor catches are generally made where the water temperature is below 1.7°C. The mid-water cold layer in Greenland waters acts as a barrier to cod.
    - (v) Tagging results and the appearance of spawning fish in Greenland waters have shown that the Greenland stock is now largely independent of the Icelandic stock. The bank cod normally do not migrate into the fjords.

(vi) Growth is faster in the north on the banks and faster when year-class strength is low. The sizes caught differ accordingly. Some fjord cod grow very slowly.

(vii) Maturity now occurs at a younger age (7 years) than was the case about 1930 (9 to 11 years).

(b) Other species: Studies of the Halibut, Shrimp (Pandalus) and the Greenland Shark are being conducted.

(c) Denmark, Norway and the United Kingdom have made plans for continued research in Sub-area 1 during 1952.

4. A review of the fisheries statistics now available for Sub-area 1 was given in considerable detail by Dr. Hansen of Denmark and it was evident that in so far as Greenland was concerned these statistics seemed to be as full as could be desired. Dr. Lucas, on behalf of the United Kingdom, indicated that statistics have been made available for the area from British sources since 1932 but not before that for Sub-area 1 alone. Some account of available statistics was given by Norwegian and Portuguese representatives. Finally Mr. Gerhardsen indicated the extent to which FAO could assist in the collection of the statistics required by the Commission. There was a unanimous consensus of opinion that the most effective way of securing the statistics required by the Commission was for the Executive Secretary to approach the individual countries concerned with a specific schedule of what was required. Mr. Dobson interposed to explain that the Executive Secretary was proceeding to France, Spain and finally to Rome in order to carry out the necessary arrangements.

5. The long-term research program presented by the Danish representatives at the first meeting of the Commission was discussed and minor amendments were made. After some discussion the Panel adopted the program as set out in Appendix 3.

The desirability of exchange of planned research programs was emphasized and it was pointed out that such programs could be distributed along with summaries of research programs which are to be circulated sixty days in advance of each annual meeting of the Commission.

6. The relationship between the work of the Northwest area Sub-committee of the International Council for the Exploration of the Sea and Panel 1 of the Commission was discussed. Mr. Dobson indicated to the Panel the heads of an arrangement made with the President of the International Council on the subject of co-operation between the Commission and the International Council and reminded the Panel of the request made at the first meeting of the Commission for co-operation by the President of the International Council and the Commission's resolution relating thereto. In Mr. Dobson's view this covered the whole

question including that of Sub-area 1, and after discussion the Panel accepted these heads of arrangement as covering any particular arrangement in Sub-area 1.

Dr. Tåning then indicated his views on the desirability of publishing in the publications of the International Council some of the reports likely to emerge from the Commission and cited the Bulletin Hydrographique and Annales Biologiques as suitable for scientific reports. The more detailed statistics required by the Commission might on the other hand be included in Commission publications. Mr. Dobson pointed out that these matters could be raised at the second meeting of the Commission when there would be an opportunity to consider in greater detail the reports which the Commission proposed to issue.

7. The Panel summarized their discussions and decided to pass on the following recommendations to the Commission:

- I Statistics Subject to discussions of the whole matter at Rome between the Executive Secretary of the Commission and the Fisheries Division of the Food and Agriculture Organization, an approach should be made to each country concerned for a submission of appropriate statistics in a prescribed form for Sub-area 1.
- II Long-term Research Program The long-term research Program for Sub-area 1, as set out in amended form in Appendix 3 to this report, should be submitted to the Commission for their approval.
- III Co-operation with the International Council for the Exploration of the Sea in Sub-area 1. The closest co-operation should be maintained between the International Commission for the Northwest Atlantic Fisheries and the International Council for the Exploration of the Sea and this co-operation should refer particularly to Sub-area 1 where the respective areas of investigation overlap. The Panel considered that, among the individual items for co-operation, unnecessary duplication in the publication of scientific reports and statistics should be avoided. Scientific papers on certain special subjects such as hydrography might well continue to appear in the publications of the International Council, whereas fisheries statistics for Sub-area 1 might appear in the publications of the Commission.

Signed: B. Dinesen  
Chairman

APPENDIX 1

Participants

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|--|---|---|
| <u>Denmark:</u>  | Commissioners   | B. Dinesen - Chairman<br>Paul M. Hansen                               |
|  | Advisers  | Kristian Djurhuus<br>A. Vedel Tåning<br>Eske Brun<br>Laurids Thygesen |
| <u>United Kingdom:</u>   | Commissioner  | A.T.A. Dobson   |
|  | Advisers  | R.S. Wimpenny<br>C.E. Lucas   |
| <u>Observers:</u>  | France:   | Marius Terrin<br>M.P. Desbrosses                                      |
|  | Iceland:  | Arni Fridriksson  |
|  | Norway:   | Klaus Sunnanaa<br>Gunnar Rollefson<br>Olav Lund                       |
|  | Portugal:   | Alfredo M. Ramalho<br>Tavares de Almeida                              |
|  | Spain:  | Count de la Enjarada  |
|  | United Kingdom:   | J. Croft Baker  |
|  | United States<br>of America:                                      | Lionel Walford  |
|  | Food and<br>Agriculture<br>Organization of<br>the United Nations: | G.M. Gerhardsen<br>W.H. Schuster                                      |
|  | International<br>Council for the<br>Exploration of<br>the Sea:    | K.A. Andersson  |
| <u>Host</u>  | Netherlands   | G.J. Lienesch   |
| <u>International<br/>Commission for the<br/>Northwest Atlantic<br/>Fisheries</u> |   | W.R. Martin      Executive<br>Secretary                               |

APPENDIX 2

Agenda

1. Opening Remarks by Chairman.
2. Approval of agenda below.
3. Reports by the Commissioners, Advisers and Observers on the status of the fisheries and of research programs in Sub-area 1.
4. A review of the fisheries statistics available for Sub-area 1 and a consideration of the means whereby fisheries statistics for the Sub-area may be collected and transmitted to the Commission.
5. Consideration of Danish general long-term program for research work in Sub-area 1.
6. Discussion of the relationship between the work of the International Council for the Exploration of the Sea and the International Commission for the Northwest Atlantic Fisheries in Sub-area 1.
7. Formulation and adoption of recommendations to the Commission.
8. Other business.
9. Approval of report to the Commission.

APPENDIX 3Proposed General Long-term Research Program for Sub-area 1I HYDROGRAPHY

Study of the influx of Atlantic and Arctic water, especially over the fishing banks, north to Hare Island.

A. Routine sections from research and other well-equipped vessels across the main currents and fishing banks:

1. Off Cape Farewell to Hamilton Inlet.
2. Off Frederikshaab.
3. Across Fylla Bank.
4. Across Little Hellefisk Bank.
5. Across Great Hellefisk Bank.
6. Off Hare Island or west of Disko Island.

If possible, carried out in April, circa 1 July, late September, and once during winter (?). Hydrographic observations comprise: temperature and salinity down to 1,500 meters, some stations also to bottom in the open Davis Strait (sections 1 and 3); occasionally: phosphate, nitrate, and oxygen.

B. Drift-bottle releases in the main surface currents.

C. Routine surface temperature (and salinity) observations along steamer routes.

D. Observations from weather ship in the Labrador Sea.

E. Hydrographic observations in the southwest Greenland fjords.

F. Arrangement with ICES relating to routine sections for the study of influx of Atlantic water.

G. Studies of the influence of climatic changes on fish distribution and general fish biology.

H. Observations on ice conditions.

II PLANKTON

A. Phytoplankton sampling on routine hydrographic sections (standard net sampling; plankton recorder). Indicator species.

B. Determination of phytoplankton production. Relationship between environmental factors and production of plankton, and relationship between plankton and fish fry.

C. Quantitative and qualitative macroplankton sampling, inclusive egg and fish larvae, during the months April-September. Determination of spawning localities and dispersal of fry.

D. Investigation on the food of cod larvae and other fish larvae in relation to phyto- and zooplankton distribution, i.e. occurrence of food supply for larval and postlarval stages of cod and other fish larvae.

E. Comparative tests of nets and recorders used. Gear standardization.

### III. FISHERY AND FISH INVESTIGATIONS, ETC.

A. General experimental fishery (different gears). Studies in comparative efficiency of gears used and proposed used in Greenland waters.

#### B. Investigations

##### [ 1 ] Gadiformes

(a) Cod (Gadus callarias). Population survey of (1) fjords, (2) coastal areas, and (3) banks. Material from research vessels and commercial fishing.

Quantitative distribution (line experiments).

Variation in growth rate.

Marking experiments.

Observations on fecundity.

Quantitative distribution of eggs and larval stages (2 and 1m. stramin net, Hensen net).

See under "Plankton".

Determination of spawning grounds and time of spawning.

Determination of ripening in relation to size, time, and vitamin content in liver oil.

Comparison with Newfoundland-Labrador stock of cod as well as the Iceland stock of cod.

Collection of more detailed statistics (catch per unit of gear).

Meeting of experts for further development of methods used in age determination, etc.

(b) Gadus ogac, Greenland cod. General biology. Development elucidated by experimental investigations.

(c) Haddock, saithe, and other gadoid fishes. General biology.

##### [ 2 ] Pleuronectiformes

###### (a) Halibut:

Population survey from research vessels and commercial catches.

Marking experiments.

Spawning and larval distribution.

- (b) Greenland halibut:
  - Population survey.
  - Marking experiments.
  - Spawning and larval distribution.
  - Fishing experiments: new fishing areas of adults.
- [3] Sebastes (redfish or rosefish):
  - General biology. Determination of boundaries of spawning areas and drift of larval stages.
  - Length measurements of commercial catches.
  - Commercial fishing experiments with suitable gears (e.g. floating trawl).
- [4] Greenland Shark
- [5] Fish Food
  - (a) General studies of the importance of pelagic and bottom animals as food for important species of fish.
  - (b) Fish:
    - (1) Capelin, sand eel, etc. General biology.
    - (2) Herring. General biology and fishing experiments (echo sounding). Marking experiments.
  - (c) Invertebrates:
    - (1) Shrimps (Pandalus borealis). General biology; fishing experiments, especially research work on the occurrence in fjords as well as in the Davis Strait.
    - (2) Crabs, etc. General biology.
- C. Studies of fish as indicators of environmental changes (climatic changes).
  - (1) Marine fishes: above-mentioned species, and also seawolf. (General biology, marking experiments, etc.)
  - (2) Anadromous fishes: salmon and char. (General biology).
- D. Fishery statistics. Detailed analyses, improvement (e.g. catch per unit of gear).
- E. Experimental investigations in a permanent marine biological laboratory in Greenland.
- F. Adaptation of research results to commercial fishing (relation of temperature to cod fishing, echo-sounding records to cod and herring fishing etc.; improvement of local bait supply).
- G. Measures to be taken for protection of special marine-fauna elements (e.g. seals and walrus).

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