



— FIRST MEETING - WASHINGTON, D. C. - APRIL 2, 1951 —

Serial No. 10

RESTRICTED
DOC/31
April 6, 1951

SUMMARY REPORT
(MINUTES)
OF
PANEL, SUB-AREA 1

TIME: Thursday, April 6, 1951, 10:00 a.m.
PLACE: Louis Seize Room, Shoreham Hotel
CHAIRMAN: B. Dinesen (Denmark)

THE SECRETARY GENERAL (MR. WHEELER): Gentlemen, we have as the first item of business today the convening of Panel 1. The absence at this moment of the Canadian delegation, I think, will not prevent our convening the membership of this Panel. Therefore, it is my pleasure to call the meeting of Panel 1 to order and to refer to the Proposed Agenda for the Panels, DOC/3.

Item 1 of that agenda is the Call to order by the Secretary General.

Item 2 is the Provisional Adoption of the Rules of Procedure, with final adoption of those portions dealing with the election of a chairman.

MR. DOBSON (UNITED KINGDOM): Mr. Chairman, is that Document 3 around the table?

THE SECRETARY GENERAL (MR. WHEELER): I believe it was previously distributed, in the first issuance of the documents, and the Chair will pause a moment while you can look at Document 3, the Provisional Agenda.

MR. DOBSON (UNITED KINGDOM): Mr. Secretary General, may I raise a point here. Under Item 2, Provisional Adoption, until we have done that we can't appoint a chairman.

THE SECRETARY GENERAL (MR. WHEELER): Yes, sir.

MR. DOBSON (UNITED KINGDOM): But, may I point out, isn't the selection of a Rapporteur omitted?

THE SECRETARY GENERAL (MR. WHEELER): That was in the draft rules and has been eliminated, and I did not read that, Mr. Dobson. Inasmuch as the proposed agenda was published prior to this meeting, I did not read that motion.

MR. DOBSON (UNITED KINGDOM): If you want a motion, I propose we accept such of the provisional rules, so we can get on with the appointment of the chairman.

RESTRICTED
DOC/31
April 6, 1951

THE SECRETARY GENERAL (MR. WHEELER): I might suggest in that respect that I read Rule 7 only, which is as follows:

"The Panel shall elect from its members a Chairman for a term of two years who shall be eligible for reelection but not to a succeeding term. If the office of Chairman is vacated a new Chairman may be elected at the next meeting of the Panel for the unexpired balance of the term."

In that respect, I take your recommendation as a motion, Mr. Dobson.

MR. DOBSON (UNITED KINGDOM): Please.

THE SECRETARY GENERAL (MR. WHEELER): The Chair would like a second.

MR. DINESEN (DENMARK): Second.

THE SECRETARY GENERAL (MR. WHEELER): Thank you, sir.

Rule 7 is adopted, with the remainder of the Rules of Procedure provisionally adopted until later consideration.

With that matter settled, the next item on the agenda is election of a Chairman.

MR. DOBSON (UNITED KINGDOM): Mr. Chairman, I have great pleasure in proposing Mr. Dinesen, of Denmark, as the Chairman of Panel 1.

THE SECRETARY GENERAL (MR. WHEELER): The Chair hears the motion that Mr. Dinesen be designated as Chairman of Panel 1. There being no objection, it is so ordered.

MR. DINESEN (DENMARK): I thank you very much.

MR. DOBSON (UNITED KINGDOM): It is a great pleasure to me.

THE SECRETARY GENERAL (MR. WHEELER): Item 4 is eliminated, and if Mr. Dinesen will be kind enough to tell the Chair, we will proceed with the panel meeting.

THE CHAIRMAN (MR. DINESEN): We will now take up Item 5, adoption of the rules of procedure for panels. That is Document 4.

MR. DOBSON (UNITED KINGDOM): I beg to move them, Mr. Chairman.

THE CHAIRMAN (MR. DINESEN): Then it is adopted.

You see before you DOC/25, "Proposed General Long-Term Programme for Research-Work in Panel 1, Northwest Atlantic Commission." This program was worked out, before

RESTRICTED
DOC/31
April 6, 1951

we came here to this meeting, by Dr. Taning and Dr. Paul Hanson, and I would like to have Dr. Taning explain a little about this program.

DR. TANING (DENMARK): Gentlemen, it is of great importance for us in the different panels to have programs aiming at work carried out during several years. We have, in the ICES, made long-term programs for our work, and we are very satisfied with these programs because it is practical that everybody knows something about the problems which should be

RESTRICTED
DOC/31
April 6, 1951

solved by the research ships and in other ways in these different areas.

Therefore, we have made, in draft, such a long-term program, which I should like to put before you very shortly. Some of the items of this program are in progress just now. Dr. Hansen has carried out work in the Southwest Greenland fjords during many years, and of course he had to select first some of the most pressing problems for his work. Several of the items in this proposed long-term program are of great importance, too, but have not yet been considered during the work carried out. But these items of the program, must now be taken up, and we hope to solve them in due course.

We have also included in the long-term program such items which could be carried out at our leisure. When we have time, we should see what we can do with these items.

As I mentioned, this program is, in several respects, in accordance with the long-term programs adopted by the committees of the ICES, and as we have decided to collaborate closely, I shall not go more in detail as to this connection with the ICES.

As it is well known, the present cod fishing in Greenland waters is less than 50 years old. Previous to about 1924, we had a poor period for cod fishing, and we should go back more than 50 years before we had some similar cod fishing in Greenland waters. The present increase in the cod stock came with the rising temperatures in the sea, and the higher temperatures increased the areas where cod could find food in Greenland waters. The northern boundary of the good cod fishing areas in West Greenland fjords has been pushed 150 to 200 miles to the north during the last 25 or 30 years. Thus, the present climatic change has called forth this great difference, and we are, accordingly, very much interested in the studies of hydrographic fluctuations within this area, because the temperature means life or death for the West Greenland fisheries.

From this point of view, you must see our keen interest in the combination of hydrographical and biological studies, and our long-term program of hydrographic observations, therefore, is a very important item of the whole program.

It is, however, not sufficient to study the hydrography in West Greenland waters to follow these very important alterations. We have to go to the sources of the warm water, and that is the Atlantic, namely the warm Atlantic current, going north west of the British Isles. The warm waters which reach West Greenland move northward west of the British Isles, but east of Latitude 30°; then it streams south of Iceland, over the Denmark Strait, and around Cape Farewell. There are no other sources for warm water to the West Greenland area, and, as the cod fishing is dependent only on this water, it is very important that we study these currents.

Therefore, we would be glad, now we have entered into cooperation with the American side, if we could agree upon

RESTRICTED
DOC/31
April 6, 1951

some hydrographic program for the studies of the fluctuations in this influx of Atlantic water. And, of course, we have also to study the other currents, the Arctic Currents; i.e., the East Greenland Current, and the Labrador Current, and I hope that we, at the next meeting, for instance, could agree on a general hydrographic program for the North Atlantic, which should aim at studying the fluctuations in these very important currents which mean life or death also for other northern fisheries. I suppose that the Labrador fishery must be in similar situation as at Greenland, and that it would be an advantage to include the hydrographical studies there in a general North Atlantic program.

Of course, it is not possible, at this meeting, to go into the detail, of the program, but we on the eastern side of the Atlantic will try to carry out as much as possible of the program.

There are many good research vessels working now in the North Atlantic. There are the weather ships, which probably could help us, and the Navy is very much interested in these studies. Moreover, you have here on this side the Ice Patrol of the U.S. Coast Guard. And I suppose that we could get all these bodies interested in a general program.

You will see, in the long-term program for the hydrography in West Greenland waters, that we have proposed different sections. Most of them have been operated, during several years, as often as it has been possible, especially, of course, in the summertime because we may have very severe ice conditions in some parts of the Davis Straits that prevent work during most of the wintertime.

I will not go into further detail with respect to the hydrographic proposals. You have all had the opportunity to see the program, and I hope that you now will give us such remarks or suggestions to alterations which you may have.

The next item is the plankton studies. It has previously not been possible to carry out plankton investigations according to a fixed program in these waters, but now we hope that it will be possible to carry out some of the items mentioned in our program.

The next item concerns the fishery and fish investigations, and of course the studies of the cod predominate. You had an opportunity to get some information from Dr. Paul Hansen when we were last here, and he will also tell you a little about it when I have finished this very short review of the program.

The cod is the most important fish, and then we have the halibut, and the Greenland halibut, which are of some importance. Probably the halibut in Greenland waters cannot be protected any more in these waters. There might be introduced a minimum size, but the matter is a very difficult one.

RESTRICTED
DOC/31
April 6, 1951

Then, in our general program, we have the Redfish group, the Sebastes, which is of much importance, and is becoming more important for all countries where this fish is landed.

We are also proposing special studies in the different food items for the important fish species.

Moreover, we have put in a small paragraph on studies of fish as indicators of climatic changes. It might look unimportant, but the different fishes can be very good indicators of what happens in the sea. Some push forward when the conditions are good in the sea, and some retire when it is becoming colder.

The last items concern inter-alia fishery statistics, experimental investigations which should be carried out in a small laboratory which will be started in West Greenland as soon as possible.

I beg you now to see if you can recommend this long-term program. Of course, it can be altered and amended at the next meeting. But we should like to have something to work after in the future.

The different hydrographic sections in West Greenland waters are mentioned only by numbers here. If anyone is interested in knowing the position of the stations on these sections, I can give you a list of them.

Thank you.

THE CHAIRMAN (MR. DINESSEN): Thank you very much, Dr. Taning, for your interesting report. I should like to know if Paul Hansen has anything to add to the program of Dr. Taning.

DR. HANSEN (DENMARK): Perhaps I can give a short survey of the investigations we have made in Greenland waters and the knowledge we have gained. I shall only mention it very briefly as I know we do not have too much time.

The most important fish in Greenland waters is the cod. The cod fishery began in 1911 in a very small degree and increased very much in the following years, as soon as the cod appeared along the coasts, first in the southern district of Greenland and later on northwards.

RESTRICTED
DOC/31
April 6, 1951

The results of the cod fishery carried out by the Greenlanders during the years from 1925 to 1950 show that there was a very definite increase in the fishery until 1930, in which year it reached a peak, and then decreased to some degree. Please pay attention to that decrease, for it is the result of a very interesting fact. It is because some of the predominant year-classes of cod disappeared from Greenland waters over to Iceland.

After 1941 it increased very much. The decrease, in 1949, in the curve is due to a very bad year with very cold waters, where the cod were on the edge of the bank, and the fishery failed in many of the Greenland fjords, and the fishery began very late.

One of the most interesting of our studies is the study of the age of the cod, and the different year-classes which occur in the stock of cod. The predominance of the good year-classes is much more pronounced in Greenland waters than in other waters.

When the fishery started, we had a very good year-class, 1922. After this came the 1924 and 1926. Then for some years we have no good year-classes, but then appeared the year-class '34 and '36. These two year-classes have predominated in several years, from 1940 until now. But the latest two years are of lesser significance, due to the fact that a good year-class, 1942, has entered the catches.

I have made yearly age analysis of the cod stock for the years 1924 to 1950. In all, we have made age determinations on about 70,000 samples of cod otoliths.

It is very important to know when a good year-class enters the cod stock, as soon as possible. We are able to make predictions about the entrance of good year-classes in the stock of cods as soon as they are one year old. We take hauls with a seine along the coast and calculate how many cods of the different year-classes of small cod we get, and then we are able to make some calculations about whether we have a good or bad year-class before us.

The latest good year-class is 1947, but that has not yet entered in the catches--it is too small. They grow very slowly. We can see that the '47 year-class is distributed along the coast from the southern point of Greenland up to 70° N.L. They are along the coast in very great schools, quite like herring schools. I suppose when they are five years old, they will come into the catches, and we will have a good fishery in West Greenland waters.

We have also taken the average lengths of the different age-groups of cods and we have shown that in the beginning of the period, when we started the investigations, we have a very good growth rate. But in the later years, they grow very slowly. There is, for instance, a difference in the average length of cod of the year-class, 1922, and the year-class 1934 at as much as ten centimeters.

I suppose it is because we have so many cod that there is some competition for food, and they grow more slowly than before.

Another important study has been the study of the migration of cods by tagging experiments. We have tagged, from 1924 to 1950, more than 18,000 cods in Greenland waters. We have, in all, 992 recaptures in Greenland waters, and 462 in Iceland waters and in other waters. One has been taken in the Barents Sea by an English trawler, and another has been taken in the Faeroes waters. If we take all the recoveries together, we have 68.2 percent taken in Greenland waters, and 31.8 percent in other waters, especially Iceland waters. The total recapture percent is 8.

It is very interesting to see the fluctuations in the migration of cod from Greenland to Iceland waters. In the years after the war, we have got very few recaptures of marked Greenland cod from Iceland waters. In the period 1945 to 1950 we have only got 12 recaptures of cod marked at Greenland from the Icelandic area, while we have got 450 in the period from 1924 to 1939. That means, perhaps, that the Greenland cod has been acclimatized in Greenland waters.

We have also seen that, by our investigation on the occurrence of cod eggs and larvae, that we have much more cod fry than we have had before. At the investigations carried out by Dr. Taning at the banks in West Greenland waters he found ten times more cod fry in 1950 than we had in 1925 when we began the investigations.

That is about all I have to tell you at this time about the investigations.

In our statistical studies concerning migration, and the recoveries of marked cod we use the hole-card system. This system makes the work more easy.

Smaller cards are used for the age determinations. Each cod has its own card.

I could continue much longer, but due to the lack of time I will finish now.

THE CHAIRMAN (MR. DINIEN): Thank you very much. Now we have heard from the two Danish scientists regarding their program and I should like to ask if you have any comments or alterations on this program, or if it can be recommended now.

MR. DOBSON (UNITED KINGDOM): Mr. Chairman, Mr. Graham would like to speak on this subject.

MR. GRAHAM (UNITED KINGDOM): Mr. Chairman, we are very grateful to the Danish delegation for telling us about this work that has been done by them under the authority of the ICWS for so many years, and particularly to hear Dr. Hansen, who has given us a marvelous exposition of thirty years of work in such a short time.

RESTRICTED
DOC/51
April 6, 1951

There is no doubt, I think, from Dr. Hansen's researches, that his conclusion is right--that perhaps the stock has now become acclimatized in Greenland, as his marking experiments suggest, and we cannot but suspect that that development is associated with a climatic change, as Dr. Taning has suggested.

It is true that, in all this question of climatic change, we have not as many direct observations as we would wish to have. We must proceed on the basis that this fishery is the result of large-scale climatic change.

Now, it seems to me, Mr. Chairman, that if, during the next decade or so, this fishery begins to fail, no doubt there will be strong suspicions on the part of people who are conservation minded that this failure is due to the fishing operations, whereas those of us who have been in touch with this work for 30 years will believe that the failure is due to a reversal of the climatic change that we believe has produced this fishery. For that reason, sir, it does seem to me of great importance to this Commission's work that the kind of scientific research set out in this long-term program should receive the encouragement of this Commission, from the point of view of the future situation.

I don't know, sir, if we would all be prepared at this moment to adopt this program word for word. I have no complaints about it, myself. I just wonder if it would be worth including some studies of the Greenland shark as chief predator and enemy of our food fishes, and one which, from the point of view of the fisherman, is associated with poor catches of the other fishes.

When the Greenland shark migrates to the grounds, the other fish go away. That is the fishermen's story, and this may be associated with movements of the water, and so on. But I think that probably there are a good many of us who would like still further opportunity to study this program in detail.

I wonder, sir, if you would be prepared to consider a motion on the basis of adoption of this program in principle?

THE CHAIRMAN (MR. DINKLEY): Thank you very much.

MR. DOBSON (UNITED KINGDOM): Perhaps Dr. Wood would like to make a comment at this time.

DR. WOOD (UNITED KINGDOM): I would like to indorse what my colleague, Mr. Graham, has said. We have some interest in this area. I know our hydrographers are particularly anxious that there should be a link-up between the hydrography of the whole of the Commission area and our work in the Faeroe-Shetland Channel.

I don't know whether we can make any contribution to this work for some time, except that one of my colleagues is now interested in halibut, he is making a study of halibut, and he proposes, if he can get the opportunity, to visit West Greenland in a commercial vessel in order to continue his studies.

But I am afraid, at the moment, there is nothing much we can add to the program that you have proposed. However, I would like to emphasize the interest that we have in the hydrography of the region.

THE CHAIRMAN (MR. DIMSENF): Thank you. Mr. Sunnansaa.

MR. SUNNANSAAS (NORWAY): Mr. Chairman, we ought to be very thankful to the Danish Government for the fisheries investigations they have made in Greenland waters.

During the last four years, Norway also has made investigations there, and I can tell you that we will continue to do so. I think we should ask other nations fishing in Greenland waters if they are prepared to participate in the research work there.

I can advise some of the other nations of a cheaper way to do this. You see, the Greenland waters are far off from the European countries. If you send a research ship there, it costs you very much. But it is possible to make an arrangement with the ordinary fishing vessels, the Norwegian fishing vessels, to take on board research people for a trip. You can rent the ship for two or three weeks and you have the ship at your disposal. Then you can do the research work much cheaper than if you should send a ship

from some European country to Greenland waters.

I think in the future we should regard the fisheries in the Greenland waters, fisheries made by other people than the Greenlanders, on a combination cod fishery and halibut fishery. You see, I believe that it will be difficult for the European countries to carry on economical fisheries only on the cod. They have to combine the cod fishery and the halibut fishery.

Now, I think you will agree, Paul Hansen, that in the thirties, when the British and Norwegian big expeditions fished halibut there, I think they all fished the stock, and that may be the case again. If some fishing vessels will use two and four weeks in the middle of the season in the summertime to fish halibut on the special grounds, they may deplete the stock of halibut and make the total fishery, which I will say would be a combination of cod and halibut fishery, economically unprofitable for the industry.

The third item I wish to stress is this: we have a Commission area; a part of the cod is fished also outside the area in Icelandic waters, so we have to draw Iceland into the picture some way; Iceland is a member of the Commission but not a member of any panel, I think you are quite aware of that.

We know that at the moment the main stock of cod are living in Greenland waters, but that may change, and then the catch of cod in Icelandic waters might be of very great importance.

I should also mention something about the shark fisheries--the Greenland shark fisheries--but that is not so important. However, I agree with Mr. Graham that we should also keep in mind those fisheries.

THE CHAIRMAN (MR. DINESEN): Thank you very much.

CAPTAIN AUDIGOU (FRANCE): Mr. Chairman, this program will certainly be of great interest to my people in Paris, and I am very glad to know that this program will be considered as provisional and not final. We certainly will have to study it first.

THE CHAIRMAN (MR. DINESEN): Are there any further observations.

DR. TANING (DENMARK): I should like just to mention a few things. I agree with Mr. Graham that it is best to adopt this program only in principle, because you would have to study it in more detail and we are not specialists enough here to consider all the questions. But it was my intention that we should have some framework to fill in until the next meeting.

I was very glad to hear Dr. Wood's remarks about the hydrographic researches, and I hope that we can some time agree to a general hydrographic program for the whole North Atlantic.

I should like to propose that on page 2 of the proposed program, lines 2 and 3, we delete, after the word "water" the phrase "along the Southeast Greenland coast."

Relating to the halibut studies, we should be very grateful if you could carry out some collection of halibut otoliths for determination of the different age groups. Probably you could get such samples from halibut landed in England.

MR. GRAHAM (UNITED KINGDOM): That is very difficult, I'm afraid.

DR. WOOD (UNITED KINGDOM): It is easy with the small ones, but it is not so easy with the bigger fish. I know my colleague is trying to do what he can in that matter, and he won't miss any opportunity of collecting that material, I know.

DR. TANING (DENMARK): Thank you very much. I don't think I have any more to say. I am glad that our Norwegian colleagues will continue their work as before. It is very valuable and a great contribution.

THE CHAIRMAN (MR. DINESEN): Dr. Hansen.

DR. HANSEN (DENMARK): I have only a few remarks. As Mr. Graham said, it should be important to make some observations on the Greenland shark. We have done such observation work. We started just before the war by marking experiments, and we got some recoveries. We marked, in one of the South Greenland fjords, 77 Greenland sharks by ebony discs and we had recaptures of 7 Greenland shark. Some of the recaptures were made eight or nine years after the marking experiments were done. One was caught several hundred miles northward; another had migrated over to the east coast.

I can tell you that the Greenland shark is a rarer fish in Greenland waters than before, due to the increase in temperature. In South Greenland, and also in the Disko Bay in North Greenland, where we have had very good catches of Greenland shark in 1935 and 1936, we have tried again with a long line fishery and we have had very bad results. The Greenland shark is an arctic fish which moved northward when the temperature increased. I saw also from the Norwegian expeditions that they had to go to the northernmost part of Greenland to get good catches of Greenland shark.

I quite agree that it is very interesting to get a good collaboration with Iceland with regard to the Iceland and Greenland stock of cod. I should appreciate it very much if the Icelanders could do many more marking experiments at the spawning grounds in the spring, as they have done before. I have spoken to Dr. Fridriksson about that and he promised me that in the future they shall do much more marking work on cod than before.

I also appreciate very much the Norwegian fisheries investigations in Greenlandic waters. It is very valuable that the Norwegians participate in those matters and we must compare the results we have gained in the coastal waters with

the results of the Norwegians on the banks. But the bank is a very wide area, and I hope that we also, from the Danish side, will be able to make collections of otoliths for age determinations on the banks, so that we can cover the whole area with those investigations.

DR. TANING (DENMARK): Relating to this work on the Greenland shark, I should propose that we, on page 5 of the program, just before "C - Fishery statistics", put in a number "5 - Enemies: Greenland shark."

As to the question of the adoption of this program, I wish to say that we very much appreciate that our French colleagues will study the program and bring their comments to the next meeting.

CAPTAIN AUDIGOU (FRANCE): I shall forward this program in a few days with my report, and we probably will be able to tell you what we think of it even before the next meeting, if that will be of value to you.

THE CHAIRMAN (MR. DINESEN): Are there any further observations?

THE SECRETARY GENERAL (MR. WHEELER): Mr. Chairman, for the purposes of the record I would like to say that the document containing the proposed program is Document 25.

THE CHAIRMAN (MR. DINESEN): Are there any further observations?

CAPTAIN AUDIGOU (FRANCE): May I say that on page 5, paragraph d-1, the Greenland shark is mentioned.

DR. TANING (DENMARK): Here it is mentioned as an indicator of climatic changes.

CAPTAIN AUDIGOU (FRANCE): Only for that purpose?

DR. TANING (DENMARK): Yes, and now we have it also as an enemy.

MR. DOBSON (UNITED KINGDOM): Mr. Chairman, if you are willing to accept a motion for the adoption of Dr. Taning's extremely interesting program, which, as you have heard, is supported warmly on this side, as amended, I should be prepared to so move.

May I make two observations before that have a bearing on this? At the present moment, in the absence of the ratifications from France and Norway, who would both be members of this panel when they ratify, we only have two countries, of which obviously Denmark has carried out considerable investigations already under the aegis of ICES. It seems to me, therefore, it might be well to remind you that in October next we shall be having the annual meeting of ICES at Amsterdam, and, subject to anything my colleagues may say, we are all very busy on that occasion. But it might be possible, in the course of that meeting, to have a very small

informal meeting of this panel to keep the Commission apprised as to any progress. Perhaps we can then have a more effective panel with France and Norway.

I think it would be well not to lose that opportunity to have an informal meeting. Otherwise, we shall not have a meeting of this panel until the next regular meeting.

THE CHAIRMAN (MR. DINESEN): That might be a good idea.

MR. DOBSON (UNITED KINGDOM): We might leave it as a possibility.

Now, the other point I would like to raise is this: This is purely an administrative point, there is a question of how this information is to be conveyed to the Commission. This may be a matter that should come under the chairman's suggestion of an informal committee dealing with the relations with outside bodies. I think probably it had better go there.

As there are four countries who will possibly be carrying out investigations--Denmark, Great Britain, France, and Norway--I gather it is the wish on the Danish side that these results should be conveyed to the Commission through ICES. They would, in fact, coordinate the results. But I take it we might discuss that, Mr. Chairman, at our conference when we are dealing with ICES and FAO. It is a matter where we ought to know what is happening.

THE CHAIRMAN (MR. DINESEN): Thank you.

MR. DOBSON (UNITED KINGDOM): I move we adopt this in principle with the amendments.

THE CHAIRMAN (MR. DINESEN): I can second it. Then it is adopted.

The next item on the agenda is Number 6.

MR. DOBSON (UNITED KINGDOM): We have covered that, and we have covered Item 7.

THE CHAIRMAN (MR. DINESEN): Are there any comments on Item 7? Is there any other business? Are there any comments on Point 9? If there are no further comments, the meeting of Panel 1 is adjourned.

(Whereupon, at 11:10 a.m. the meeting was adjourned.)

- END -