INTERNATIONAL COMMISSION

FOR THE

NORTHWEST ATLANTIC FISHERIES

PROCEEDINGS
OF THE
22nd ANNUAL MEETING
AND THE
SPECIAL MEETING ON HERRING
1972

Issued from the Headquarters of the Commission
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ANNUAL MEETING - JUNE 1972

OFFICERS

Chairman of Commission	- Mr K. Løkkegaard (Denmark)
Vice-Chairman of Commission	- Mr R.A. Lagarde (France)
Executive Secretary	- Mr L.R. Day (ICNAF Secretariat)
Assistant Executive Secretary	- Mr V.M. Hodder (ICNAF Secretariat)

Panels

Chairman, Panel 1	- Dr D. Booss (Fed. Rep. Germany) acting for Mr G. Möcklinghoff (Fed. Rep. Germany)
" Scientific Advisers	- Mr Sv.Aa. Horsted (Denmark)
Chairman, Panel 2	- Mr R.H. Letaconnoux (France) replacing Captain Tavares de Almeida (Portugal)
" Scientific Advisers	- Dr A.W. May (Canada) replacing Dr W. Templeman (Canada)
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" Scientific Advisers	- Dr F.D. McCracken (Canada) replacing Dr G.F.M. Smith (Canada)
Chairman, Panel A	- Mr O. Lund (Norway)
" Scientific Advisers	- Dr A.W. Mansfield (Canada) replacing Dr G.F.M. Smith (Canada)

Research and Statistics

Chairman of Standing Committee on Research and Statistics	- Dr A.S. Bogdanov (USSR)

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Chairman of Standing Committee on Finance and Administration	- Mr Wm. L. Sullivan, Jr (USA)

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International Control

Chairman of Standing Committee on International Control	- Captain J.C. Esteves-Cardoso (Portugal)

PART I

PROCEEDINGS OF THE 22ND ANNUAL MEETING

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INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2872
(B.a.72)

Proceedings No. 2

ANNUAL MEETING - JUNE 1972

Ceremonial Opening

Thursday, 25 May, 1000 hrs

The Opening Session of the 22nd Annual Meeting of the Commission was convened in the Main Conference Room of the International Conference Suite of the Department of State Building, Washington, D.C. at 1000 hrs on 25 May 1972.

The Chairman of the Commission, Mr K. Løkkegaard, Head of Department, Ministry of Fisheries for Denmark, opened the 22nd Meeting of the Commission by extending to Commissioners, Advisers, Observers and Guests a hearty welcome. On behalf of everyone connected with the Commission and participating in the meeting which was about to begin, he expressed gratitude for the hospitality shown by the Government of the United States of America in hosting the Meeting and providing such ideal conditions for the work to be done. He explained that it was traditional for the Commission to start its sessions with what is called on the agenda "a ceremonial opening" to which guests were invited and which is open to the public and press. He said that through the years, the Commission has had the privilege of being addressed by prominent people from the host country. He pointed out that the tradition had not been broken this year and expressed his pleasure at being able to call upon James T. Lynn, Under Secretary, Department of Commerce, who addressed the Meeting on behalf of the Government of the United States of America as follows:

"The Government of the United States is honored that the International Commission for the Northwest Atlantic Fisheries has accepted its invitation to hold the 22nd Annual Meeting in Washington, D.C., and extends to the Commissioners, and other participants a very warm welcome. We are very pleased to be your host, and find it particularly fitting that the Commission should return again to Washington where it held its First Annual Meeting in 1951, 21 years ago, and where it met in 1961, 11 years ago. Washington was the birthplace of the Commission; it gives us special satisfaction to receive the Commission again at a time when it may be said to have come of age.

"At that First Annual Meeting, 21 years ago, the participants faced the delicate task of launching a new experiment in international fisheries cooperation. They went about their work with confidence and skill, creating ICNAF---an organization that has become known throughout the fisheries world as one of the most sophisticated of international management bodies. The pioneer work of ICNAF in scientific assessment of stocks and regulatory techniques stands as a model for newer commissions. You have demonstrated that scientists from many different nations through intensive study, effort, and cooperation can provide the scientific foundation for international conservation programs. In the regulatory and enforcement field, your strength has been an innovative approach to changing problems. It is especially noteworthy that only last February ICNAF became the first multilateral fisheries commission to recommend national catch quotas in a major international fishery.

"Yet, the complex fisheries of the Northwest Atlantic have been a stern testing ground, and we have gained no measure of security with age. Problems have grown faster than solutions, and fisheries have expanded faster than our conservation programs. Thus, I believe, it no exaggeration to say that the future of the Commission, the future of our resources, and the future of our fisheries is now more precarious than ever. We might ask ourselves if this young adult is up to the task.

"For perspective, it might be helpful to look back for a moment at the intervening years since the Commission was formed. We have seen expansion of fishing effort that was not dreamed of in 1951. Since that time, country after country has turned to the Northwest Atlantic with great new fishing fleets seeking rich harvests---often as substitutes for declining yields elsewhere. At the 1951 ICNAF Annual Meeting there were participants from 5 member countries. Today, we have with us delegates from 15 member countries and still others participate in the fisheries. In 1951, a little over a million tons of fish were harvested in the Northwest Atlantic; three times that amount has been taken in some recent years.

"At that first Annual Meeting there was a spirit of optimism noted in the Chairman's Closing Statement when he said:

"We have with us in the area healthy fisheries for the most part, with some limited problems requiring attention."

"He also said:

"This is the first time in the history of international cooperation in fisheries that an international body has been established in advance of serious crises in the resources."

"We are not so fortunate now. Our conservation problems are no longer limited, and crises in the resources have burst upon us. We have seen massive fisheries develop in the space of a brief period, taking enormous yields from one fish stock after another, only to be confronted with the collapse of the resources supporting these fisheries. From the vantage point of the Commission's early years, it must have been hard to imagine that the great schools of herring, haddock, and other groundfish could ever be exhausted. Yet, now the haddock have all but disappeared in an economic sense; the most stringent controls on herring fisheries are required because of serious depletion, at least of those stocks off the coast of the United States; and no less than seven other species of marine resources are named on the agenda for this meeting as being in need of conservation.

"Our scientists tell us that the fishing capacity or effort deployed in the Northwest Atlantic is out of proportion to the resources. For years they have been telling us that there are far more vessels present than are needed to maximize harvests. More recently, they have been warning us that this enormous capacity is so mobile that it can move easily from resource to resource depleting and destroying each in turn. We spoke of the seriousness of this problem in our opening address to ICNAF at the last meeting in the United States in Boston in 1967. Fishing effort has continued to grow since then and the term "serious problem" which we used in 1967 is totally inadequate to describe the crisis we are facing now.

"We in the United States are convinced that the fisheries in the Northwest Atlantic can survive only if there is a well-nigh revolutionary change within the Commission equalling the revolutionary change in fishing, or alternatively, if the Commission and the international cooperative approach, which it symbolizes, are abandoned in favor of another approach.

"Many nations seek now a change in approach to fishery management through change in international law. Although we, in the United States, favor the international cooperative approach, I must say that the United States is ready to accept another solution involving juridical changes before it will tolerate the destruction of US fisheries because of widespread depletion of the resources of the Northwest Atlantic. We have said as much on earlier occasions in this Commission. We have made new proposals recently in the United Nations Law of the Sea Preparatory Committee in New York earlier this Spring.

"There are signs that ICNAF, in its work on national catch quota schemes, is moving to offer a meaningful alternative. Although only a start has been made, it has attracted much attention and many will be watching to see how you carry though. No one will be watching with more anxiety than the American fishermen who fish the Northwest Atlantic. They are not overwhelmed with the success of ICNAF. Their opportunities, always limited to fish stocks within relatively short range of the coast, have diminished as stock after stock has been reduced in abundance. With the imposition of regulatory control on those resources, American fishermen have turned to others in coastal waters only to find them already the objective of massive fishing effort.

"These American fishermen are also less than enthusiastic about the Commission's first efforts in the allocation of catch quotas, for they feel that the Commission has not adequately taken into account their unique position. Their attitude is reflected in the action taken by the Committee established pursuant to Article V of the Convention to advise the US Commissioners to ICNAF, when it recently voted formally in support of immediate US withdrawl from ICNAF. This Government has taken their recommendation under advisement and will make a decision on it next month, taking into account Article XVI of the Convention. Your success or failure in bringing about the necessary changes will have an important bearing on this decision.

"With so much at stake for fishermen, for the resources, and for the entire "ICNAF" concept, I hope that you will approach these tasks with the same dedication displayed when the Commission was created 21 years ago. The problems of setting quotas, determining national allocations, and arranging enforcement procedures will obviously be difficult. The technical capacity and necessary authority to act has been built into the Commission. It remains only for you to use this mechanism to its full capacity. Can it be made to work? This may be the last real chance to try.

"At this meeting, you will be absorbed with an unusually long agenda of immediate problems. These are pressing matters and the Commission will be judged on the way in which it deals with them. However, I would also urge you to give some attention to the basic cause of our difficulties---the excess fishing effort found everywhere in the North Atlantic. Solutions to this fundamental problem will obviously involve long-range planning. Nevertheless, until we do find solutions, interim protection for one species will simply divert the threat of resource depletion without lessening it, and we will continue to experience one crisis

after another. We can no longer afford that luxury.

"Perhaps some have thought that as one resource disappeared there would always be others. For the small coastal fishing vessels in the historic fish ports of New England, this has never been the case. There is no future for our fishermen if the rest of the fish off New England go the way of the haddock. We intend to see that this does not happen. I cannot overemphasize this. My Department is close to our fishermen in New England. I understand their feeling of desperation. They have no future, unless we find a better way than the one ICNAF follows now. That is why we speak to you with a feeling of urgency.

"From the broader standpoint, however, I question whether there is a future for any of us in fisheries if we do not halt the resource disasters coming now with such frequency. I have spoken of the problems facing our coastal fishermen, but where will those of you with distant water fleets turn if these disasters continue? Where will anyone turn?

"I have spoken frankly to you of these problems because we in the United States believe that the situation is grave, and because at the same time, we are hopeful that there is yet opportunity to correct it through the regional international approach; but there must be the will to make that approach work. There must be hard decisions, and they must be made now.

"We are happy to have you here in Washington again and offer you a most sincere welcome."

The Chairman thanked the Under Secretary for his warm welcome and agreed that there were many problems of a serious nature facing the Commission. He could not, however, agree with all points made by the Under Secretary. The Chairman assured the meeting that Member Countries were aware of the obligations and responsibilities on their shoulders and that they would do their utmost to find better management of international fisheries. He agreed with the Under Secretary that enormous development has taken place in the fisheries since 1949 when the Convention was signed in Washington and that as a consequence the problems had increased. These developments had made it necessary to make changes in the text of the Convention, the most important one of which perhaps was the power to allocate national catch quotas. He pointed out the remarkable speed with which this new tool had been used. Only one month after coming into force, the new tool had been used at an extraordinary meeting of the Commission in Rome in January 1972. Developments and changes were reflected also in the agenda of the present Commission Meeting by the great number of proposals included in it. However, it is not enough, he said, just to have new tools. There must be intensified international cooperation with more patience and goodwill from all Countries taking part in the Commission's work---and, not the least of all, a spirit of compromise is indespensible. In many other fields, he said, life goes on without international cooperation or at a lower and more inefficient stage of international cooperation. Modern fisheries, however, are international in their very nature. Fish do not respect boundaries. The principle of freedom of the seas has been the guiding principle---the foundation of fishery activities. He pointed out, however, that freedom of the seas does not mean that everybody can behave as he likes but it means that no one can claim a monopoly on the rights of exploitation. With such a background, international cooperation becomes a compelling necessity and failure to achieve agreement, consequently, more serious. That, he said, is where our responsibility comes in. However, people insist on results from ICNAF and similar bodies often beyond that which they can reasonably be expected to achieve and with the desired speed. They insist on this either in order to prove the efficiency or the inefficiency of those bodies. In both cases---with both motivations---people run the risk of destroying an advanced international cooperation without having anything of value to replace it. He added that there is today, a tendency among people, who do not know the details of the work done and who do not realize the general difficulties in international cooperation, to insist on results on specific points of interest to them and if they do not have these results, they want to take matters into their own hands. Such an attitude, he felt, was outdated decades ago. He said that international cooperation is based on the spirit of compromise---and compromises are normally not ideal for either party. He emphasized that over the years of the Commission's existence, an international scientific cooperation has been built up, which is a model in other international fields. The atmosphere of negotiating and the openness of the discussions is far above average and should not be destroyed.

He concluded by repeating in addition to what might already be considered a fullsome praise of ICNAF, that he felt all Member Countries of ICNAF were fully aware of the increased demands on the efficiency of the organization and that they would do their utmost to live up to these demands. They know better than anyone that overfishing is knocking at the door---has even passed the threshold---and that immediate action is necessary.

The Chairman thanked the Meeting for its attention and declared the 22nd Annual Meeting of the Commission recessed to 1200 hrs when it would begin work on its long agenda.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2873
(B.e.72)

Proceedings No. 3

ANNUAL MEETING - JUNE 1972

Report of Meeting of Panel 1

Saturday, 27 May, 0900 hrs

1. In the absence of the Chairman, Mr G. Möcklinghoff (Fed.Rep. Germany), Dr D. Booss (Fed.Rep. Germany) opened the meeting and welcomed members of the Panel and Observers. Dr Booss was appointed Chairman for the session. All Member Countries of the Panel were represented and Observers from FAO and ICES also attended.

2. Rapporteur. Mr B.B. Parrish (UK) was appointed Rapporteur.

3. Agenda. The draft agenda for the meeting was approved.

4. Panel Membership. No changes in the membership of Panel 1 were proposed.

5. Report of Scientific Advisers. The Chairman of the Scientific Advisers to Panel 1, Mr Sv.Aa. Horsted (Denmark) presented the Report of the Meeting of the Scientific Advisers and a summary of the Status of the Fisheries and Research Carried Out in Subarea 1 and East Greenland (Appendices I and II). He drew attention to the continued low fish production in the Subarea in 1971, especially of cod, due largely to reduced fishing activity owing to adverse environmental conditions and the low abundance of the exploited cod stock. He indicated that the reduced fishing activity had not been accompanied by a reduction in the fishing mortality rate which has been maintained at a level near to that giving the maximum yield-per-recruit. This and the relatively poor recruitment prospects in the immediate future indicates that cod catches in 1972-73 are not likely to be more than about 100,000 metric tons.

The Panel noted with approval the STACRES recommendations concerning developments in the study, appraisal and reporting of environmental features in the Subarea, especially those relating to ice, temperature and salinity conditions. It also strongly endorsed the recommendations of STACRES regarding the vital need for all Member Countries to supply, in a timely way, the basic scientific data required for assessment work, especially the statistics of catches and fishing effort and the size and age composition of catches. Mr Horsted pointed out that some Member Countries have failed to fulfill the minimum statistics collection and catch sampling requirements to meet these needs. The Panel accordingly

recommended

that the statistical and catch sampling requirements should be set out by the Chairman of the Scientific Advisers in consultation with the Secretariat and sent to all Member Countries fishing in the Subarea with the request that they implement their collection and reporting as a matter of high priority.

6. Conservation Measures for Subarea 1. The Panel noted that the Scientific Advisers had made no specific proposals for additional conservation measures in Subarea 1. It was agreed that since questions relating to salmon, and to the Canadian proposal concerning the full utilization of catches of regulated species in the Convention Area (Comm.Doc. 72/20) would be dealt with in a joint meeting of Panels and, therefore, agreed not to consider them further at this Panel meeting.

The Panel also noted that while no specific proposals for further conservation measures for cod in Subarea 1 had been proposed, proposals for the fisheries in other Subareas, before the Commission at this Annual Meeting if agreed and implemented, could result in the diversion of fishing effort to the Subarea and thereby increase the fishing interests on the already fully exploited cod stocks there. It was, therefore, agreed that the Panel should consider fully the need for catch quota or other additional regulatory measures at its next Annual Meeting, in the light of the latest scientific information and of the regulations agreed at this Commission meeting for other fisheries. The Panel requested that its Scientific Advisers prepare an up-to-date assessment of the state of the stocks in the Subarea for that meeting, including estimates of the recommended allowable catch for 1974, as the basis for a catch quota regulation.

7..

7. Future Research. The Panel noted and approved the plans for future research in the Subarea as set out in the Report of the Scientific Advisers and National Research Reports.

8. Date and Place of Next Meeting. It was agreed that the next meeting of Panel 1 would be held at the time of the 1973 Meeting of ICNAF.

9. Approval of Panel Report. It was agreed that a draft of the Panel Report would be circulated for approval among the Panel Members.

10. Adjournment. There being no other business, the Panel adjourned at 1035 hrs.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2873
(B.f.4)

Proceedings No. 3
Appendix I

ANNUAL MEETING - JUNE 1972

Report of Meeting of Scientific Advisers to Panel 1

Wednesday, 24 May, 0900 hrs

1. The Chairman, Mr Sv.Aa. Horsted (Denmark) opened the meeting and welcomed Scientific Advisers and Observers.

2. Mr B.B. Parrish (UK) was appointed Rapporteur.

3. Scientific Advisers from all Member Countries of Panel 1, except Norway, Poland and Spain, were present. Observers from Canada and ICES also attended.

4. The Agenda as circulated was adopted.

5. Report of Chairman of Scientific Advisers. The Chairman presented his summary report on the Status of Fisheries and Research Carried Out in Subarea 1 and at East Greenland in 1971 (Appendix II; also Res.Doc. 72/132), which excluded reference to the salmon and seal fisheries in the Subarea. The Report was adopted subject to minor amendments.

It was agreed that because of the close link between the cod stocks in the Subarea and that at East Greenland it was very desirable to include information on the status of the East Greenland fisheries in the summary report. The Scientific Advisers

recommend

that all Member Countries include information on their fisheries off East Greenland in their annual Research Reports to the Commission.

6. Information on Fisheries in 1972. Mr Horsted reported that cod catches by the Greenland fishery in the first quarter of 1972 had been substantially greater than in the corresponding period in 1971. This was primarily due to an increase in the numbers of trawlers operating but also to larger concentrations of cod, especially in the Banana Bank area.

Dr A. Meyer (Fed.Rep. Germany) reported that good cod fishing had also been experienced by German trawlers in January and February 1972 in the Fyllas Bank-Banana Bank areas on existing concentrations, mainly of the 1966 year-class. With the onset of adverse ice conditions in March the fleet moved to East Greenland and more recently to Southwest Greenland grounds where good fishing was experienced on cod concentrations mostly of the 1963 year-class.

Dr J. Magnusson (Iceland) reported that Icelandic trawlers had experienced good fishing on cod and redfish at East Greenland since April 1972. He indicated that ice conditions and water temperatures were favourable for fishing, and that extraordinarily large concentrations of young redfish had been located on the offshore banks in this area.

7. Review of STACRES Report. The Chairman drew attention to items of major relevance to Panel 1 in the Reports of STACRES and its Subcommittees and Working Groups, including the Joint ICES/ICNAF Working Group on Cod Stocks in the North Atlantic.

The meeting noted with approval and endorsed the recommendations by the Environmental Subcommittee that a member of the Oceanographic Laboratory, Edinburgh (UK) be invited to attend its next meeting to report on the Plankton Recorder Survey program; that information on ice conditions should be included in national research reports; that ice experts, forecasters and meteorologists should be invited to participate in its next meeting, and that a list of standard hydrographic sections and stations in the ICNAF Area should be prepared together with standard base periods for reference of fluctuations in temperatures and salinities.

The meeting also noted with approval the prompt publication of Vol. 20 of the Statistical Bulletin

for 1970 and the expectation that Vol. 21 for 1971 will be published before the end of 1972. It strongly endorsed the Statistics and Sampling Subcommittee's recommendation concerning the need for all Member Countries to avoid serious delays in submitting their statistical data to the Secretariat and concerning the growing need for more frequent and detailed statistical data for both stock assessment and regulatory purposes.

8. Review of Proposals for Regulatory Measures. The meeting noted that, with proposals for quota regulations for most of the important cod stocks in the ICNAF Area, the Subarea 1 cod stock is the only major one in the ICNAF Area for which no specific proposals have been made. Should the proposals be adopted there would be the possibility of a diversion of surplus effort to the West Greenland stock which, as indicated by STACRES, could lead to an undesirably high level of fishing mortality if no regulatory action is taken to prevent it.

9. Review of Proposal for Better Utilization of Fish. The Panel Advisers noted the Canadian proposal (Comm.Doc. 72/20) that ICNAF consider the prohibition of discarding any fish of a regulated species weighing over one-half kilogram. In this connection the Panel Advisers commented that, for Subarea 1, only small quantities of regulated species below that size are caught by trawls with the 130-mm mesh size in force, and that the small discard rate reported indicates that most fish caught are retained on board, except that on board salting vessels without freezing capacities, species other than cod are to some extent discarded.

10. Future Research. It was noted that most Panel Members have circulated Research Programs for 1972. No additions or amendments to these were reported. In discussing future research the meeting noted information in Res.Doc. 72/63 about the inadequacy of sampling of the important species in the Subarea. The Panel Advisers stress the necessity of adequate sampling as a basis for sound assessment and adequate management.

11. Mr Sv.Aa. Horsted (Denmark) was re-elected Chairman of the Panel Advisers for the ensuing year.

12. There being no other business, the meeting adjourned at 1110 hrs.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2863
(D.b.71)

Proceedings No. 3
Appendix II
(also ICNAF Res.Doc. 72/132)

ANNUAL MEETING - JUNE 1972

Status of Fisheries and Research Carried Out in Subarea 1, 1971

by

Sv.Aa. Horsted
Grønlands Fiskeriundersøgelser
Charlottenlund, Denmark

1. Pertinent Documents

This summary is based upon Research Reports by the following Member Countries (1972 Res.Doc.No. in brackets):

Canada (36), Denmark (34), Fed.Rep. Germany (44), Iceland (35), Japan (41), Poland (43), Portugal (40), Spain (39), UK (37), USA (45), and USSR (42). Also Res.Docs. 72/19 and 72/91 contain information on research carried out in the Subarea in 1971.

Other pertinent documents for this summary are:

Res.Doc. 72/32 - Report of the Joint ICES/ICNAF Working Party on North Atlantic Salmon
Res.Doc. 72/33 - Report of the Joint ICES/ICNAF Working Group on North Atlantic Cod Stocks
Res.Doc. 72/84 - Discards and industrial fish
Res.Doc. 72/124 - 1971 statistics

Work on salmon and seals is not considered in this summary, and documents containing information on salmon or seals solely are, therefore, not listed here.

2. Status of the Fisheries

A. Subarea 1

Table 1 gives the nominal catches by species or group of species for the last four years and for the peak year 1962. Table 2 shows for the same years total catches and catches of cod by countries.

Table 1. Nominal catches from Subarea 1 (thousands of metric tons) by principal species (excl. mammals). Figures from ICNAF Statistical Bulletin.

Species/Year	1962	1968	1969[1]	1970	1971[2]
All species	528	408	225	146	148
Cod	451	382	205	116	119
Redfish	61	9	4	4	3
Grenadiers	-	Ø	Ø	6	4
Flounders and other groundfish	14	10	6	5	5
Salmon	Ø	1	2	2	3
Prawns	3	6	7	9	10
Other species	Ø	Ø	1	4	3

[1] Catches by non-members are not allocated to subareas and are not included. Their total catch of cod in the Convention Area was 55,000 tons.
[2] Figures include the following estimates: Denmark (F) 15,000 tons of cod out of a known total of 16,750 tons. Norway + Denmark (F) 1,000 tons of prawns.

11..

Table 2. Nominal catches from Subarea 1 (thousands of metric tons) by countries. Only countries with more than 500 tons total catch are shown separately. Figures from ICNAF Statistical Bulletin.

Country/Year	All Species (excl. Mammals)					Cod				
	1962	1968	1969	1970	1971	1962	1968	1969	1970	1971
Denmark (F)	93	46	19	8	17	93	46	18	8	15[1]
Denmark (G)	41	33	38	37	38[2]	35	21	24	20	20[2]
France	53	47	25	5	4	53	47	25	5	4
Germany (F.R.)	192	145	83	45	43	125	133	79	41	41
Iceland	6	Ø	Ø	-	-	1	Ø	Ø	-	-
Norway	32	40	19	7	7	32	39	18	6	5
Poland	1	1	Ø	-	-	Ø	1	Ø	-	-
Portugal	92	33	16	9	6	92	33	16	9	6
Spain	3	22	24	19	22	3	22	24	19	22
USSR	-	2	Ø	8	5	-	2	Ø	1	Ø
UK	17	10	1	4	3	16	10	1	3	2
Non-members	-	29	NK	5	3	-	28	NK	5	3
Total	528	408	225+	146	148	451	382	205+	116	119

[1] Estimated
[2] Provisional

Total nominal catch in 1971 was just above that in 1970, and the catches in these two years are the lowest recorded in ICNAF's statistics. The 1971 catch is only about one-quarter of the catch in the peak year 1962.

The drastic decline in total catch in the last four years falls nearly entirely on cod, but over the last decade also, catches of redfish have declined from a level constituting about 12% of catches in 1962 to an insignificant catch of about 2% of the present low total catch.

Catches of other species have remained more constant and for the economically important species, salmon and prawns, there has been a rather steady increase in catches. After cod, prawns now account for the highest quantities landed from the Subarea.

As shown in Table 2 the changes in catches have varied greatly between countries. The relatively most abrupt decline in catches is found for Denmark (F) although with some improvement in 1971, France and Portugal, and in the last few years also the Norwegian catches have dropped abruptly. Denmark (G) has maintained its total catch by increasing catches of species other than cod and has avoided a more drastic decline in cod catches only by introducing large stern trawlers. Spanish catches have remained rather stable, probably due to a switch of effort from other trawlers to pair trawlers. German catches have declined seriously in the mid-sixties, especially so far as redfish is concerned, in the last years also for cod, although an important German cod fishery on the same cod stock is taking place off East Greenland as shown in Table 3. Germany has maintained a high catch per day but only by limiting effort to fish on concentrations of cod around the spawning season, especially off South Greenland.

The overall decline in catches in the last three years is to a great extent due to reduced activity following adverse conditions for fishing, especially bad ice conditions. However, also the present low level of the cod stock has made vessels less interested in fishing in the area. In this connection, it should be pointed out that the reduced activity has not been followed by a proportional decline in fishing mortality. The Assessments Subcommittee reports that fishing mortality for fully recruited age-groups has been maintained at a level near F_{max}. Taking this into account and considering the relatively poor prospects for recruitment in the near future, the best estimate of catches in 1972-73 is not much more than 100,000 tons. Present year-class strength of commercial-size fish and of pre-recruits indicate the possibility that by 1973 cod may be more evenly distributed in the Subarea than at present.

B. East Greenland

Cod in Divs. 1E-1F and off Southeast Greenland seems to be a unit stock and fishing off East Greenland should be taken into consideration when assessing exploitation of Subarea 1 cod. The catches from East Greenland waters are given in Table 3.

Table 3. Nominal catches from East Greenland (thousand metric tons). Figures from 1971 Meeting Proceedings No. 2 and from Res.Doc. 72/44.

	Total				Cod				Redfish			
	1968	1969	1970	1971	1968	1969	1970	1971	1968	1969	1970	1971
Germany (F.R.)	26	41	31	44	10	14	14	29	15	25	16	14
Iceland	13	9	7		7	4	5		6	4	1	
Other nations	1	1	1	1	1	1	1	1	Ø	Ø	Ø	Ø
Total	40	51	39	45+	18	19	20	30+	21	29	17	14+

Cod has now become the most important species in the fisheries off East Greenland. The German cod catches are nearly as large as in 1964 when German trawlers had their hitherto highest catch in this area (29,400 tons). Catch per day in the German fishery was the highest so far recorded (25.4 tons total, 16.5 tons cod), for cod about a doubling of former level of catch per day.

3. Research Work

Research work in Subarea 1 in 1971 is reported by Canada, Denmark, Fed. Rep. Germany, Portugal, UK and USSR. Also Res.Doc. 72/91 reports work carried out in the Subarea.

A. Hydrography

(Canada, Denmark, Fed.Rep. Germany, USSR, and Res.Doc. 72/91)

Hydrographic studies have been made in all Divisions but with the best coverage in Div. 1D.

In 1971 as in the two preceding years, the ice situation was extremely severe. During its maximum extension in July the "storis" reached from Cape Farewell to lat 64°N (Fyllas Bank) and extended westward off Frederikshaab to a distance of 120 nautical miles from the coast line. Although ice conditions were more normal from August on, it should be mentioned that air temperatures in periods of the 1971-72 winter have been extremely low causing great difficulties for sailing and for fishing operations. Ice was formed on many of the fishing banks. Germany reports that in December a new progression of polar ice was observed in the Cape Farewell region. Div. 1A and northern part of Div. 1B have been completed closed by winter ice during the whole winter of 1971-72.

Water temperatures in the first five months of the year (observations on sections in Divs. 1C and 1D) were very cold, below 0°C, in the upper 100 m as a result of strong winter cooling and inflow of cold water from the East Greenland Polar Current. In June temperatures over the lower part of Fyllas Bank were still below 1°C and even below 0°C west of the Bank. This sub-zero water mass was still observed in July although further westwards. From August to December water temperatures over Fyllas Bank were generally between 1°C and 2°C, and the summer heating caused relatively high surface temperatures over the northern banks, higher than over Fyllas Bank. In November-December severe winter cooling took place, leading again to subzero temperatures in upper water layers over all the West Greenland fishing banks.

Comparison of 1971 temperatures and salinities with values in 1963 (Germany) and with mean values for 1950-66 (Denmark) clearly shows that water temperatures and salinities have decreased in recent years indicating strong inflow of polar water to West Greenland. The cooling seems to be most pronounced in water layers between 50 m and 300 m, in July and for the area just west of Fyllas Bank between 1°C and 1.5°C lower than the mean of 1950-66. The corresponding salinity anomalies were found to be about -0.5‰.

B. Bathymetry and Geophysics

(Canada)

Surveys were undertaken for the general bathymetric chart of the ocean program and in support of the geophysical studies.

C. Plankton

(Denmark, UK)

The surveys with the Continuous Plankton Recorder operated by the Oceanographic Laboratory in Edinburgh covered 1,092 miles in Subarea 1.

Denmark continued the long series of plankton samples taken with 2-m stramin net. The results indicate that plankton abundance, especially numbers of crustaceans, has been very low the last few years (Res.Doc. 72/38, Table 2). This corresponds to the colder surface temperatures in most recent years.

D. Cod

(Denmark, Fed.Rep. Germany, Portugal, and Res.Doc. 72/91)

1. Eggs and larvae (Denmark)

Eggs and larvae were sampled on the Fyllas Bank Section (Div. 1D) in May, June and July and on sections in Divs. 1C and 1B in July. Some spawning seems to have taken place over the western part of Fyllas Bank and German trawlers exploited spawning concentrations to the west of Banana Bank. Numbers of larvae caught north of Fyllas Bank are the lowest so far recorded. The 1971 cod year-class of West Greenland origin is, therefore, at present regarded as being very poor.

2. Young fish (age-groups I, II and III) (Denmark)

Hauls with fine meshed otter trawls on standard stations in Divs. 1C and 1D show that the 1968 year-class is the most promising of those that will recruit to the fishery up to about 1975. The 1968 year-class seems to be most abundant in Divs. 1B-1D but does also occur in Div. 1E (see also Section 3). It may be comparable to the 1966 year-class, which can be regarded as a relatively good, although not a strong, one. The 1968 year-class will, no doubt, be predominating in catches in Divs. 1B-1D and probably Div. 1E in 1973-75.

3. Composition of commercial catches (Denmark, Fed.Rep. Germany, Portugal, and Res.Doc. 72/91)

According to Res.Doc. 72/84 very few discards occurred in the 1970 fisheries (rate less than 2%), and discarding in 1971 is probably at the same low level.

Age composition of landings as reported by Denmark and Fed.Rep. Germany shows a general trend in year-class distribution off West Greenland. In the northern Divs. 1B and 1C the 1965 and 1966 year-classes constitute nearly the whole part of most landings. Spawning concentrations fished by Germany in great depths west of Banana Bank (Div. 1C) were composed mainly of the 1965 year-class but with considerable amounts also of year-classes 1961, 1966 and partly 1960.

Inshore catches in the northern Divisions taken mainly by fine meshed pound nets contain considerable numbers also of year-class 1967.

For catches taken at the end of the year, Ernst and Zukowski (Res.Doc. 72/91) found the 1965 and 1966 year-classes to be the most abundant in Div. 1B, whereas in Div. 1C the 1966 and 1967 year-classes predominated.

The 1962, 1963 and 1964 year-classes are nearly missing in Divs. 1B-1C.

Also in Div. 1D, Danish and German samples show that the 1965 and 1966 year-classes are of great importance but here they are mixed up with year-classes 1963 (especially) and 1964, the former of these extending also up in southern part of Div. 1C (Banana Bank) in June in its post-spawning northward migration.

The further south the more the 1963 year-class dominates. In Div. 1F it is by far the most important followed by year-class 1964. These two year-classes seem to constitute nearly the whole catch off southernmost Greenland. The 1965 and 1966 year-classes dominating in the northern Divisions are nearly missing in Div. 1F.

For Divs. 1D and 1E, Ernst and Zukowski found the 1964 and 1965 year-classes to be the most abundant.

At the end of the year, German research catches in Div. 1D and off Cape Thorvaldsen (boundary between Divs. 1E and 1F) showed the promising 1968 year-class to occur also here being the most abundant year-class in the samples from Div. 1D.

Length composition of Portuguese trawler landings generally seems to be in agreement with Danish and German samples.

Broadly speaking, it could thus be said that catches in Divs. 1B-1C as well as in Divs. 1E-1F are based on two year-classes only, but with two years older cod in the two southern Divisions, whereas the catches in Div. 1D seem to be mixed of all four year-classes.

In spite of the difference in age-composition between north and south, there is not a corresponding

difference in mean weight of cod. Growth rate for cod in southern areas seems to have decreased in most recent years.

4. Tagging (Denmark)

A total number of 2,322 cod were tagged, mainly in Div. 1D inshore.

The ICES North Western Working Group and the Joint ICES/ICNAF Working Group on Cod Stocks in the North Atlantic have tried to assess the spawning migration of cod from West Greenland to East Greenland-Iceland partly on the basis of tag-recapture data. The migration of mature cod from Divs. 1E-1F and East Greenland to Iceland was found to fluctuate between years and year-classes, but generally speaking, the migration seems to be of the order of 25% per year. For further information see Res.Doc. 72/33, p. 12-13.

5. Other work on cod

A small-scale exchange of otoliths from 1971 samples between Denmark and Fed.Rep. Germany showed a nearly complete agreement in ageing of cod between readers in the two laboratories.

Ernst and Zukowski (l.c.) report on cod feeding patterns in Subarea 1 in December. In Div. 1D small fish predominated. Near Great Halibut Bank (Div. 1B), deep-sea prawn was common food, whereas brittle stars were important in Divs. 1C and 1E south.

E. Grenadiers

(USSR)

In August and October a series of trawl hauls were made in depths of 600-800 m along the Greenland-Canada Ridge, mainly in western part of Div. 1C. Roundnose grenadier prevailed in the catches south of the ridge. Most fish measured 55-65 cm, males being the smallest and most abundant. No grenadiers were recorded north of the ridge where the temperatures (below 1°C) may be too low for this species. Greatest abundance was found in water masses with temperatures between 3°C and 4°C.

F. Greenland Halibut

(Denmark, USSR)

The USSR sampled Greenland halibut both north and south of the Greenland-Canada Ridge in June. In August 424 specimens were tagged in Div. 1B.

Denmark tagged 51 specimens in Div. 1D. Nursery grounds were found off Umanak Fjord (Div. 1A) at a depth of 500-600 m.

G. American Plaice

(Denmark)

395 specimens were tagged in Div. 1D. Material for ageing was collected.

H. Pelagic Fish

(Denmark)

Samples of capelin by a fine meshed pelagic trawl were taken in Div. 1D inshore.

The distribution of larvae of sand eel has been studied and is shown in Res.Doc. 72/38, Fig. 5. In a dredge sample of bottom material in July west of Great Halibut Bank, depth 740 m, several partly decomposed sand eels were found. This may indicate a mass death of sand eels as is the case with capelin in coastal waters.

I. Atlantic Salmon

(Canada, Denmark, UK)

All work on salmon has been reported to the Joint ICES/ICNAF Working Party on North Atlantic Salmon. The report of the last meeting of the Working Party is Res.Doc. 72/32.

Studies in Greenland fresh water systems aiming at elucidating the possibility of planting salmon in Greenland rivers were carried out in Divs. 1C-1D and it is planned to continue them in Divs. 1E and 1F in 1972.

J. Crustaceans

(Denmark)

Further investigations on prawn stocks were undertaken especially in Div. 1A at Umanak Fjord, in Div. 1B west of Great Halibut Bank and in Div. 1E.

Small-scale trap-fishing experiments for *Chionoecetes* were conducted in coastal waters near Godthaab.

K. Seals

(Denmark)

Research on seals in Subarea 1 is reported to Panel A Advisers in Res.Doc. 72/85.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2874
(B.e.72)

Proceedings No. 4

ANNUAL MEETING - JUNE 1972

Report of Meeting of Panel 2

Monday, 29 May, 0930 hrs

1. The meeting was called to order by the Chairman of the Commission. Mr R.H. Letaconnoux (France) was elected Chairman of the Panel, replacing Captain T. de Almeida (Portugal) who had retired.

2. Rapporteur. Dr G.F.M. Smith (Canada) was elected Rapporteur.

3. Agenda. The agenda, as circulated, was adopted except for Items 5 (Report of Scientific Advisers), Item 6 (Review of Present Conservation Measures), and Item 7a (Conservation Requirements for Cod in Divs. 2J, 3K and 3L). These items had already been dealt with in a Joint Meeting of Panels 2 and 3 (Proc. 11).

4. Panel Membership. The following Panel Members were present: Canada, France, Fed.Rep.Germany,Norway, Poland, Portugal, Romania, Spain, USSR, and UK. There were no new applications for panel membership. The Chairman welcomed Observers from Cuba.

5. Full Use of Regulated Species. Canada explained that this suggestion (Comm.Doc. 72/20) was to minimize waste through discarding of regulated species over one-half kg in weight. It was noted that more information was required on the problem of discards and it was suggested that STACRES be asked to analyze this matter and report to the next Annual Meeting. Agreed.

6. Future Research. Dr A.W. May (Canada), Chairman of Scientific Advisers, stressed the research needs as outlined in the Scientific Advisers Report (Appendix I of Proc. 11, Meeting of Joint Panels 2 and 3), especially the need for better coverage of sampling and biostatistical information and increase in research vessel time and effort.

7. Date and Place of Next Meeting. It was agreed that the next meeting of Panel 2 would coincide with the next Commission Annual Meeting.

8. Approval of Panel Report. It was agreed that the Panel Report would be approved by circulation of a draft to Member Countries.

9. Adjournment. The meeting adjourned at 0940 hrs.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2875
(B.e.72)

Proceedings No. 5

ANNUAL MEETING - JUNE 1972

Report of Meeting of Panel 3

Monday, 29 May, 1000 hrs

1. The meeting was opened by the Chairman, Mr A.A. Volkov (USSR).

2. Rapporteur. Dr G.F.M. Smith (Canada) was elected Rapporteur.

3. Agenda. The agenda, as circulated, was adopted except for Items 5 (Report of Scientific Advisers), Item 6 (Review of Present Conservation Measures), and Item 7a (Conservation Requirements for Cod in Divs. 2J, 3K and 3L). These items had already been dealt with in a Joint Meeting of Panels 2 and 3 (Proc. 11).

4. Panel Membership. The following Panel Members were present: Canada, Denmark, France, Japan, Norway, Poland, Portugal, Romania, Spain, USSR, UK, and USA. Italy was not represented. There were no new applications for membership.

5. Cod Quota for Subdiv. 3Ps. Canada presented this item (Comm.Doc. 72/14) in an upward revision of suggested Convention Area quota to 50,000 metric tons from 30,000 metric tons, on the basis of the latest report by the Assessments Subcommittee. This stock is also exploited outside the Convention Area in Canadian territorial waters. The suggested exploitation of the stock is on the following basis:

Estimated yield for whole stock	70,000 metric tons
Estimated Canadian territorial sea catch	20,000 " tons
Quota in Convention Area Subdivision	50,000 " tons

The Convention Area quota in Subdiv. 3Ps of 50,000 metric tons of cod was unanimously approved.

6. Cod Quota for Divs. 3N-O. Canada suggested a quota of 70,000 metric tons for cod in Divs. 3N-O (Comm.Doc. 72/15), on the basis of the report of the Assessments Subcommittee to make best long-term use of the large 1968 year-class which would make up the largest part of the catch in 1973. Portugal suggested a quota of 100,000 metric tons. Several countries questioned the practical need for the smaller quota, and in particular Spain, and UK. In the light of the suggestions and the ensuing debate, the interested Assessments Subcommittee members met briefly and reported back that, although 70,000 metric tons would be a desirable quota for best long-term use of the large 1968 year-class, a considerably larger catch could be taken immediately. On vote called by the Chairman, a quota of 100,000 metric tons of cod in Divs. 3N-O was unanimously approved.

7. American Plaice and Yellowtail Quota in Divs. 3L, 3N, 3O. (Comm.Doc. 72/13). Canada presented the proposal in revised form as follows: that there be an overall American plaice quota in Divs. 3L, 3N, 3O of 60,000 metric tons arrived at by the total of estimates.

Div. 3L	32,000 metric tons
Div. 3N	20,000 " tons
Div. 3O	8,000 " tons
Total	60,000 metric tons

Canada considered it desirable to include a quota for yellowtail flounder in conjunction with American plaice in Divs. 3L, 3N, 3O as these two species fisheries overlap to a considerable extent. As the yellowtail flounder proposal had not been the subject of the required 60-day notice through the Secretariat, unanimous consent of the Panel Members was required for its discussion. This unanimous consent was given. Canada then proposed the addition of a quota for yellowtail flounder of 50,000 metric tons in Divs. 3L, 3N, 3O. The Panel unanimously approved the following quotas for Divs. 3L, 3N, 3O.

American plaice	60,000 metric tons
Yellowtail flounder	50,000 metric tons

8. Future Research Requirements. Dr H A. Cole (UK), Chairman of Scientific Advisers, drew attention to the Report of the Scientific Advisers (Appendix III of Proc. 11, Joint Meeting of Panels 2 and 3) and to the inadequacy of sampling in the Subarea, and to the fact that no assessments or no recent assessments were available for some Divisions of Subarea 3.

9. Date and Place of Next Meeting. It was agreed that the next meeting of Panel 3 would coincide with the next Annual Meeting of the Commission.

10. Other Business. Mr R.A. Lagarde (France) presented a statement to Panel 3 as follows:

Statement of the French Delegation on Allocation of Quotas in Subarea 3

I would like to take advantage of the meeting of Panel 3 to note a short statement to inform the Delegates of the special situation of the St. Pierre et Miquelon Islands which are situated within that Subarea (Subdiv. 3Ps).

This French territory is a very small one but the population is entirely dependent on fisheries and this industry is now developing to some extent with assistance from the French authorities who made special efforts to establish and maintain a research laboratory at St. Pierre.

We do not need, for the present time, any special allocation for the Territory on the basis of its special situation of coastal territory, but we should like the Commission to take note of this present statement to which we could refer in the future.

11. Approval of Report. It was agreed that the Panel Report would be approved by circulation of a draft to Member Countries.

12. Adjournment. The meeting adjourned at 1100 hrs.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2876
(B.e.72)

Proceedings No. 6

ANNUAL MEETING - JUNE 1972

Report of Meeting of Panel 4

Friday, 26 May, 1430 hrs
Friday, 2 June, 1030 hrs

1. The meeting was opened by the Chairman, Captain J.C.E. Cardoso (Portugal). Representatives of all Member Countries of the Panel, except Italy, were present.

2. Rapporteur. Mr H.R. Beasley (USA) was appointed Rapporteur.

3. Agenda. The agenda for the meeting, as circulated, was adopted.

4. Panel Membership. No changes in the membership of Panel 4 were proposed.

5. Report of Scientific Advisers. The Chairman of the Scientific Advisers to Panel 4, Mr J.A. Posgay (USA), presented his summary report on Status of the Fisheries and Research Carried Out in 1971 (Appendix II; also Res.Doc. 72/131 Revised), and the Report of the Meeting of Scientific Advisers (Appendix I). These were adopted by the Panel.

6. Review of Present and Proposed Conservation Measures. The Panel carried out this review in its consideration of Panel agenda Items 7 and 8 as noted below.

7. Consideration of Increase to 130-mm Mesh Size for All Regulated Species. USSR drew attention to its 1971 proposal to establish uniform mesh size requirements (130 mm) throughout the Convention Area when fishing for regulated species. Taking into account discussions in Panel 5 on this question (Proc. 7), the Panel agreed that increased mesh size requirements in the codend of nets from 114 mm to 130 mm for Subarea 4 might be adopted as of 1 January 1974. However, Canada reserved the right to object to the application of such a mesh size requirement for vessels under 65 feet in Div. 4X, where it noted there is an exceptionally slow growing haddock stock and a long established inshore fishery. This item was deferred for decision to a Joint Meeting of Panels 4 and 5 (Proc. 14).

8. Conservation Measures for (a) Div. 4X Haddock and (b) Div. 4W Haddock. The Chairman of the Scientific Advisers to the Panel noted that the haddock stocks in these areas are expected to continue declining under the 1972 regulatory program, and that removals from these stocks should be reduced to the lowest practicable level. The Panel agreed that conservation recommendations concerning these stocks would be inter-related with recommendations for the haddock stock in Subarea 5, and therefore, should be considered in a Joint Meeting of Panels 4 and 5.

8. (c) Conservation Measures for Divs. 4V-W Cod Stock. The Chairman of the Scientific Advisers to the Panel noted that the 1968 year-class is the only good one of those of 1966-69 entering this fishery, and should be only moderately exploited to prevent substantial stock decline; the level of current fishing intensity would probably provide a catch in 1973 of about the maximum sustainable yield of 60,000 metric tons.

Canada noted that its acceptance of the overall quota of 60,000 metric tons which it proposed for the cod stock complex in these Divisions, was conditional upon agreement on some type of national allocation. It proposed in Comm.Doc. 72/16 that this quota be allocated as follows:

> "40% in proportion to catches by Member Countries in the most recent three years for which figures are available, 40% in proportion to catches in the preceding ten years; 10% to the coastal state; 10% to provide for non-members and new entrants."

Portugal said it did not object to a catch quota in the area, although it had questions concerning the enforcement of a quota system broken down into a number of small subdivisions. Regarding allocation procedures, Portugal favoured allocating 70% of the allowable catch in proportion to performance over the 10-year period and only 10% in proportion to the 3-year period. In addition, it proposed that allocations for new entrants and non-members be based on actual expectations.

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USSR indicated it could support the overall quota limit proposed by Canada for the cod stocks in Subdiv. 4Vs and Div. 4W, and could agree in principle to take performance of participants for a certain period of years as a factor in quota allocation, with some provision being made for new entrants and those countries that have recently started fishing, as well as for small inshore fisheries. It could accept the most recent 3-year period and the most recent 10-year period as bases for quota allocation, but believed these should be overlapping rather than sequential periods, to avoid covering 13 years which it considered too long a base period.

The Federal Republic of Germany noted that the total quota appeared reasonable and said that allocation of national shares was wise. It was concerned about the use of a sequential 3-year base period and a 10-year base period for allocation purposes, since it had understood the guidelines discussed in STACREM to refer to overlapping base periods. It also noted that the reasonableness of amounts set aside for new entrants and for coastal states would need careful review.

Japan said it was important to make provision for new entrants in fisheries.

Poland noted that in principle it could support the overall level of the proposed quota. It would be acceptable to make some special reservation for the inshore fishery. In addition, new entrants should not be excluded and the door should be open for countries with developing fisheries to participate. Poland did not favour the use of a long-term historical base as a factor in quota allocation; however, it did not wish to obstruct the work of the Panel, and would offer its support to solutions that would satisfy Polish needs and conservation objectives.

USA indicated it did not presently have a major interest in the stocks in question. Its interest related to the principles of quota allocation that might be involved. It had no objection in principle to the factors for quota allocation set forth in the Canadian proposal, or any objection to some adjustment of historical base periods as proposed by the USSR and the Federal Republic of Germany. What USA considered important as it had indicated in the Commissioners' Documents it had circulated was that allocations to coastal countries should not reduce their fisheries, but rather should provide some opportunity for growth.

Spain said it could agree in principle with the concept of quota allocation, but drew attention to discussions in STACREM concerning the factors other than historical performance which should be taken into account in allocating quota shares. One such factor was provision for states with fleets which were incapable of being diverted to other fisheries. Spain said that almost all of its ICNAF fleet was in this category since it had been built specially for salting and drying fish and could not be diverted elsewhere.

France said that in principle it favoured overall quota limits, and was generally in agreement with the proposal of Canada.

In response to questions, Canada noted that the catch of cod in Subdiv. 4Vs and Div. 4W outside the Convention Area in territorial waters as they existed in 1949, was insignificant. It was also noted that catches by Non-Members in these Divisions were insignificant.

The Panel, at the Chairman's suggestion, agreed that, because quota allocation arrangements are of interest to other Panels, they should be considered in an *ad hoc* Working Group composed of representatives from all Member Countries. Note was taken by the Panel of general approval for a proposed overall quota of 60,000 metric tons, provided agreement was reached on appropriate allocations of national shares.

8. (d) Conservation Measures for Subdiv. 4Vn Cod Stock. The Chairman of the Scientific Advisers noted that the cod stock in question migrated between Div. 4T and Subdiv. 4Vn. He reported that fishing was now below the level thought to provide maximum yields. Canada explained that its proposal for a quota in Subdiv. 4Vn (Comm.Doc. 72/17) was precautionary in nature since catch restrictions in other areas could lead to substantial shifts of fishing effort to Subdiv. 4Vn. However, Canada provisionally withdrew the proposal after question arose over the effect of restrictive catches in only part of the area where the stock was found.

8. (e) Conservation Measures for Div. 4V and Div. 4W Herring Stock. The Panel took note of Comm. Doc. 72/11 which was described by Canada as a notice of intent to ask consideration of a catch limitation on the Banquereau herring stock at the Special Mid-Term Meeting of the Commission on Herring, proposed for January-February 1973.

8. (f) Conservation Measures Concerning the Full Use of Regulated Species. The Chairman of the Scientific Advisers said more information on discards and their survival was required to evaluate on a scientific basis a Canadian proposal to prohibit discarding fish of any regulated species weighing over one-half kilogram (Comm.Doc. 72/20). Canada emphasized its view that such discards were wasteful, and asked further study of discards. USA agreed in principle with the Canadian view, but suggested approaching this issue with caution, bearing in mind economic aspects of the regulatory process.

9. Further Research Required. The Chairman of the Scientific Advisers pointed out plans to repeat in

1972 the 1971 multi-nation survey of the dispersal of larval herring after hatching in Div. 4X and Subarea 5. Additional commitments of ship time, however, are needed for the work in 1972. He also drew attention to the need generally to greatly improve the coverage, accuracy and speed of reporting of national statistics and to extend biological sampling programs. The latter is particularly important in view of current regulatory approaches which may reduce the value of commercial catch/effort data as indices of stock abundance.

USA noted that new methods of regulating fisheries being applied by the Commission will require more refined stock assessments. It also asked that efforts be made to obtain more information about less heavily exploited species, e.g. squid, mackerel, and pollock, in order that the Commission will have assessments of these resources before they become overexploited.

10. Date and Place of Next Meeting. It was agreed that the next Panel Meeting should take place at the time and place of the 1973 Annual Meeting of the Commission, unless circumstances require otherwise.

11. Approval of Panel Report. It was agreed that the Panel Report would be circulated in draft form for approval by Panel Members.

12. The meeting of Panel 4 recessed at 1700 hrs.

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13. The meeting of Panel 4 reconvened at 1030 hrs, Friday, 2 June with all Member Countries represented.

14. The Panel Members were asked to consider a proposal from the *ad hoc* Committee on Quota Allocation for quota control of the fishery on the cod stock in Subdiv. 4Vs and Div. 4W of Subarea 4. The Panel

agreed to recommend

that the Commission transmit to the Depositary Government for joint action by the Contracting Governments a proposal (5) for international quota regulation of the fishery for cod in Subdiv. 4Vs and Div. 4W of Subarea 4 (Appendix III).

15. The Panel noted that proposals (17) and (18) for retaining in 1973 the unallocated catch quotas in effect for haddock in 1972 in Div. 4X and Div. 4W of Subarea 4 had been agreed to by the Joint Meeting of Panels 4 and 5 (Proc. 14, Appendices II and III, respectively).

16. Adjournment. The meeting of Panel 4 adjourned at 1045 hrs.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2876
(B.f.2)

Proceedings No. 6
Appendix I

ANNUAL MEETING - JUNE 1972

Report of Scientific Advisers to Panel 4

Wednesday, 24 May, 1615 hrs

1. The Chairman, Mr J.A. Posgay (USA), opened the meeting at 1615 hrs, 24 May 1972, with representatives of Canada, France, Fed.Rep. Germany, Japan, Poland, Portugal, USSR, UK, and USA in attendance.

2. Dr R.G. Halliday (Canada) was appointed Rapporteur.

3. The Chairman's report on Status of the Fisheries and Research Carried Out in Subarea 4 in 1971 was read and approved with minor modifications (Appendix II).

4. Increase in Mesh Size to 130 mm for all Regulated Species in Subarea 4. Small long-term gains in yield per recruit of 1%-6% for cod and haddock stocks in Subarea 4 can be expected from an increase in mesh size from the present 114 mm to 130 mm, except in the case of Div. 4X haddock where a small long-term loss of about 3% is expected. Flounder in general may benefit but few assessments have been made.

5. Conservation Measures for Haddock in Div. 4X. Stock abundance can be expected to continue to decline under 1972 regulatory measures and continuing poor recruitment. As the Assessments Subcommittee has concluded, removals from this stock should be reduced to the minimum practicable level. Even with complete cessation of directed fishing for haddock removals as by-catches would amount to about 6,000 metric tons.

6. Conservation Measures for Haddock in Div. 4W. The haddock stock which inhabits Div. 4W and Div. 4V is expected to continue to decline in abundance under 1972 regulatory measures and with continuing poor recruitment. As the Assessments Subcommittee has concluded, removals from this stock should be reduced to the lowest practicable level. Even with complete cessation of directed fishing for haddock removals as by-catches would amount to about 4,000 metric tons.

For effective management the active area of distribution of the stock should be regulated, i.e., regulation should include Div. 4V as well as Div. 4W.

Imposition of a closed area during the spawning season of March-May inclusive of the spawning area in Div. 4W, as defined in a Canadian proposal for conservation of haddock in Div. 4W to the Commission at the 1970 Meeting, would likely be effective in reducing by-catches of haddock. However, direct biological advantages of such a regulation have not been demonstrated. It is also apparent that this would result in significant interference to the Canadian cod fishery and to a lesser extent the Canadian flatfish fishery, and also to the USSR silver hake and herring fisheries. The USSR report 22,000 metric tons of silver hake taken in this area in March-May of 1971 representing 40% of the catch of this species in Div. 4W in these months, and in the process took only 25 metric tons of haddock. No reports were presented by other countries which have significant fisheries in the area.

7. Conservation Measures for Cod in Subdiv. 4Vs and Div. 4W. The 1968 year-class is the only good one of those of 1966-69 which are entering this fishery. Since the fishery is based predominantly on ages 5 and 6, its success in the next few years is largely dependent on the strengths of the 1968 year-class. It is important that this year-class be only moderately exploited to prevent substantial stock decline. Thus F, now about 0.50, should not be allowed to increase. This is approximately the level giving maximum yield-per-recruit and implies a catch in 1973 of about the maximum sustainable yield of 60,000 metric tons.

8. Conservation Measures for Cod in Subdiv. 4Vn. The stock which inhabits Div. 4T in the summer months migrates into Subdiv. 4Vn in December-January and moves back into Div. 4T in April-May. There is an independent fishery on inshore stocks in Subdiv. 4Vn in the remainder of the year.

For the migratory Div. 4T-Subdiv. 4Vn (Spring) stock fishing mortality has been below that thought to give maximum yield. With stock abundance and recruitment currently at average levels, an increase in F to the optimum of 0.40-0.45 in 1973 can be expected to give a catch of 60,000-65,000 metric tons from the stock as a whole.

9. Conservation Measures for Herring in Div. 4V and Div. 4W. No assessment is currently available. Work is progressing in order to provide such an assessment for the Mid-Term Meeting of the Commission.

10. Full Utilization of Regulated Species. More information is required on discards and their survival before the specific proposal before the Commission can be evaluated on a scientific basis.

It was stressed that current information on discards and on fish used for industrial purposes is inadequate. Yet such information is essential for accurate assessments of individual species and also for assessment of the effects of fishing on the biomass as a whole.

11. Future Research Required. A joint survey of the dispersal of larval herring after they hatch was conducted in Div. 4X and Subarea 5 in 1971 by Canada, France, Fed.Rep. Germany, USSR and USA. The preliminary results are given in Res.Doc. 72/123 and show that this was a most useful experiment for determining which spawning areas support which fisheries. In order to gain the greatest benefit from this work, it is planned to repeat the survey in 1972 and, perhaps, succeeding years. The Commissioners are requested to support the allocation of sufficient ship time to carry out these operations.

A juvenile herring echo-sounding and trawling survey planned by the USSR for the Scotian Shelf in February-March 1973 is important in evaluating the abundance of incoming year-classes, as the accuracy of assessments depend on accurate information on pre-recruit abundance.

Mesh selection experiments for cod planned for 1973 by Fed.Rep. Germany are important to determine the selectivity of various currently used materials.

The attention of the Panel to the Statistics and Sampling Subcommittee Report, Item 1(b) on "Adequacy of Sampling" was urged most emphatically. It was noted that the statements contained in the ICES Liaison Committee's Report to NEAFC (see Annex I) are equally pertinent to the ICNAF Area. If the Commission intends to regulate stocks on a scientific basis, responsibility must be accepted to provide the necessary information on which to base scientific assessments.

12. Date and Place of Next Meeting. The date and place of the next meeting was set immediately before the next meeting of the Panel in 1973.

13. Other Business. None.

14. The meeting adjourned at 1740 hrs.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2876
(B.f.2)

Proceedings No. 6
Appendix I
Annex I

ANNUAL MEETING - JUNE 1972

Extract from ICES Liaison Committee Report to NEAFC, 1972
(see ICNAF Res.Doc. 72/34)

B. Note on the Communiqué from the Special Meeting at the Level of Ministers

12. The Liaison Committee has noted that at the NEAFC Special Meeting in Moscow in December 1971, the Ministers agreed on the importance of:

a. extending the range and scope of fisheries research,
b. increasing cooperation in joint scientific programmes,
c. improving the supply of statistics by Member Countries to the scientific bodies concerned.

It wishes to draw the attention of the Commission to some important points which concern ICES in its capacity as the advisory body of NEAFC and which will be considered by the Council at its next Statutory Meeting.

13. In order to achieve the necessary improvement of the stock assessments, it is essential to greatly improve the coverage, accuracy and speed of reporting of national statistics and to extend substantially the biological sampling programmes. In this connection it should be noted that the amount of biological sampling differs considerably between countries and is far from proportional to the quantity of fish caught by the individual countries. Also, the type of data used up till now in assessments must be augmented by other information in order to permit more accurate estimation of stock size and recruitment.

14. With the rapid changes in the fisheries and with the introduction of catch regulation, the comparability of the present abundance indices will become less and less precise. They are based on long established national patterns of fishing. Closed seasons, closed areas or quotas will disrupt these patterns, making it essential to obtain estimates of stock size independent of catch and effort data, for example by means of acoustic surveys and tagging experiments.

15. Another essential requirement for management is a reliable estimate of future recruitment to the fishery. For some stocks this is already monitored by means of larval, 0-group and groundfish surveys. These surveys require high investments in time and effort by research vessels. Provisions must be made for considerable increase in such investments and for the expansion of international cooperation in these types of research activities if scientific management of the stocks is to become a reality.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2862
(D.b.71)

Proceedings No. 6
Appendix II
(also ICNAF Res.Doc. 72/131 - Revised)

ANNUAL MEETING - JUNE 1972

Status of Fisheries and Research Carried Out in Subarea 4 in 1971

by

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Reports on research in Subarea 4 were submitted by Canada, France (St.P), Japan, Poland, Spain, USSR, UK, and USA. Research Documents 1, 10, 11, 12, 17, 18, 21, 29, 33, 36, 37, 39, 40, 41, 42, 43, 45, 46, 51, 52, 53, 54, 55, 57, 98, 111, 120, 123, and 124 all include information of interest to the Panel Members.

1. Status of Fisheries

The nominal catches of the major species fished in Subarea 4 are listed in Table 1. The total catch dropped about 130 thousand (K) tons (12%) below 1970, the peak year, but was slightly higher than 1969, the previous high. The greatest decreases were in herring (105K tons), cod (45K tons), and silver hake (40K tons). Redfish rose 23K tons and flounders 13K tons.

Most of the herring (279K tons) was taken by Canada; almost half (134K tons) from Div. 4T. Canada took more than half the cod (123K tons), Spain was next (48K tons), while France (M) took 25K tons. Haddock which averaged about 50K tons in the early 60's, and rose to a peak of 85K tons in 1965, was down to 31K tons with 17.5K tons from Div. 4X of the 18K-ton quota.

Table 1. Nominal catches from Subarea 4, 1967-71 (thousands (K) of metric tons, roundfresh).

	1967	1968	1969	1970	1971
All species	680	882	915	1,069	936
Cod	194	247	206	262	217
Haddock	49	46	42	28	31
Redfish	88	104	111	119	142
Flounders	43	74	54	43	56
Silver hake	2	3	46	169	129
Other groundfish	43	38	34	32	50
Total groundfish	419	512	493	653	625
Herring	261	370	422	416	311

2. Work Carried Out

a) Canada. Dispersal of herring larvae from Div. 4X. Distribution of ichthyoplankton in Div. 4T. Sampling for pollutants between Halifax and Bermuda. Investigations of the evolutions of the thermocline in the Gulf of St. Lawrence. Groundfish survey, March, July and September, Divs. 4X to 4T. Age structure of Div. 4T cod. Haddock recruitment in Divs. 4V, 4W and 4X. Migratory behaviour and feeding habits of yellowtail flounder. Ecology of sand launce. Parasites of flatfish. Food habits of sea ravens and cod. Submersible studies of the effects of dredging on sea scallops. Migration and racial studies of herring. Tagging of salmon smolts, grilse and salmon. Biochemical racial studies on salmon. Physical characteristics of otter trawls.

b) France. (St.P). Trawl surveys were made in Subdiv. 4Vs, Divs. 4W and 4X. Icthyoplankton surveys in Div. 4X.

c) Japan. Length composition of redfish and argentines in the catch.

d) Spain. Length, age, and sex ratio of cod in Subdiv. 4Vs.

e) USSR. Growth rate and meristics of argentine in Divs. 4V, 4W and 4X. Age composition of herring and silver hake. Trawl survey on Scotian Shelf. Ichtyoplankton survey in Div. 4X.

f) UK. 2,345 miles of CPR records.

g) USA. Abundance of haddock in Div. 4X. Sexual maturity and spawning of Div. 4X haddock in cooperation with Canada. Trawl survey on Scotian Shelf. Icthyoplankton survey in Div. 4X.

3. Hydrography

Water temperatures on the Scotian Shelf were warmer in 1971 than in 1970.

4. Cod

The Div. 4T-Subdiv. 4Vn stock abundance is at about the long-term level. Growth rate has increased, leading to earlier recruitment to the fishery. This stock can stand a moderate increase in F. The inshore stock in Subdiv. 4Vn seems to be stable.

Abundance in the Subdiv. 4Vs-Div. 4W stock seems to have declined slightly. The 1966, 1967, and 1969 year-classes are poor but the 1968 year-class appears to be good. If F is held at its present level (0.49), a 1973 catch of about 60K tons will be close to the maximum sustainable yield.

Abundance of the Div. 4X offshore stock is extremely low and continuing to decline. Prospects for recruitment are poor. The present fishing mortality rate is twice that calculated to give maximum yield-per-recruit.

5. Haddock

The Divs. 4V-4W stock will have poor recruitment through 1975; the 1967-70 year-classes are all poor. Stock size has declined from about 78K tons in 1958-64 to about 19K tons in 1972. Removals from this stock should be minimal, preferably by closing the fishery and restricting the landings to the by-catch.

The 18K-ton quota in Div. 4X in 1971 was not quite reached. Abundance continues to decline and the 9K-ton quota for 1972 is not likely to arrest it. The 1964-71 year-classes were all very poor. Complete closure of this fishery would still result in a 6K-ton by-catch.

6. Herring

There are two stocks on the Scotian Shelf, Banquereau and Div. 4Xa. The Div. 4Xa stock does not contribute to the New Brunswick juvenile fishery.

7. Silver Hake

The stocks in Div. 4X are considered separate from those in Div. 4W. USSR data from Div. 4W show the population increasing from 1969 to 1971 with 3- and 4-year-olds dominating the catch.

8. Salmon

The Northwest Miramichi salmon populations are low and recovery would require drastic curtailment of the fishery. Tag returns from West Greenland show that smolts from the Miramichi contribute heavily to the fishery.

9. Ichthyoplankton

A major survey of the disperal of herring larvae was conducted by Canada, France (St.P), Fed.Rep. Germany, USSR, and USA. The larvae from the Lurcher Shoal area (Div. 4X) drifted north along the eastern side of the Bay of Fundy. Egg and larval surveys were conducted by Canada in Div. 4Ta in May and August of 1971.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2876
(A.a.4)

Proceedings No. 6
Appendix III

ANNUAL MEETING - JUNE 1972

(5) Proposal for International Quota Regulation of the Fishery for Cod in Subdivision 4Vs and Division 4W of Subarea 4

Panel 4 recommends that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

"1. That the Contracting Governments take appropriate action to regulate the catch of cod, *Gadus morhua* L., by persons under their jurisdiction fishing in Subdivision 4Vs and Division 4W of Subarea 4 so that the aggregate catch of cod by vessels taking such cod shall not exceed 60,500 metric tons in 1973.

"2. That Competent Authorities from each Contracting Government listed below shall limit in 1973 the catch of cod taken by persons under their jurisdiction to the amount listed from the above-mentioned Subdivision and Division:

Canada	18,400	metric tons
Denmark	1,150	" tons
France	500	" tons
Fed. Rep. Germany	550	" tons
Iceland	450	" tons
Italy	450	" tons
Japan	450	" tons
Norway	450	" tons
Poland	550	" tons
Portugal	1,150	" tons
Romania	450	" tons
Spain	31,550	" tons
USSR	2,900	" tons
UK	450	" tons
USA	1,050	" tons

"3. That each Contracting Government mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of the date on which its vessels have ceased a specialized fishery for cod in Subdivision 4Vs and Division 4W of Subarea 4.

"4. That the Contracting Governments take appropriate action to ensure that all vessels under their jurisdiction which take cod, record their catches on a daily basis according to position, amount, date, type of gear, amount of effort, i.e., number of sets (or hooks) x time gear on the bottom (otter trawl) or fishing (midwater trawl, lines, other gear), discards and disposition of catch.

"5. That the allocations in paragraph 2 above are without prejudice to future allocations of catches for this or other stocks."

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2877
(B.e.72)

Proceedings No. 7

ANNUAL MEETING - JUNE 1972

Report of Meeting of Panel 5

Friday, 26 May, 0930 hrs
Saturday, 27 May, 1130 hrs
Friday, 2 June, 0900 hrs

1. As the Chairman was not present, the first meeting was opened by the Executive Secretary. Ambassador McKernan (USA) was elected Chairman for the current meetings. Representatives of all Member Countries of the Panel were present.

2. Rapporteur. Dr A.W. May (Canada) was appointed Rapporteur.

3. Agenda. The Agenda, as circulated, was amended to include an item "Proposals for conservation of cod stocks".

4. Panel Memberships. The application of Spain for membership in Panel 5, beginning in the 1973 financial year, was approved by the Panel and referred to STACFAD. Further details of 1971 catches with reference to Comm.Doc. 72/9 were provided by Romania.

5. Report by Chairman of Scientific Advisers. Dr F.D. McCracken (Canada) presented his summary of Status of the Fisheries and Research Carried Out in 1971 (Appendix III; also Res.Doc. 72/129 - Revised), and also presented the Report of the Meeting of Scientific Advisers (Appendix I). With reference to this Report, the USA stated that it attached a great deal of importance to these issues concerning research requirements which were contained in the Report of Scientific Advisers. More refined research was needed in relation to catch quota regulations, and this was most urgent for herring. At the same time, it was necessary to undertake research on lightly exploited species, before fisheries reached a high level. USA expressed concern that some haddock catches in Subarea 5 had not been reported in accordance with the quota control procedures. Poland informed the Panel that analysis of information on mackerel was in progress and would be reported next year.

6. Scallops. A Canadian proposal (Comm.Doc. 72/19) to introduce a size limit of 40 meats per pound landed was discussed. Canada stated that this was not adequate to achieve maximum sustained yield-per-recruit, but for practical reasons was the best that could be done initially.

Panel 5 reviewed the proposal of a Working Group set up to consider this question and

agreed to recommend

that the Commission transmit to the Depositary Government for joint action by Contracting Governments a proposal (23) for international regulation of the fishery for sea scallops by minimum size values in Div. 5Z of Subarea 5 (Appendix IV).

7. Review of Present Conservation Measures. Present conservation measures were reviewed by the Chairman. It was agreed that the quota reporting system had operated well in that final catch statistics for haddock and yellowtail flounder were close to those reported by the quota reporting procedure.

8. Consideration of Increase to 130-mm Mesh Size Regulation for All Regulated Species. USSR repeated its proposal of last year to extend the 130-mm mesh regulation to the whole Convention Area for the dual purpose of protecting juvenile fish and facilitating more effective implementation of international control. USA referred to its proposal concerning mesh regulation for yellowtail flounder (Comm.Doc. 72/25) and the Panel agreed to consider these together. The Chairman of the Assessments Subcommittee reviewed earlier assessments and reported that predicted benefits of increase in mesh size to 130-mm would now be greater, having regard to increased fishing intensity in recent years. Panel 5 agreed that significant conservation benefits could be achieved by increasing mesh size in Subarea 5 to 130 mm for cod, haddock, and yellowtail flounder. The Panel also agreed to a Polish amendment that the regulation could come into force in 1 January 1974.

Panel 5, therefore,

recommends

that the Commission transmit to the Depositary Government for joint action by the Contracting Governments a proposal (22) for amendment of the international trawl regulation of the fishery for cod, haddock and yellowtail flounder in Subarea 5 by increasing the mesh size to 130 mm in the codend by 1 January 1974 (Appendix V).

9. Review of Conservation Measures for Haddock. USA referred to the summary of the Status of the Fishery and Research Carried Out in Subarea 5 (Appendix III; also Res.Doc. 72/129 - Revised) and the Report of Scientific Advisers to Panel 5 (Appendix I), which showed that present conservation measures were not preventing continued decline of haddock in Subarea 5. A second meeting of Scientific Advisers (Appendix II) examined a US proposed amendment to the haddock quota regulations, adopted in 1971, providing for closure of the Subarea 5 haddock fishery and more effective control of incidental haddock catches. However, it was considered desirable to continue discussion of this item in conjunction with a review of haddock conservation measures in Subarea 4, thus the subject was referred to a joint meeting of Panels 4 and 5. In the Joint Meeting of Panels 4 and 5 (Proc. 14), Panel 5 agreed to the recommendation of that meeting that the conservation regulations for haddock in Subarea 5 continue in force for 1973 (Proc. 14, Appendix IV), subject to any amendments for closed area boundaries made in a later meeting of Panel 5. Later, a US proposal concerning amending the closed area regulations in Subarea 5 was discussed. The Panel

agreed to recommend

that the Commission transmit to the Depositary Government for joint action by the Contracting Governments a proposal (16) for amendment of paragraph 5 of the 1971 haddock quota regulation for Subarea 5 (closed area) (Appendix VI).

10. Review of Conservation Measures for Silver and Red Hakes. USA introduced Comm.Doc. 72/23 and Comm.Doc. 72/29, pointing out that these species should be protected against possible large diversions of effort as a result of quota regulations for other species. The Panel agreed to US proposals for overall quotas on these stocks at meetings on 26 and 27 May, but left the question of national allocations for proposals from an *ad hoc* Committee on Quota Allocation set up by the Plenary. At a meeting of the Panel on 2 June the Panel Members were asked to consider proposals from the *ad hoc* Committee for quota control of the fisheries for red hake and silver hake in Subarea 5 and adjacent waters to the west and south.

Panel 5

agreed to recommend

that the Commission transmit to the Depositary Government for joint action by the Contracting Governments, proposal (14) for international quota regulation of the fishery for red hake from the Southern New England stock (Appendix VII); proposal (11) for international quota regulation of the fishery for silver hake in Div. 5Y of Subarea 5 (Appendix VIII); proposal (13) for international quota regulation of the fishery for silver hake from the Southern New England stock (Appendix IX); and proposal (12) for international quota regulation of the fishery for silver hake in Subdiv. 5Ze of Subarea 5 (Appendix X).

The Panel also considered a US proposal to extend the Subarea 5 closed area regulation for red and silver hakes, adopted in 1969, but during the month of April 1973 only. Panel 5

agreed to recommend

that the Commission transmit to the Depositary Government for joint action by the Contracting Governments, a proposal (20) for amendment of the international fishery (closed area) regulation, adopted in 1969, for the fishery for red hake and silver hake in Subarea 5 (Appendix XI).

11. Review of Conservation Measures for Yellowtail Flounder. USA referred to Comm.Doc. 72/25 and suggested that overall quotas for yellowtail flounder in the Subarea should be set with reference to the Assessments Subcommittee Report in these stocks. Following discussion of the Assessments Subcommittee Report and the recommendations of the *ad hoc* Committee on Quota Allocation, the Panel

agreed to recommend

that the Commission transmit to the Depositary Government for joint action by the Contracting Governments, a proposal (10) for amendment of the international quota regulation, adopted in 1971, for the fishery for yellowtail flounder in the Subarea 5 east of 69°W (Appendix XII), and a proposal (11) for amendment of the international quota regulation, adopted in 1971, for the fishery for yellowtail flounder in Subarea 5 west of 69°W (Appendix XIII).

12. Review of Conservation Measures for Herring Stocks. It was agreed that this subject need not be taken up now as a result of decisions at the 1972 Special Commission Meeting on Herring.

13. Proposals for Conservation of Cod Stocks. USA referred to proposals for the conservation of cod stocks by catch quota in the Northwest Atlantic and particularly in Subarea 5 (Comm.Doc. 72/22 and Comm.Doc. 72/29). Following discussion of these proposals, the Panel Members were asked to consider total allowable catches for cod in Divs. 5Z and 5Y of Subarea 5. At a meeting of the Panel on 2 June, proposals for national allocation of the total allowable quotas were presented from the *ad hoc* Committee on Quota Allocation. Following discussion, Panel 5

agreed to recommend

that the Commission transmit to the Depositary Government for joint action by the Contracting Governments, proposal (7) for international quota regulation of the fishery for cod in Div. 5Z of Subarea 5 (Appendix XIV) and proposal (6) for international quota regulation of the fishery for cod in Div. 5Y of Subarea 5 (Appendix XV).

14. Full Use of Regulated Species. Canada introduced Comm.Doc. 72/20, noting that more information was needed on discards, and suggesting that STACRES should examine the effect of a proposal to prohibit discarding of fish of a regulated species weighing over 0.5 kg, and to report on this next year.

15. Romania reported that it was unable to be represented at the Special Meeting of the Commission in Rome in 1972. It accepts the decision of that meeting, concerning quota allocation of herring to Romania for 1972, but stated that the amount was insufficient.

16. Annual Exemptions. It was reported that there was no significant use of this provision but agreed that the item should remain on the agenda for next year.

17. Future Research Required. This was considered to be adequately covered by earlier discussions of the Report of Scientific Advisers to Panel 5. Poland noted that a Polish research vessel will operate this year in Subarea 5, and that plans will be communicated to the Secretariat.

18. Next Meeting. It was agreed that the Panel would meet at the time and place of the next Commission meeting.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2877
(B.f.3)

Proceedings No. 7
Appendix I

ANNUAL MEETING - JUNE 1972

Report of Meeting of Scientific Advisers to Panel 5

Wednesday, 24 May, 0900 hrs

1. The meeting was opened by the Chairman, Dr F.D. McCracken. Representatives from Member Countries, Canada, Fed. Rep. Germany, Japan, Poland, USSR and USA, were present. Romania was not represented.

2. Mr W.G. Gordon (USA) was appointed Rapporteur.

3. The agenda for Panel 5 was adopted with minor revisions. Conservation measures for cod in Subarea 5 was added to the agenda.

4. The Chairman of Scientific Advisers, Dr F.D. McCracken (Canada), presented his Report on the Status of the Fisheries and Research Carried Out in Subarea 5 in 1971 (Appendix III; also Res.Doc. 72/129). The list of documents relevant to Subarea 5 was reviewed for completeness and the Chairman noted that several additional numbers would be added. Dr B.E. Brown (USA) suggested that the statistics on yellowtail flounder contained in the Statistical Bulletin reflect landings by Division in lieu of total catch for the yellowtail flounder regulatory areas. Mr R.C. Hennemuth (USA) called attention to a submersible operation carried on off the Maine coast to study herring spawning, the hatching process and survival of larval stages. He also noted that an increased growth rate for haddock has resulted in an increase of pre-spawning haddock being harvested. This may adversely affect the spawning stock. Dr A. Schumacher (Fed.Rep. Germany) noted that catches of herring early in the fishing season were dominated by younger herring, older herring dominated the catches during the first part of the spawning season, and young herring became dominant again in the second part of the spawning season. USSR noted that commercial fishing vessels and scouting vessels concurrently observed concentrations of juvenile herring on Georges Bank and adjacent areas during February-March 1972. The Chairman noted other minor revisions in his Report.

5. Review of Present and Proposed Conservation Measures (Subarea 5). Dr McCracken (Canada) called attention to the haddock quota being reduced from 12,000 metric tons in 1971 to 6,000 metric tons in 1972 for Subarea 5 and noted the implementation of closed areas during haddock spawning for both years. He noted the catch of 1,300 metric tons recorded by Spain in 1971, which was not reported to the ICNAF Secretariat in the agreed increments and speculated that had this been done, closure of the haddock fishery might have been necessary. Discussion of proposed conservation measures was deferred to later agenda items.

6. Consideration of Increase to 130-mm Mesh Size Regulation for all Regulated Species. Mr Hennemuth commented on studies showing that an increase in mesh size to 130 mm would not appreciably increase yield-per-recruit for cod and haddock. He also noted that the effect on many other species has not been assessed but suggested that a mesh size of 130 mm would not be feasible for the hakes. It is now effective for yellowtail. The Advisers agreed to inform the Panel of this assessment.

7. Review of Conservation Measures for Haddock in Subarea 5. Mr Hennemuth (USA) indicated that the quota of 12,000 metric tons for 1971 did not result in improvement in the haddock stock and noted that a similar observation can be made for the 1972 quota. Stock abundance is presently very low and there is little recruitment expected from the 1971 year-class. Considering general fishing activity, an incidental catch of 3,000 to 4,000 tons can be expected. Mr Hennemuth (USA) said that even this amount would not improve the density of the haddock stock. He added that closed areas for haddock at certain seasons are useful in reducing overall harvest and recommended these continue. The Scientific Advisers agreed that proposals to minimize the removal of haddock are desirable.

8. Review of Conservation Measures for Silver and Red Hakes in Subarea 5 (Comm.Docs. 72/23, 29; Res. Docs. 72/1, 27, 28, 114; and Assessments Subcommittee Report). Mr Hennemuth (USA) reviewed the results of the Assessments Subcommittee for hake stocks. They concluded that silver hake quotas should be approximately equally divided within Subdivs. 5Ze and 5Zw and that a total quota of 160,000 metric tons would achieve maximum yield-per-recruit. Mr Hennemuth reported that there has been poor recruitment to silver hake stock in Div. 5Y and the quota there should be 10,000 metric tons to provide for an increase in stock size.

The Assessments Subcommittee concluded that there were two red hake stocks divided between Subdivs.

5Ze and 5Zw - Statistical Area 6. They recommended only incidental catches from the Subdiv. 5Ze stock and 40,000 metric tons from the Subdiv. 5Zw-Statistical Area 6 stock. The Advisers agreed that quotas would be an effective conservation measure.

Mr Hennemuth (USA) reviewed the yield-per-recruit studies in regards to a proposed minimum mesh size for red and silver hakes. Dr B.E. Brown (USA) indicated that the best yield-per-recruit occurs at age 3 years and pointed out the expected benefits of applying a larger mesh of 52-55 mm in the fishery. Dr A.S. Noskov (USSR) noted that their commercial fleet uses a mesh of 44 mm for hake, herring and mixed fisheries. He also reviewed their selectivity studies indicating that a mesh of 60 mm was not suited to the medium-size trawlers engaged only in the hake fishery. Dr Noskov also noted that an increase from 44 mm to 52-55 mm would adversely affect the activities of the Soviet fleet operating in the mixed fishery. Mr Hennemuth (USA) agreed that increased mesh might cause problems for foreign fleets. Dr Noskov commenting on mesh selection studies concluded that high mortality resulted for herring that passed through codend mesh. Dr J. Popiel (Poland) noted that herring meshing would be a particular problem to vessels engaged in mixed fisheries. The Advisers agreed that increasing present mesh sizes to 52-55 mm would be beneficial to hake stocks but that an unresolved problem exists when hake and herring fisheries overlap.

Mr Hennemuth (USA) commented that the USSR successfully conducted fisheries for red and silver hake during 1971 when the hake closed areas were in effect. He concluded that the closed areas have been effective in reducing fishing mortality on hake. Although direct biological benefits from the closed areas have been difficult to assess, stock abundance appears to be increasing. Dr Noskov commented that if quotas are effected there will be little need to continue closed areas as a regulatory measure because fishing intensity will be controlled by quotas. He also noted that offshore concentrations are larger, well-fed adults, not pre-spawners or spawners, thus closed areas have little benefit as spawning occurs after late June. Mr Hennemuth noted that problems of the mixed fishery might be minimized by permitting fishing on the hake concentrations during the present closures.

9. Review of Conservation Measures for Yellowtail Flounder in Subarea 5 (Comm.Doc. 72/25 and Assessments Subcommittee Report). Mr Hennemuth (USA) noted that the Assessments Subcommittee recommended that the level of quotas for 1972 be continued unchanged for 1973. Dr F.D. McCracken (Canada) reviewed the US proposal to revise the trawl net regulations to allow use of 130-mm mesh size in the codend, only. The Scientific Advisers agreed that the US proposal would be effective for yellowtail flounder. Dr Noskov (USSR) commented that selectivity for groundfish might not be restricted solely to codend meshes and indicated their interest in additional studies.

10. Review of Conservation Measures for Herring Stocks in Divs. 5Y and 5Z. Mr T.D. Iles (Canada) summarized briefly deliberations of the Herring Working Group and their review of data acquired since the Mid-Term ICNAF Meeting in Rome, Italy. He noted that no changes in the conservation measures adopted are recommended. Herring regulatory measures for Subarea 5 involve: Div. 5Z and Statistical Area 6, quota 150,000 tons; Div. 5Y, quota 30,000 tons (a minimum adult size of 9 inches). Mr Iles noted that should incidental catches of adult herring under 9 inches exceed the 10% limitation, it might be necessary to recommend other measures at subsequent meetings. The Scientific Advisers expressed their appreciation to Mr Iles and members of the Herring Working Group.

11. Conservation Measures for Scallops in Subarea 5 (Comm.Docs. 72/19, 24; Res.Docs. 72/5, 6, 113; and Assessments Subcommittee Report). The Chairman called attention to the US and Canadian proposals for conservation of scallops. Dr J.F. Caddy (Canada) noted that to raise age of first capture to 7-8 years was not practical for a first step. He commented that the proposal by Canada would raise the age of first capture to 4 years and significantly increase yield-per-recruit. The Advisers agreed that regulation regarding meat size was the the most practical to implement. Mr Hennemuth (USA) commented that a reduction of effort would appear to be beneficial but scientists were unable at this time to assess the amount of reduction. The Scientific Advisers recommended that an appendix of the Assessments Subcommittee's Report relating to methods of regulation be appended to this Advisers Report (Annex).

12. Full Use of Regulated Species (Comm.Doc. 72/20). The Chairman called attention to the Canadian proposal dealing with discard of regulated species over a half kilogram. Mr Hennemuth (USA) commented that provided survival rate for discards was high then from a biological view such a practice was desirable. It was pointed out that there has been difficulties in obtaining satisfactory discard reports. The Scientific Advisers agreed to advise the Panel to consider means of obtaining adequate data on total removal from biomass.

13. Conservation Measures for Cod from Subarea 5 (Comm.Docs. 72/22, 29; Res.Docs. 72/1, 116; and Assessments Subcommittee Report). Mr Hennemuth (USA) outlined the status of Subarea 5 cod stocks and noted the Subcommitte's recommendation for a quota of 35,000 metric tons. The Scientific Advisers agreed with this proposed conservation measure.

14. Review of the 10% Annual Exemption for Cod and Haddock, Including Information Presented by Member Countries on Number or Weight and Length Composition of Regulated Species Caught by Small Mesh Nets. The Scientific Advisers noted that no reports were prepared for the 1972 Annual Meeting and concluded that such

reports should be made available annually if an assessment of the provision is required.

15. Future Research Requirements. The Chairman noted that recommendations are included in the Assessments Subcommittee's Report and the Herring Working Party Report, emphasizing especially work on hake and herring stocks. Mr Hennemuth pointed out the large catches of mackerel and the probable high exploitation rate in this fishery, and recommended that nations whose fleets exploit these stocks furnish an assessment report on these stocks for the next meeting. He also noted that fishing for squid is becoming important in the area and that information obtained in the early exploitation phase for this species would be most valuable. Mr Hennemuth also noted the need for additional support for the total biomass study (Res.Doc. 72/119).

Dr D. Schnack (Fed. Rep. Germany) expressed the view that member nations should be requested to support herring larval studies in Subarea 5 and Div. 4X - current vessel time being approximately half the requirements and an additional three vessels to carry out three 2-week cruises are required, assuming that Canada is able to survey the Bay of Fundy and spawning areas, southwest off Nova Scotia. Dr Noskov (USSR) called attention to their juvenile herring survey using acoustic equipment and pelagic trawl.

Mr Hennemuth (USA) noted the underwater studies with a submersible being planned for studying spawning herring, the hatching process and larval survival. The Scientific Advisers endorsed these studies and agreed to advise the Panel accordingly.

The Chairman noted the recommendation from the Statistics and Sampling Subcommittee which requests that Scientific Advisers to Panels bring to the attention of the various Panels the important conclusion relative to the adequacy of biostatistical data on fisheries contained in the Report of the ICES Liaison Committee to NEAFC, which are considered to be equally appropriate to the ICNAF Area, and which are appended to the Report of the Statistics and Sampling Subcommittee. The Scientific Advisers to the Panel strongly endorsed the importance of these requirements.

16. Election of Chairman. Dr F.D. McCracken (Canada) was unanimously elected Chairman of the Scientific Advisers to Panel 5 for 1972-73.

17. Time and Place of Next Meeting. It was agreed that the next meeting of the Scientific Advisers would be held at the time of the next Commission meeting.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2877
(B.f.3)

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Appendix I
Annex

ANNUAL MEETING - JUNE 1972

Three ways of defining a sea scallop regulation based on landed meat size were discussed in the Assessments Subcommittee. Some comments are made on the problems associated with each method.

1. A limit on average meat size in the catch

This measure would allow fishermen to include small scallops in the catch as long as the average meat weight did not fall below the specified limit. Fishermen could spend several days out of a 10-14-day trip fishing small scallop areas, as long as the remainder of the trip was spent fishing large scallops. Fairly extensive random sampling of the catch would be necessary to define the average count in the catch with adequate confidence intervals.

2. A limit on average meat size in each bag

After shucking, scallops are packed in cloth bags holding 35-40 lbs and placed on ice in the hold. These bags are often off loaded and shipped to retailers without processing, so that they form a convenient unit of the catch. If the regulation were phrased in terms of the maximum count per lb allowed in each bag, this measure would allow the inspecting officer to choose for sampling those bags whose contents obviously exceeded the specified count.

3. Minimum size of meats landed

A prohibition of the landings of meats below a certain size is the most rigorous approach in that it can be directly related to age at first capture. The confidence limits for the shell length/meat weight relationship derived by Haynes (1966) can be used to define the limits of meat size for a given size of shell. This measure would, however, be difficult to enforce because of the large number of meats in the catch (often in excess of 0.5 million), and because meats of a "legal" size scallop might fall below the prescribed limit due to careless cutting of the meat from the shell.

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Appendix II

ANNUAL MEETING - JUNE 1972

Special Meeting of Scientific Advisers to Panel 5

Monday, 29 May, 0930 hrs

1. The Chairman, Dr F.D. McCracken (Canada) reconvened the Scientific Advisers. Representatives from Canada, Fed.Rep. Germany, Japan, Poland, USSR, and USA were present.

2. Mr W.G. Gordon (USA) continued as Rapporteur.

3. Review of Proposed US Amendment to Haddock Quota Regulations for Subarea 5 (see Annex) (Annual Proceedings, Vol. 21, p. 32-33). The Chairman reviewed Item 7 in the Report to the Panel. Dr B.E. Brown (USA) reviewed the 1971 catch of haddock for US vessels of different sizes and discussed the effects that proposed amendments would have on US fishery. He pointed out that, with complete closure of the haddock fishery, US vessels would catch about 4,000 tons under the 10% limitation. If only the 5,000 lb limitation were applied, an estimated 3,000 tons would be taken. The Advisers also reviewed the landings of haddock from Subarea 5 by all other nations.

The Scientific Advisers agreed that elimination of percentage incidental catch allowance would affect those fleets operating in the cod fishery. A review of the best available data indicates that the incidental catch of haddock for these fleets probably was between 8% and 15%. Elimination of the percentage would probably not affect total removal from the stock, possibly by a direct fishery for cod, only increasing the rate of discards of haddock. For vessels fishing such species as argentines, hake, etc., the incidental catch of haddock appears very low, possibly less than 1%. Elimination of the percentage allowance for vessels operating for species other than cod and haddock would prevent opportunity for escalation of haddock landings by such vessels. However, the Advisers agreed that the percentage limitations should, in all instances, apply to all vessels and be applied to all other fish on board, caught in Subarea 5, since the poundage restriction cannot be applied to the distant-water vessel.

A review of data on US landings show that lowering the poundage limitation on incidental catch allowance to 3,000 lbs would not severely restrict small vessels operating in other fisheries, but would be restrictive to large vessels if there is no percent incidental catch allowance.

The Scientific Advisers found no biological basis for seasonal closure of areas of haddock-spawning concentrations. They noted, however, that if the present quota scheme is continued at a level higher than the expected incidental catch, such closure serves to spread fishery over the year. With complete closure of a directed fishery for haddock, the closed areas would serve to reduce the total incidental catch. It was noted that these areas were chosen to minimize the impact on spawning haddock concentrations and that it could be anticipated that the incidental catch of haddock could be greater should the closure be abandoned. It was noted that the closed areas interfere with other fisheries, notably argentine in closed Area B, shrimp and redfish in closed Area A, and to a minimal degree, on cod in closed Area B.

Catch-effort data for the US hook and line fishery in Subarea 5 was reviewed. It was noted that current effort is restricted largely to closed Area A and that this is an extremely small fishery. Monthly total production of all species in their fishery during the period March-May ranged from 44 to 152 tons during 1969 when no closure was in effect and from 84 to 117 tons in 1970 when closure was in effect. Of the above in 1969, the total haddock take was 5 tons, in 1970 - 39 tons. The Scientific Advisers noted that a reduction of hook-size gape to 2 cm would probably not appreciably change the haddock catch by this small fishery. The change in hook size for closed Area B would possibly attract new entrants.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2877
(B.f.3)

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Appendix II
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ANNUAL MEETING - JUNE 1972

Proposed Amendment of Haddock Regulations for Subarea 5

That the Haddock Quota Regulation for Subarea 5, adopted at the Twenty-First Annual Meeting of the Commission (Annual Proceedings, Vol. 21, p. 32-33), be revised to provide:

(1) Closure of the haddock fisheries in the Subarea;

(2) More effective control of incidental haddock catches through:

(a) elimination of the existing percentage incidental catch allowance,
(b) retention of a poundage limitation on incidental catches,
(c) continued seasonal closure of areas of haddock spawning concentrations to the use of fishing gear (other than hooks) in a manner capable of catching demersal species.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2860
(D.b.71)

Proceedings No. 7
Appendix III
(also ICNAF Res.Doc. 72/129 - Revised)

ANNUAL MEETING - JUNE 1972

Status of the Fisheries and Research Carried Out in Subarea 5 in 1971

by

F.D. McCracken
Fisheries Research Board of Canada
St. Andrews, N.B., Canada

Pertinent Documents

Reports on research have been received from Canada, France, Fed.Rep. Germany, Japan, Poland, Spain, USSR, UK, and USA. The following documents report matters of interest to Subarea 5.

Res.Docs. 72/1, 5, 6, 7, 8, 9, 13, 20, 22, 23, 24, 27, 28, 29, 33, 36, 37, 39, 41, 42, 43, 44, 45, 46, 51, 52, 55, 57, 62, 63, 89, 92, 94, 97, 101, 103, 112, 113, 114, 115, 116, 117, 118, 119, 120, 123, 124.

The latest information regarding the state of fish stocks and most recent assessments are given in the Report of the Assessments Subcommittee (Redbook 1971, Part I) and in the Report of its Mid-Term Meeting (Res.Doc. 72/1).

1. Status of the Fisheries

Total catches of all species, excluding catches by non-member countries, increased about 18% from 659,000 tons in 1970 to 778,000 tons in 1971. Increased catches were recorded by Canada (47,000 to 61,000 tons); Japan (11,000 to 15,000 tons); Poland (102,000 to 125,000 tons); Spain (8,000 to 9,000 tons); and USSR (166,000 to 293,000 tons); catches by Romania remained the same (2,000 tons in 1970 and 1971); and decreased catches by Fed. Rep. Germany (92,000 to 58,000 tons); and USA (230,000 to 213,000 tons).

Cod catches increased slightly from 33,000 tons in 1970 to 35,000 tons in 1971 due to stable catches by Canada (3,000 tons both years); Spain (7,000 tons both years); and slight increases for USSR (about 1,000 tons in 1971); and USA (22,000 to 23,000 tons).

Haddock catches remained at the limitation level of 12,000 tons set by the Commission, with catches of about 1,700 tons by Canada; 1,300 tons by Spain; 8,500 tons by USA, and less than 500 tons by Romania and USSR.

Redfish catches continued to increase (17,000 to 20,000 tons). Most were taken by the USA (16,000 tons) but with catches by the USSR increasing from 0 in 1970 to 3,000 tons in 1971. Increases appear to result from increased effort.

Silver hake catches continued their wide fluctuations and increased from 48,000 tons in 1970 to 95,000 tons in 1971. Catches by the USA declined (19,000 to 13,000 tons) but the USSR catches increased (28,000 to 82,000 tons). The decline for the USA was mainly in the industrial fishery. The increase for the USSR is attributed to increased commercial concentrations and high fishing effort.

Red hake catches increased sharply from 11,000 tons in 1970 to 28,000 tons in 1971, but did not reach the level of 1969 (50,000 tons). USSR catch increased (7,000 to 25,000 tons); USA catch declined (4,000 to 3,000 tons). Increased catches are attributable to increased effort mainly from May through October.

Yellowtail flounder landings were 23,000 tons but total take including discards was estimated to be about 30,000 tons. Total reported catch for the regulatory area west of 69° long. reached 14,300 tons, exceeding somewhat the 13,000-ton limit set by the Commission for that region. Total reported catches for the regulatory area east of 69° long. at 16,600 tons exceeded slightly the 16,000-ton limit set by the Commission.

Herring catches by Member Countries increased from 220,000 tons in 1970 to 247,000 tons in 1971. Fed.Rep. Germany catches declined sharply (88,000 to 56,000 tons), while catches increased for Canada (5,000 to 20,000 tons); Poland (41,000 to 69,000 tons); USSR (56,000 to 64,000 tons); USA (3,000 to 34,000 tons mainly from Div. 5Y). Catches by Non-Member Countries declined from 30,000 tons in 1970 to 17,000 tons in 1971. US catches in Div. 5Y were about 75% adults (age 4+ and older) in contrast to the period prior to 1967 when the fishery was almost all juvenile fish. Age composition of herring caught in Div. 5Z fluctuated somewhat with season. The 1966 and 1967 year-classes predominated, although the 1968 year-class was important, particularly in the early season fishery by both Fed.Rep. Germany and Poland. USSR studies indicate that all year-classes available to the fishery were poor and that no strong year-classes are likely to be recruited in 1972.

Mackerel catches remained high and increased slightly from 102,000 tons in 1970 to 117,000 tons in 1971 and most were taken by Poland (44,000 tons); and USSR (59,000 tons). The large catches are attributed to both abundance and a continuing high effort. Alewife catches declined again from 14,000 tons in 1970 to 9,000 tons in 1971.

Sea scallop catches remained stable in both 1970 and 1971 at 47,000 tons, of which Canada took 33,000 tons and USA 14,000 tons.

2. Work Carried Out

a) Canada. Population estimates, gear selectivity and mortality rates due to dredges on sea scallop. Analysis of herring larval surveys. Investigations of heavy metal contamination in swordfish as related to size, distribution and food.

b) France. Participation in joint ICNAF study of herring larval distribution with R/V *Cryos*. Hydrographic observations. Studies to distinguish two species of *Merluccius*.

c) Fed.Rep. Germany. Studies of catch, effort, catch-per-unit effort, length and age composition of herring catches by commercial vessels. Studies of herring maturity stages. Population dynamics of Georges Bank herring. Studies of herring spawning time, place and some related environmental conditions from the fishery protection vessel *Poseidon*. Hydrographic studies and herring larval surveys from R/V *Walther Herwig*.

d) Japan. Obtained records of catch effort from commercial vessels. Length composition of butterfish, argentine and squids from commercial catches.

e) Poland. Length and age composition of herring and mackerel samples. Distribution and abundance of herring larvae. Fishing studies for herring and mackerel. Hydrographic and plankton studies on Georges Bank in autumn.

f) USSR. Length and age composition studies of silver hake, red hake, herring and mackerel. Egg and larval surveys for silver hake, red hake, and herring. Race analysis for silver hake. Herring spawning stock estimates. Groundfish trawl surveys and abundance indices estimates for main species. Hydrographic and hydrochemical studies on Georges Bank.

g) UK. Continuous Plankton Recorder sampling, 1,258 miles, with analysis of collected data.

h) USA. Length and age composition for catches of haddock, cod, silver hake, yellowtail flounder, and herring. Herring larvae, plankton and groundfish bottom trawl surveys. Environmental studies from cruises of *Albatross IV*, Coast Guard vessels and shore stations. Population studies on haddock, cod, silver hake, red hake, yellowtail flounder, and herring. Food studies of groundfish and research on benthic invertebrate communities. Use of a submersible in studying herring spawning and larval survival.

3. Hydrographic and Plankton Studies

USSR standard hydrographic sections show higher subsurface temperatures in 1971 in the East Channel region and the southern Georges Bank area. In the northern Georges Bank region, temperatures were higher only in the near-bottom layer. Hydrographic studies by Poland in October distinguished five types of water masses in Subarea 5. Mean surface temperature at Boothbay Harbor was slightly lower (0.2°C) than in 1969, continuing the break in the upward trend begun in 1967. US data from Coast Guard surveys and records from lightships and light stations are being analyzed.

An atlas which will include monthly distribution of common fish eggs and larvae in Continental Shelf waters from Long Island to Nova Scotia is being prepared by the USA. The USA is also developing equipment for shipboard operation in resolution by type and continuous flow sampling of various plankton types.

According to USSR studies, the biomass of zooplankton over Georges Bank as a whole has recently

followed a downward trend and this may affect both strength of year-classes for various fish species as well as directly affecting plankton-feeding adults.

Polish researches (September to November) showed copepods as the main component of the zooplankton, followed by Euphausidacea.

4. Cod

Landings in 1971 fell within the 30,000-40,000 tons estimated maximum sustainable yield level. The fishery appears to be fully exploited at this time. Estimates of the abundance of commercial stock for 1972-74, based on US research vessel sampling of pre-recruit sizes, suggest that, if fishing effort remains constant, the level of commercial stock abundance should remain relatively unchanged.

5. Haddock

Bi-weekly reports of haddock catches reaching the Commission Secretariat did not reach 80% of the quota and the fishery was not closed. However, final tabulation shows a nominal catch of 215 tons above the quota. The stock of haddock remains low with fish 8 years and older (mainly 1963 and 1962 year-classes) representing about 50% of the catch. Autumn groundfish surveys by the USA and USSR indicate that the 1971 year-class is only slightly better than that of 1970. Recruitment to the fishery through at least 1973 will be low. Studies show haddock spawning on Georges Bank to begin in late February and to be 50% completed by mid-April.

6. Herring

The dramatic decline in herring catches from the peak landing in 1968 led to special emphasis on assessment of these stocks and a mid-term meeting of the Commission, at which both total and national quotas were recommended to be applicable in 1972. In Div. 5Y the fishery is primarily harvesting adults (4+ and older), whereas prior to 1967 the fishery was mainly for juveniles. Exploitation levels are high and because of poor recruitment the adult stock will decrease. A further decline in adult stock may reduce the probability of getting a good new year-class.

In the Georges Bank area (Div. 5Z), the 1968 and 1967 year-classes apparently predominated with some variation in proportions according to time. In the early part of the spawning season (September) older fish were important (5-, 4- and 3-year-old fish), while later in the season the younger fish (3-year-olds) became more important. Fed. Rep. Germany studies indicate that spawning of herring is located in a narrow band of 10°-13°C water along the northern edge of Georges Bank. USSR studies continue to show a much reduced spawning stock, however, commercial and scouting vessels reported large concentrations of juvenile herring on Georges Bank and adjacent waters in February and March 1972.

A joint ICNAF herring larval survey was carried out in 1971 with a number of countries participating. The studies included distribution, abundance, sizes, feeding, etc. Biochemical studies were also pursued in an effort to separate stocks and relate larvae to three possible parent populations.

7. Yellowtail Flounder

Landings per day fished declined on both major fishing grounds (Subdivs. 5Ze and 5Zw). Survey cruise data also reflect lower abundance, particularly for Subdiv. 5Zw. Three- and four-year-old fish made up about 65% of the landings. Assessments based on fall survey cruises and 1971 catches suggest that 1972 abundance will be about the same or slightly less than in 1971.

In 1971 the yellowtail fishery in east of 69° long. was closed by mid-November when 80% of the quota was reached.

8. Silver Hake

In offshore catches of silver hake (Div. 5Z) fish of three to four years of age predominated and fall surveys by the USSR indicated that the silver hake stock was somewhat more abundant than in 1970. Inshore landings and catch-per-unit effort were again reduced. Research vessel surveys indicate that pre-recruit numbers were more abundant (1971 year-class) and suggest that in 1974 when these fish reach commercial age the harvestable stock is likely to increase. Eggs and larvae of silver hake on the main spawning grounds on the southern slope of Georges Bank were found to be much higher than in previous years. Studies show that the food of the larvae is mainly nauplii, copepodites and adult copepods. Race analysis based on a variety of parameters have delineated a number of stocks of silver hake within the Subarea 5 and Statistical Area 6 regions.

9. Red Hake

USSR studies indicate that two principal stocks exist, a Subdiv. 5Ze stock and a Subdiv. 5Zw-Statistical Area 6 stock. During winter, the stocks may be relatively discrete, but in summer during

extensive inshore migrations the stocks may be intermixed in some areas. USSR studies indicate a high natural mortality rate for older ages in red hake stocks and the extremely important role of recruitment in determination of the commercial stock of red hake. Good recruitment of the 1971 year-class (determined from trawl surveys) is expected in 1973-74.

10. Sea Scallops

Although landings of scallops remained stable, this apparently was possible only because of exploitation of young scallops at about 3 years of age. Fishing mortality is high and Canadian researches indicate important incidental mortality resulting from the action of the dredges used in the fishery.

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Serial No. 2877
(A.a.4)

Proceedings No. 7
Appendix IV

ANNUAL MEETING - JUNE 1972

(23) Proposal for International Regulation Respecting the Fishery for Sea Scallops in Division 5Z of Subarea 5

Panel 5 recommends that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

"That the Contracting Governments take appropriate action to prohibit the retention and landing of sea scallops, *Placopecten magellanicus* (Gmelin), by persons under their jurisdiction,

(a) of a shell size less than 95 mm, measured from the hinge to the opposite margin; and

(b) the meats of which are of an average weight of less than 11.3 grams, providing an average count of forty (40) units per pound or more."

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(A.a.4)

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Appendix V

ANNUAL MEETING - JUNE 1972

(22) Proposal for International Regulation of the Trawl Fishery for Cod, Haddock, and Yellowtail Flounder in Subarea 5

Panel 5 recommends that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

That paragraph 1 of the Trawl Regulations for Subarea 5, adopted at the Twenty-First Annual Meeting (Annual Proceedings, Vol. 21, 1970-71, pages 30-31) and entered into force 1 January 1972, be replaced by the following, effective 1 January 1974, with the understanding that paragraph 1(a) of the Trawl Regulations, adopted at the Seventeenth Annual Meeting (Annual Proceedings, Vol. 17, 1966-67, page 20) and entered into force on 1 January 1970, will follow and remain part of the new regulation:

"1. That the Contracting Governments take appropriate action to prohibit (except as provided in paragraph 2) the taking of cod, *Gadus morhua* L., haddock, *Melanogrammus aeglefinus* (L.); and yellowtail flounder, *Limanda ferruginea* (Storer) in Subarea 5, by persons under their jurisdiction, with trawl nets having in any part of the net other than the codend, meshes of dimensions less than 114 mm or 4-1/2 inches, and having in the codend of the nets, meshes of dimensions less than 130 mm or 5-1/8 inches measured by the ICNAF gauge specified below. These mesh sizes relate to manila twine netting when measured wet after use or the equivalent thereof when measured dry before use. The Commission may, on the basis of scientific advice as to selectivity equivalents, determine the appropriate mesh sizes when trawl nets made of materials other than manila are used or when seine nets are used."

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Appendix VI

ANNUAL MEETING - JUNE 1972

(16) Proposal for International Quota Regulation of the Fishery for Haddock in Subarea 5

Panel 5 recommends that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

That paragraph 5 of the Haddock Quota Regulation for Subarea 5, adopted at the Twenty-First Annual Meeting (Annual Proceedings, Vol. 21, 1970-71, pages 32-33) and entered into force on 1 January 1972, be replaced by the following:

"5. That the Contracting Governments take appropriate action to prohibit persons under their jurisdiction from using fishing gear in a manner capable of catching demersal species during March, April and May of 1973 in areas of Subarea 5 bounded by straight lines connecting the following coordinates in the order listed:

(a)	69°55'W,	42°10'N	(b)	67°00'W,	42°20'N
	69°10'W,	41°10'N		67°00'W,	41°15'N
	68°30'W,	41°35'N		65°40'W,	41°15'N
	68°45'W,	41°50'N		65°40'W,	42°00'N
	69°00'W,	41°50'N		66°00'W,	42°20'N

The provisions of this paragraph shall not apply to vessels that fish with hooks having a gape of not less than 3 cm."

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Appendix VII

ANNUAL MEETING - JUNE 1972

(15) Proposal for International Quota Regulation of the Fishery for Red Hake from the Southern New England Stock

Panel 5 recommends that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

"1. That the Contracting Governments take appropriate action to regulate the catch of red hake, *Urophycis chuss* (Walb.), by persons under their jurisdiction fishing on the Southern New England stock found in Subdivision 5Zw of Subarea 5 and in the adjacent waters to the west and south so that the aggregate catch of red hake by vessels taking red hake from this stock shall not exceed 40,000 metric tons in 1973.

"2. That Competent Authorities from each Contracting Government listed below shall limit in 1973 the catch of red hake taken by persons under their jurisdiction to the amount listed from the above-mentioned stock:

USSR	22,000	metric tons
USA	15,000	" tons
Other Contracting Governments, a total of	3,000	" tons

"3. That each Contracting Government mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of the date on which its vessels have ceased a specialized fishery for red hake from the Southern New England stock. Each Contracting Government not mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary if its vessels engage in a specialized fishery for red hake together if possible with an estimate of the projected catch. Each Contracting Government not mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of specialized or incidental catches of red hake in increments of 100 tons. The Executive Secretary shall promptly inform all other Contracting Governments of such notifications. The Executive Secretary shall notify each Contracting Government of the date on which accumulated catch and estimated catch of red hake, the quantity estimated to be taken before closure could be introduced, and the likely incidental catch for the remainder of the year equal 3,000 tons. Within 10 days of receipt of such notification from the Executive Secretary, each Contracting Government not mentioned by name in paragraph 2 above shall prohibit the catching of red hake from the Southern New England stock by persons under its jurisdiction, except for small incidental catches.

"4. That the Contracting Governments take appropriate action to ensure that all vessels under their jurisdiction which take red hake, record their catches on a daily basis according to position, amount, date, type of gear, amount of effort, i.e., number of sets (or hooks) x time gear on the bottom (otter trawl) or fishing (midwater trawl, lines, other gear), discards and disposition of catch.

"5. That the allocations in paragraph 2 above are without prejudice to future allocations of catches for this or other stocks."

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(A.a.4)

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Appendix VIII

ANNUAL MEETING - JUNE 1972

(12) Proposal for International Quota Regulation of the Fishery for Silver Hake in Division 5Y of Subarea 5

Panel 5 recommends that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

"1. That the Contracting Governments take appropriate action to regulate the catch of silver hake, *Merluccius bilinearis* (Mitch.), by persons under their jurisdiction fishing in Division 5Y of Subarea 5 so that the aggregate catch of silver hake by vessels taking such silver hake shall not exceed 10,000 metric tons in 1973.

"2. That Competent Authorities from each Contracting Government listed below shall limit in 1973 the catch of silver hake taken by persons under their jurisdiction to the amount listed from the above-mentioned Division:

USA	9,500 metric tons
Other Contracting Governments, a total of	500 " tons

"3. That each Contracting Government mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of the date on which its vessels have ceased a specialized fishery for silver hake in Division 5Y of Subarea 5. Each Contracting Government not mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary if its vessels engage in a specialized fishery for silver hake together if possible with an estimate of the projected catch. Each Contracting Government not mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of specialized or incidental catches of silver hake in increments of 100 tons. The Executive Secretary shall promptly inform all other Contracting Governments of such notifications. The Executive Secretary shall notify each Contracting Government of the date on which accumulated catch and estimated catch of silver hake, the quantity estimated to be taken before closure could be introduced, and the likely incidental catch for the remainder of the year equal 500 tons. Within 10 days of receipt of such notification from the Executive Secretary, each Contracting Government not mentioned by name in paragraph 2 above shall prohibit the catching of silver hake from Division 5Y of Subarea 5 by persons under its jurisdiction, except for small incidental catches.

"4. That the Contracting Governments take appropriate action to ensure that all vessels under their jurisdiction which take silver hake, record their catches on a daily basis according to position, amount, date, type of gear, amount of effort, i.e., number of sets (or hooks) x time gear on the bottom (otter trawl) or fishing (midwater trawl, lines, other gear), discards and disposition of catch.

"5. That the allocations in paragraph 2 above are without prejudice to future allocations of catches for this or other stocks."

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Appendix IX

ANNUAL MEETING - JUNE 1972

(14) Proposal for International Quota Regulation of the Fishery for Silver Hake from the Southern New England Stock

Panel 5 recommends that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

"1. That the Contracting Governments take appropriate action to regulate the catch of silver hake, *Merluccius bilinearis* (Mitch.), by persons under their jurisdiction fishing on the Southern New England stock found in Subdivision 5Zw of Subarea 5 and in the adjacent waters to the west and south so that the aggregate catch of silver hake by vessels taking silver hake from this stock shall not exceed 80,000 metric tons in 1973.

"2. That Competent Authorities from each Contracting Government listed below shall limit in 1973 the catch of silver hake taken by persons under their jurisdiction to the amount listed from the above-mentioned stock:

USSR	47,000 metric tons
USA	25,000 " tons
Other Contracting Governments, a total of	8,000 " tons

"3. That each Contracting Government mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of the date on which its vessels have ceased a specialized fishery for silver hake from the Southern New England stock. Each Contracting Government not mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary if its vessels engage in a specialized fishery for silver hake together if possible with an estimate of the projected catch. Each Contracting Government not mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of specialized or incidental catches of silver hake in increments of 100 tons. The Executive Secretary shall promptly inform all other Contracting Governments of such notifications. The Executive Secretary shall notify each Contracting Government of the date on which accumulated catch and estimated catch of silver hake, the quantity estimated to be taken before closure could be introduced, and the likely incidental catch for the remainder of the year equal 8,000 tons. Within 10 days of receipt of such notification from the Executive Secretary, each Contracting Government not mentioned by name in paragraph 2 above shall prohibit the catching of silver hake from the Southern New England stock by persons under its jurisdiction, except for small incidental catches.

"4. That the Contracting Governments take appropriate action to ensure that all vessels under their jurisdiction which take silver hake, record their catches on a daily basis according to position, amount, date, type of gear, amount of effort, i.e., number of sets (or hooks) x time gear on the bottom (otter trawl) or fishing (midwater trawl, lines, other gear), discards and disposition of catch.

"5. That the allocations in paragraph 2 above are without prejudice to future allocations for this or other stocks."

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2877
(A.a.4)

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Appendix X

ANNUAL MEETING - JUNE 1972

(13) Proposal for International Quota Regulation of the Fishery for Silver Hake in Subdivision 5Ze of Subarea 5

Panel 5 recommends that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

"1. That the Contracting Governments take appropriate action to regulate the catch of silver hake, *Merluccius bilinearis* (Mitch.), by persons under their jurisdiction fishing in Subdivision 5Ze of Subarea 5 so that the aggregate catch of silver hake by vessels taking such silver hake shall not exceed 80,000 metric tons in 1973.

"2. That Competent Authorities from each Contracting Government listed below shall limit in 1973 the catch of silver hake taken by persons under their jurisdiction to the amount listed from the above-mentioned Subdivision:

USSR	55,000	metric tons
USA	17,000	" tons
Other Contracting Governments, a total of	8,000	" tons

"3. That each Contracting Government mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of the date on which its vessels have ceased a specialized fishery for silver hake in Subdivision 5Ze of Subarea 5. Each Contracting Government not mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary if its vessels engage in a specialized fishery for silver hake together if possible with an estimate of the projected catch. Each Contracting Government not mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of specialized or incidental catches of silver hake in increments of 100 tons. The Executive Secretary shall promptly inform all other Contracting Governments of such notifications. The Executive Secretary shall notify each Contracting Government of the date on which accumulated catch and estimated catch of silver hake, the quantity estimated to be taken before closure could be introduced, and the likely incidental catch for the remainder of the year equal 8,000 tons. Within 10 days of receipt of such notification from the Executive Secretary, each Contracting Government not mentioned by name in paragraph 2 above shall prohibit the catching of silver hake from Subdivision 5Ze of Subarea 5 by persons under its jurisdiction, except for small incidental catches.

"4. That the Contracting Governments take appropriate action to ensure that all vessels under their jurisdiction which take silver hake, record their catches on a daily basis according to position, amount, date, type of gear, amount of effort, i.e., number of sets (or hooks) x time gear on the bottom (otter trawl) or fishing (midwater trawl, lines, other gear), discards and disposition of catch.

"5. That the allocations in paragraph 2 above are without prejudice to future allocations of catches for this or other stocks."

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Appendix XI

ANNUAL MEETING - JUNE 1972

(20) Proposal for International Regulation of the Fishery for Red Hake and Silver Hake in Subarea 5

Panel 5 recommends that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

That the Red Hake and Silver Hake Trawl Regulations for Subarea 5, adopted at the Nineteenth Annual Meeting (Annual Proceedings, Vol. 19, 1968-69, page 26) and entered into force on 1 January 1970, be replaced by the following:

"That the Contracting Governments take appropriate action to prohibit the taking of red hake, *Urophycis chuss* (Walb.), and silver hake, *Merluccius bilinearis* (Mitch.), during the month of April of 1973 in the area bounded by 69°00'W, 39°50'N; 71°40'W and 40°20'W, however, provided that during this period, groundfish vessels may be permitted to take on each trip during which they fish in the said area, red and silver hake in amounts not to exceed 10 percent each of the total catch taken in the said area on that trip."

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(A.a.4)

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Appendix XII

ANNUAL MEETING - JUNE 1972

(10) Proposal for International Quota Regulation of the Fishery for Yellowtail Flounder in the Area East of 69°W in Subarea 5

Panel 5 recommends that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

"1. That the Contracting Governments take appropriate action to regulate the catch of yellowtail flounder, *Limanda ferruginea* (Storer), by persons under their jurisdiction fishing in the area east of 69°W in Subarea 5 so that the aggregate catch of yellowtail flounder by vessels taking such yellowtail flounder shall not exceed 16,000 metric tons in 1973.

"2. That Competent Authorities from each Contracting Government listed below shall limit in 1973 the catch of yellowtail flounder taken by persons under their jurisdiction to the amount listed from the above-mentioned stock:

USA	15,000 metric tons
Other Contracting Governments, a total of	1,000 " tons

"3. That each Contracting Government mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of the date on which its vessels have ceased a specialized fishery for yellowtail flounder in the area east of 69°W in Subarea 5. Each Contracting Government not mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary if its vessels engage in a specialized fishery for yellowtail flounder together if possible with an estimate of the projected catch. Each Contracting Government not mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of specialized or incidental catches of yellowtail flounder in increments of 100 tons. The Executive Secretary shall promptly inform all other Contracting Governments of such notifications. The Executive Secretary shall notify each Contracting Government of the date on which accumulated catch and estimated catch of yellowtail flounder, the quantity estimated to be taken before closure could be introduced, and the likely incidental catch for the remainder of the year equal 1,000 tons. Within 10 days of receipt of such notification from the Executive Secretary, each Contracting Government not mentioned by name in paragraph 2 above shall prohibit the catching of yellowtail flounder from the area east of 69°W in Subarea 5 by persons under its jurisdiction, except for small incidental catches.

"4. That the Contracting Governments take appropriate action to ensure that all vessels under their jurisdiction which take yellowtail flounder, record their catches on a daily basis according to position, amount, date, type of gear, amount of effort, i.e., number of sets (or hooks) x time gear on the bottom (otter trawl) or fishing (midwater trawl, lines, other gear), discards and disposition of catch.

"5. That the allocations in paragraph 2 above are without prejudice to future allocations of catches for this or other stocks."

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Appendix XIII

ANNUAL MEETING - JUNE 1972

(11) Proposal for International Quota Regulation of the Fishery for Yellowtail Flounder in the Area West of 69°W in Subarea 5

Panel 5 recommends that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

"1. That the Contracting Governments take appropriate action to regulate the catch of yellowtail flounder, *Limanda ferruginea* (Storer), by persons under their jurisdiction fishing in the area west of 69°W in Subarea 5 so that the aggregate catch of yellowtail flounder by vessels taking such yellowtail flounder shall not exceed 10,000 metric tons in 1973.

"2. That Competent Authorities from each Contracting Government listed below shall limit in 1973 the catch of yellowtail flounder taken by persons under their jurisdiction to the amount listed from the above-mentioned stock:

USSR	400	metric tons
USA	9,000	" tons
Other Contracting Governments, a total of	600	" tons

"3. That each Contracting Government mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of the date on which its vessels have ceased a specialized fishery for yellowtail flounder in the area west of 69°W in Subarea 5. Each Contracting Government not mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary if its vessels engage in a specialized fishery for yellowtail flounder together if possible with an estimate of the projected catch. Each Contracting Government not mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of specialized or incidental catches of yellowtail flounder in increments of 100 tons. The Executive Secretary shall promptly inform all other Contracting Governments of such notifications. The Executive Secretary shall notify each Contracting Government of the date on which accumulated catch and estimated catch of yellowtail flounder, the quantity estimated to be taken before closure could be introduced, and the likely incidental catch for the remainder of the year equal 600 tons. Within 10 days of receipt of such notification from the Executive Secretary, each Contracting Government not mentioned by name in paragraph 2 above shall prohibit the catching of yellowtail flounder from the area west of 69°W in Subarea 5 by persons under its jurisdiction, except for small incidental catches.

"4. That the Contracting Governments take appropriate action to ensure that all vessels under their jurisdiction which take yellowtail flounder, record their catches on a daily basis according to position, amount, date, type of gear, amount of effort, i.e., number of sets (or hooks) x time gear on the bottom (otter trawl) or fishing (midwater trawl, lines, other gear), discards and disposition of catch.

"5. That the allocations in paragraph 2 above are without prejudice to future allocations of catches for this or other stocks."

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Appendix XIV

ANNUAL MEETING - JUNE 1972

(7) Proposal for International Quota Regulation of the Fishery for Cod in Subdivisions 5Ze and 5Zw of Subarea 5

Panel 5 recommends that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

"1. That the Contracting Governments take appropriate action to regulate the catch of cod, *Gadus morhua* L., by persons under their jurisdiction fishing in Subdivisions 5Ze and 5Zw of Subarea 5 so that the aggregate catch of cod by vessels taking such cod shall not exceed 35,000 metric tons in 1973.

"2. That Competent Authorities from each Contracting Government listed below shall limit in 1973 the catch of cod taken by persons under their jurisdiction to the amount listed from the above-mentioned Subdivisions:

Canada	4,000	metric tons
Poland	400	" tons
Spain	5,800	" tons
USSR	2,900	" tons
USA	19,600	" tons
Other Contracting Governments, a total of	2,300	" tons

"3. That each Contracting Government mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of the date on which its vessels have ceased a specialized fishery for cod in Subdivisions 5Ze and 5Zw of Subarea 5. Each Contracting Government not mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary if its vessels engage in a specialized fishery for cod together if possible with an estimate of the projected catch. Each Contracting Government not mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of specialized or incidental catches of cod in increments of 100 tons. The Executive Secretary shall promptly inform all other Contracting Governments of such notifications. The Executive Secretary shall notify each Contracting Government of the date on which accumulated catch and estimated catch of cod, the quantity estimated to be taken before closure could be introduced, and the likely incidental catch for the remainder of the year equal 2,300 tons. Within 10 days of receipt of such notification from the Executive Secretary, each Contracting Government not mentioned by name in paragraph 2 above shall prohibit the catching of cod from Subdivisions 5Ze and 5Zw of Subarea 5 by persons under its jurisdiction, except for small incidental catches.

"4. That the Contracting Governments take appropriate action to ensure that all vessels under their jurisdiction which take cod, record their catches on a daily basis according to position, amount, date, type of gear, amount of effort, i.e., number of sets (or hooks) x time gear on the bottom (otter trawl) or fishing (midwater trawl, lines, other gear), discards and disposition of catch.

"5. That the allocations in paragraph 2 above are without prejudice to future allocations of catches for this or other stocks."

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Serial No. 2877
(A.a.4)

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Appendix XV

ANNUAL MEETING - JUNE 1972

(6) Proposal for International Quota Regulation of the Fishery for Cod in Division 5Y of Subarea 5

Panel 5 recommends that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

"1. That the Contracting Governments take appropriate action to regulate the catch of cod, *Gadus morhua* L., by persons under their jurisdiction fishing in Division 5Y of Subarea 5 so that the aggregate catch of cod by vessels taking such cod shall not exceed 10,000 metric tons in 1973.

"2. That Competent Authorities from each Contracting Government listed below shall limit in 1973 the catch of cod taken by persons under their jurisdiction to the amount listed from the above-mentioned Division:

Canada	100 metric tons
USA	9,400 " tons
Other Contracting Governments, a total of	500 " tons

"3. That each Contracting Government mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of the date on which its vessels have ceased a specialized fishery for cod in Division 5Y of Subarea 5. Each Contracting Government not mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary if its vessels engage in a specialized fishery for cod together if possible with an estimate of the projected catch. Each Contracting Government not mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of specialized or incidental catches of cod in increments of 100 tons. The Executive Secretary shall promptly inform all other Contracting Governments of such notifications. The Executive Secretary shall notify each Contracting Government of the date on which accumulated catch and estimated catch of cod, the quantity estimated to be taken before closure could be introduced, and the likely incidental catch for the remainder of the year equal 500 tons. Within 10 days of receipt of such notification from the Executive Secretary, each Contracting Government not mentioned by name in paragraph 2 above shall prohibit the catching of cod from Division 5Y of Subarea 5 by persons under its jurisdiction, except for small incidental catches.

"4. That the Contracting Governments take appropriate action to ensure that all vessels under their jurisdiction which take cod, record their catches on a daily basis according to position, amount, date, type of gear, amount of effort, i.e., number of sets (or hooks) x time gear on the bottom (otter trawl) or fishing (midwater trawl, lines, other gear), discards and disposition of catch.

"5. That the allocations in paragraph 2 above are without prejudice to future allocations of catches for this or other stocks."

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Serial No. 2878
(B.e.72)

Proceedings No. 8

ANNUAL MEETING - JUNE 1972

Report of Meeting of Panel A

Thursday, 25 May, 1615 hrs

1. The Chairman, Mr O. Lund (Norway), opened the meeting with representatives of the three Panel countries and Observers, Mr J.A. Gulland (FAO) and Mr V.M. Hodder (ICNAF), in attendance.

2. Rapporteur. Dr C.J. Kerswill (Canada) was appointed Rapporteur.

3. Agenda. The Agenda, as circulated, was adopted with minor revisions.

4. Review of Panel Membership. The Chairman observed that no new application for membership had been received.

5. Report of Mid-Term Meeting of Panel A Member Countries, Copenhagen, 7 October 1971 (Comm.Doc. 72/6). The Chairman felt that there was no need to review the report. Pertinent sections would be considered under later Agenda items.

6. Scientific Advisers Report. The Chairman of Scientific Advisers to Panel A, Dr A.W. Mansfield (Canada), read the Report (Appendix II). It incorporates information on the Status of the Harp and Hooded Seal Fisheries and Research Carried Out (Appendix III; also Res.Doc. 72/133 - Revised), and considers points raised at the 1971 Mid-Term Meeting of Panel A Member Countries (Appendix I; also Comm.Doc. 72/6), such as disposal of unused annual quotas for harp seals.

The following points in the Report are particularly significant:

Harp seals.
(a) There is no basis for changing estimates, reached at the September 1971 Special Meeting of Panel A Experts in Copenhagen, that production of pups in 1970 was 300,000 young, and that sustainable yield from present harp seal stock is 150,000 pups.
(b) Recent information confirms that Gulf and Front seals come from the same stock, but mixing appears to be slow or incomplete.
(c) Catches in 1972 fell below ICNAF quotas; for Norwegian vessels this was not because seals were scarce but because vessels concentrated on the more valuable pups early in the season. It is not considered desirable to make any automatic addition to an annual quota to compensate for an unused quota in a previous year.
(d) No changes in regulations for opening and closing dates, etc. are proposed.
(e) Future research should follow recommendations of the 1971 Annual Meeting, except for some reservations on usefulness of aerial surveys; the need for behaviour studies of breeding seals in relation to aerial photography was emphasized.

Hooded seals.
(a) Research by Denmark and Norway shows no evidence of changes in population abundance.
(b) Introduction of catch quotas for harp seals may result in greater catches of hooded seals, undesirable until better population assessments are available.
(c) Postponement of the opening date of the season for hooded seals is suggested to prevent over-exploitation of females as compared to males, because the proportion of males tend to increase in catches as the season progresses.
(d) Future research should include further age-sampling, studies of reproductive performance and more marking.

Next Meeting of Scientific Advisers to Panel A. Since it is impossible at a May-June meeting to consider in detail the results of the sealing season just passed, a mid-term meeting, say in October, is desirable on a regular basis.

The Scientific Advisers Report was approved by the Panel.

7. Conservation Measures and Requirements. Dr A.W.H. Needler (Canada) concurred with the Scientific Advisers' suggestion that an autumn 1972 meeting of Scientific Advisers was necessary for proper considerations of conservation measures that would be effective for the 1973 sealing season. He further recommended that a full meeting of Panel A be held then when all available scientific data would be available for consideration. Mr Lund (Norway) said that Norway was prepared tentatively to accept prolongation of the 1972 harp seal conservation scheme to the 1973 season. He pointed out, however, that Norway is concerned that the new Canadian sealing restrictions in the Gulf of St. Lawrence may result in diversions of effort to the Front, placing additional pressure on the Front herd of harp seals. He also recommended consideration of the disposal of unused catch quotas at the next Panel meeting. He further stated that Norway would be willing to consider catch restriction on hooded seals as far as scientific evidence shows that it is desirable.

Denmark offered no comments.

8. Future Research Required. There was general agreement with the recommendations of the Scientific Advisers for further research on harp and hooded seals (Appendix II). No additional research plans were submitted.

9. ICES/ICNAF/IBP Symposium on Seals, University of Guelph, Guelph, Ontario, 14-17 August 1972. Dr A.W. Mansfield (Canada) reported that good progress has been made in arranging the Symposium. Chairmen have been appointed for all the sessions, many participants are preparing papers and some have been received already.

10. Date and Place of Next Meeting. It was agreed that an interim Panel A meeting should be held in the autumn of 1972 as discussed under Item 7 above, possibly in Copenhagen. The time and place are to be arranged by correspondence.

11. Election of Chairman for 1972/73 and 1973/74. Dr A.W.H. Needler (Canada) was unanimously elected Chairman of the Panel for the ensuing two years.

12. Adjournment. The Panel meeting adjourned at 1705 hrs.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2723
(B.e.71)

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Appendix I
(also ICNAF Comm.Doc. 72/6)

ANNUAL MEETING - JUNE 1972

Report of a Mid-Term Meeting of Panel A Member Countries

Ministry of Greenland, Copenhagen, 7 October 1971

1. Welcome. Mr E. Hesselbjerg (Denmark) welcomed the meeting participants on behalf of the Greenland Ministry.

2. Attendance. The following attended the meeting:

Canada	-	Dr A.W.H. Needler	Norway	-	Mr O. Lund
	-	Mr K. Henriksen		-	Mr G. Saetersdal
	-	Dr A.W. Mansfield		-	Mr T. Øritsland
	-	Dr G.F.M. Smith		-	Mr T. Storli
				-	Mr E. Aas
Denmark	-	Mr E. Hesselbjerg			
	-	Mr H. Lassen	ICNAF	-	Mr L.R. Day
	-	Mr Sv.Aa. Horsted			
	-	Mr F. Kapel			
	-	Mr E. Lemche			

3. Rapporteur. The Chairman of the meeting, Mr O. Lund, requested the appointment of Mr Day as Rapporteur. Agreed.

4. Agenda. The following agenda was agreed:

1) Opening by the Chairman, Mr Lund
2) Selection of Rapporteur
3) Report from the Special Meeting of Panel A Experts, Charlottenlund, 23-24 September 1971
4) Quantity regulation
5) The opening and closing dates
6) Other business.

5. Seal Experts Report. Mr Horsted, Chairman of the Panel A Experts, presented the Report (Annex I) and answered questions relating to its content.

6. Quantity Regulation for Harp Seal Harvest. The Panel Members explored the need for and the implications of additional quota reduction as outlined in the Report of the Seal Experts. It was unanimously agreed that reduction of the quota below the 1971 level was necessary. Economic effects of various strategies were also considered.

After considerable discussion of various strategies, the Panel Members agreed to submit to their Governments the following recommendations for the 1972 harp sealing season on the "Front" and in the "Gulf":

That a catch of 150,000 harp seals be allowed, allocated as follows:

Canadian landsmen	30,000
Canadian vessels	60,000
Norwegian vessels	60,000

It was agreed that it is desirable to keep the proportion of animals-of-the-year as high as possible with these allocations.

7. Opening and Closing Dates. It was agreed that the 1972 Gulf and Front sealing season start not earlier than 12 March and close not later than 24 April.

8. Other Business.

(a) Hooded Seals. Canada drew attention to the need for a review of the status of the hooded seal population. It was agreed that this would be discussed with any pertinent data available from Member Countries at the 1972 Annual Meeting.

(b) Unused Quotas. The question was raised as to whether an unused quota from one year should be added to the next year's regular quota. It was agreed that this question should receive further attention at the 1972 Annual Meeting.

(c) Disposal of Reports. It was agreed that this Report with its annex should be submitted to the Commission at its 1972 Annual Meeting.

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ANNUAL MEETING - JUNE 1972

Report of the Special Meeting of Panel A Experts

Charlottenlund, Denmark, 23-24 September 1971

1. Participants.

Canada	- A.W. Mansfield (Rapporteur)	Norway	- Ø. Ulltang
	- W.E. Ricker		- T. Øritsland
	- G.F.M. Smith		- O.J. Østvedt
Denmark	- Sv.Aa. Horsted (Convener)	FAO	- J.A. Gulland
	- F. Kapel		
		ICNAF	- L.R. Day

2. This meeting was requested by Panel A at the 1971 Annual Meeting of ICNAF (1971 ICNAF Meeting Proceedings No. 16, para. 5) to examine the long-term effect on the seal population of reducing the catch to the level of the sustainable yield in more than one step.

3. The Agenda (Attachment I) was adopted.

4. The Group reviewed documentation (Attachment III) and considered the latest assessment of the state of the stocks of harp seals as reported by STACRES (Redbook 1971, Part I, p. 30-33) at the 1971 Annual Meeting of ICNAF.

5. After discussion, the Group agreed that they were not able to change the estimate of production of 300,000 pups in 1970 (Redbook 1971 Part I, p. 31) though it could be smaller.

6. Further discussion suggested that the survival of pups to maturity was nearer 40% than any other figure in the table presented in Redbook 1971, Part I, p. 27. The 40% applies to hunting strategy as in the years before 1971. Of the deaths that occurred before maturity approximately half are due to hunting. If no harvesting of animals other than pups occurred at Newfoundland, the survival of pups to maturity would increase to about 63%.

7. There was considerable uncertainty concerning the mortality rate among adults. Data on age-composition of recent years suggested that the total mortality during the 1960's was around 15% per year. Of this mortality about one-third was due to hunting, and the present estimate of natural mortality is, therefore, about 10% per year, but it should be stressed that the true value may well be 2% or 3% on either side of this.

8. The adult mortality in the future will depend on the number of adults included in the harvest. During the 1971 season the nature of the quota system encouraged the harvesting of pups rather than older animals. Provided future quotas are small enough to be filled by pups alone, it is likely that the adult mortality will decrease towards the natural mortality estimated in paragraph 7.

9. In the STACRES Report (Redbook 1971, Part I, p. 32) estimates of sustainable harvest of pups were given for an equilibrium stock of 300,000 adult females (corresponding to about 270,000 breeding females).

The Group wishes to point out, however, that the stock size will decline until 1978 even if no catch occurs, due to catches of pups in recent years in excess of the sustainable yield. Assuming that there will be some reduction in the catch rate of juveniles so that 50% will survive to maturity, the stock size of 1978 is estimated to be about 240,000 breeding females.

10. Despite the uncertainties concerning the mortality rates and the current magnitude of the stock (see paragraph 5 above), it is quite clear that recent catches have been greatly in excess of the sustainable

yield of the present stock and still more in excess of the sustainable yield from the reduced stock population that will exist by 1978.

Catches will, therefore, have to be reduced until the annual catch is no more than the current sustainable yield. The quicker this reduction is achieved, the larger will be the stock, and the sustainable yield from it.

11. In the time available it was not possible for the Group to examine strategies for more than one combination of parameters. The strategies in the following paragraphs are based on assumptions set out in Attachment II.

12. Strategies examined (all strategies can permit a kill of about 2% of the age 1-6 animals per year):

I. The total catch in 1972 and later years is set at 200,000 pups plus 10,000 adult females (i.e., 240,000 animals in all per year).

Result. The total production of pups will be taken by 1977 (Fig. 1).

II. All pups caught. No adults caught.

Result. Stock declines to give 70,000 breeding females by 1990 (Fig. 1).

III. In 1972 and all subsequent years, the pup catch is held at the level which provides a pup escapement sufficient to maintain a stock of 239,000 and sustainable yield of 143,000 pups.

Result. The actual catches are 194,000 in 1972, 182,000 in 1973, 164,000 in 1974, 170,000 in 1975, 158,000 in 1976, 150,000 in 1977, and 143,000 in all subsequent years (Fig. 2).

IV. An initial catch of 200,000 pups in 1972 reduced to 180,000 in 1973, 160,000 in 1974 and 145,000 each year thereafter.

Result. A sustained level of 145,000 is achieved in 1975 (Fig. 2).

V. An immediate reduction in catch to 150,000 pups plus 2% of age 1-6 animals (10,000).

Result. The 150,000 pup catch can be maintained indefinitely (Fig. 2).

VI. The total catch is limited to 200,000 pups in 1972 and reduced by 20,000 pups per year down to 100,000 pups in 1977, and kept at that level in later years.

Result. The stock of breeding females will start to increase in 1979. It reaches 310,000 in 1990 and continues to increase to maximum (Fig. 2).

VII. No catch of pups or adults.

Result. The stock begins to rise in 1979 and exceeds 600,000 in 1990 (Fig. 1).

13. The Group wishes to emphasize the preliminary nature of its assessment and stresses the importance of continuing adequate programs of research on the harp seal which will lead to better estimates of population parameters.

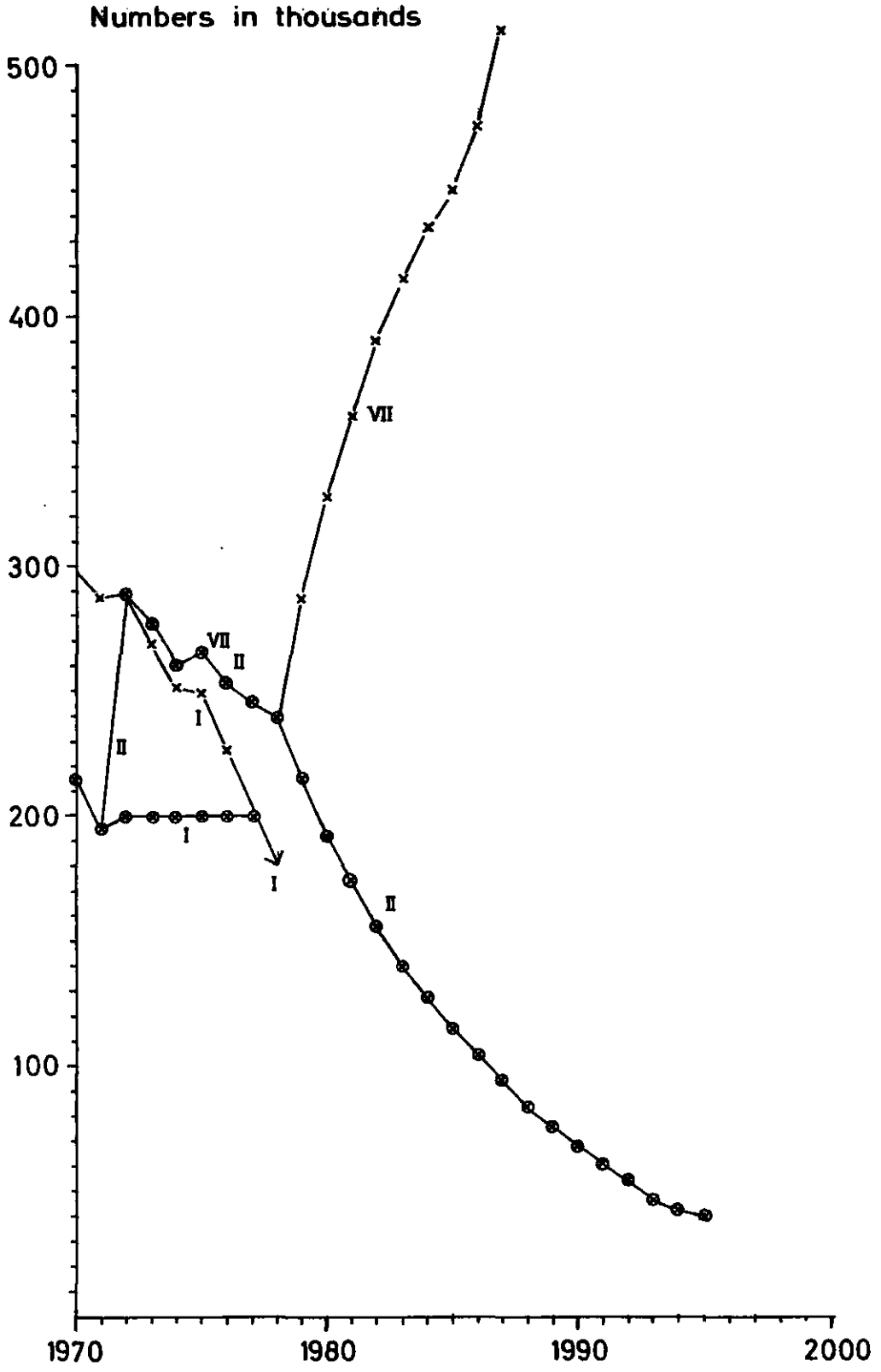

Fig. 1. Seal hunting strategies I, II, and VII.

× - breeding stock (equal to pup production)
o - pup harvest

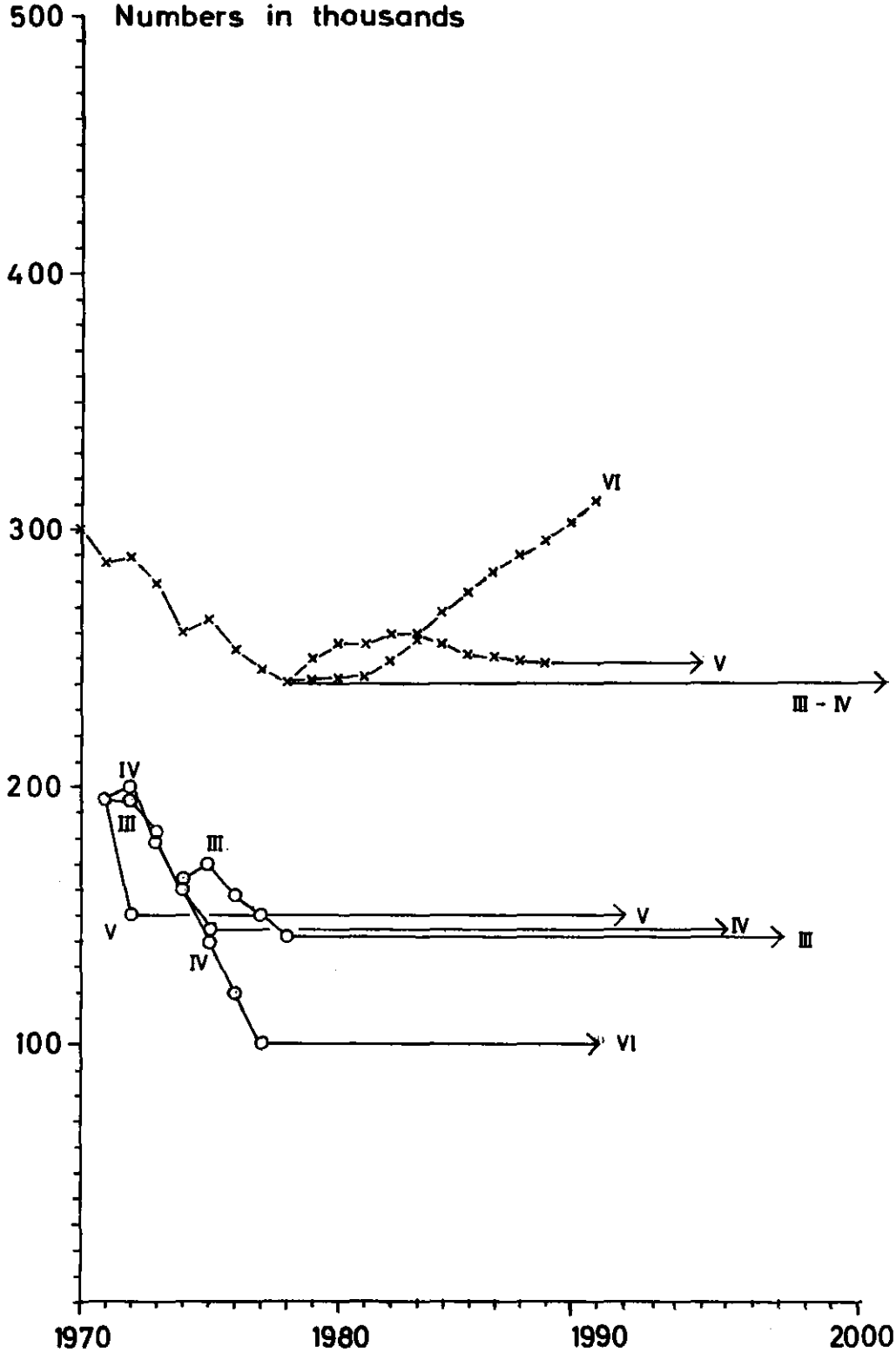

Fig. 2. Seal hunting strategies III, IV, V and VI.

× - breeding stock (equal to pup production)
o - pup harvest

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ANNUAL MEETING - JUNE 1972

Meeting of Panel A Experts

Charlottenlund, 23-24 September 1971

Agenda

1. Opening by the Convener

2. Adoption of Agenda

3. Election of Rapporteur

4. Review of documentation including papers and reports from the 1971 Annual Meeting of Panel A and ICNAF

5. Review of latest assessment of state of stocks of harp seals

6. Biological effects of approaching a given level of catch in more than one step:

   i) Review of possible indication of the practicable magnitude of successive reductions in quota and/or number of successive reductions
   ii) The biological effects of stepwise approach to a sustainable yield

7. Consideration of report

8. Other matters

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ANNUAL MEETING - JUNE 1972

Meeting of Panel A Experts

Charlottenlund, 23-24 September 1971

Basis for Numerical Projections in Examples of Paragraph 12

1. 1970 stock of breeding females = 300,000. Hence also 300,000 pups produced in 1970.

2. During 1963-70 the female breeding stock decreased by 10,000 per year. Together with known pup catches and the survival rate in 3(a) below, this determines the recruitment of breeding females at age 7 in each year.

3. (a) For year-classes through 1971, 100,000 surviving pups (both sexes) produced 20,000 females of age 7.

(b) For year-classes from 1972 onward, 100,000 surviving pups will produce 25,000 females age 7.

(The difference between (a) and (b) reflects a postulated reduction of kill of seals of age 1-6; however, a small kill - about 2% [about 10,000 juveniles per year] - of this age-group is implied in all examples, since the 50% survival over 7 years is less than the 63% that may be possible.)

4. Natural mortality rate of female seals age 7 and older is 10%, catches at Greenland and in the Canadian Arctic are included in this mortality.

5. Items 3(b) and 4 determine that the equilibrium rate of utilization of pups is 60%.

6. The above conditions lead to a female breeding stock of 239,000 in 1978.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2723
(B.e.71)

Proceedings No. 8
Appendix I
Annex I
Attachment III
(also ICNAF Comm.Doc. 72/6
Appendix I, Annex III)

ANNUAL MEETING - JUNE 1972

Meeting of Panel A Experts

Charlottenlund, 23-24 September 1971

Documentation

A. Documents and reports presented to earlier meetings of ICNAF:

1. ICNAF Annual Meeting Proceedings No. 7 with appendices (Report of Meeting of Panel A, Scientific Advisers to Panel A, and Status of the Harp Seal Fishery and Research Carried Out), 1971.

2. ICNAF Annual Meeting Proceedings No. 10 (STACRES Report, Assessment Section on Seals, provisional pages 26-28) (also Redbook 1971, Part I, p. 30-33).

3. ICNAF Commissioners Document 71/12 (Canadian proposal concerning conservation of seals in the Convention Area).

4. ICNAF Commissioners Document 71/25 (Proposal by Canadian Delegation on harp seal quotas).

5. Sergeant, D.E.: Calculation of production of harp seals in the western North Atlantic. ICNAF Research Document 71/7.

6. Øritsland, T.: Progress report on Norwegian studies of harp seals at Newfoundland. ICNAF Research Document 71/8.

B. Documents regarded as working documents for this Special Meeting of Panel A Experts:

7. Allen, R.L.: The future of the harp seal stocks of the western North Atlantic.

8. Kapel, F.: Age composition of samples of harp seals, W. Greenland 1970 (Figure only).

9. Kapel, F.: Comparison of Greenland catch of harp seals to estimates of escapement at Newfoundland (Table and Figure only).

10. Ricker, W.E.: Comments on the West Atlantic harp seal herd and proposals for the 1972 harvest.

11. Ulltang, Ø.: Estimates of mortality and production of harp seals at Newfoundland.

12. Ulltang, Ø.: Effects of stepwise reduction of the catch of harp seals at Newfoundland.

13. Sergeant, D.E.: Canadian studies on harp seals in 1971.

Furthermore, some updated figures for Paper 6 were presented to the Group.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2878
(B.f.6)

Proceedings No. 8
Appendix II

ANNUAL MEETING - JUNE 1972

Report of Meeting of Scientific Advisers to Panel A

Wednesday, 24 May, 1115 hrs

1. In the absence of the Chairman, Dr G.F.M. Smith (Canada), the chair was taken by Dr A.W. Mansfield (Canada). Representation from all Member Countries (Canada, Denmark and Norway) and an Observer from FAO were present.

2. The Agenda, as proposed by the Chairman, was adopted. Mr J.A. Gulland (FAO) was nominated as Rapporteur.

3. A detailed review of the state of the stocks of harp seals, and of the effects of different management strategies had been carried out by the Special Meeting of Panel A Experts in Copenhagen, September 1971 (Proc. 8, Appendix I). Such limited material as has been made available since that meeting has not changed the estimate that the production of pups in 1970 was 300,000 young. The meeting also re-affirmed the earlier estimate of the sustainable yield from the present harp seal stock as being 150,000 pups.

4. The more recent information tends to confirm that the seals in the Gulf and on the Front come from the same stock. If there were complete mixing between the two groups, it would be irrelevant from the point of view of conservation from what area the catches are taken. It appears, however, that mixing is slow or incomplete, so that it is desirable for exploitation, taken over a period, to be reasonably balanced between the two areas.

5. It was noted that the actual catches in 1972 fell below the quotas set by ICNAF. So far as Norwegian vessels were concerned, this was due to an attempt to maximize their catches of the more valuable animals, rather than a general shortage of seals. The possibility that unused quotas in one year should be transferred to the next year has been discussed by Panel A (Proc. 8, Appendix I). The Scientific Advisers emphasized that the level of sustainable yield is being kept under regular review, and that it was not desirable that there should be any automatic addition to an annual quota.

6. No proposals were made for changes in the regulations for opening or closing dates, etc., for harp seals.

7. Future research on the harp seal should follow the recommendations made at the 1971 Annual Meeting (Proc. 7, Appendix II).

(a) However, there were some reservations expressed about the usefulness of annual aerial surveys and more especially daily aerial surveys in any particular season.

(b) It was emphasized that more attention should be paid to studying the behaviour of the breeding seals and attempting to use the information obtained when interpreting counts of seals from aerial photographs.

8. Information on research on hooded seals was presented by Denmark (Res.Doc. 72/85) and by Norway in an informal working paper. Catches in the Newfoundland area have fluctuated markedly from year to year, probably due to changes in ice conditions, and have tended to increase since 1965. The 1946-65 average was 6,700 animals, but in the period 1966-70 the average was 15,000 animals. Catch and effort data show no evidence of changes in population abundance, but there appears to be some relation between years of high catches of young hooded seals and the appearance of weak year-classes.

9. The meeting noted that following the introduction of the catch quotas for harp seals, there will be a tendency for greater catches of hooded seals to be taken. It is believed that it would be undesirable to allow such an increase until more complete assessments become available, particularly of the increase in catches that have already taken place. A catch limit of around the average of the 5-year period 1966-70 (15,000 animals) was suggested as an interim measure.

10. The proportion of males taken in the catches of adult hooded seals tends to increase as the season progresses. At present it seems that rather more females than males are taken, but that it would be desirable to catch as many or more males than females. The Advisers therefore suggest that there should be a postponement in the opening date of the season for hooded seals.

11. Future research on hooded seals should include further collection of age samples, studies of reproductive performance and increased marking.

12. The Chairman reported on the arrangements for the ICES/ICNAF/IBP Symposium on Seals at the University of Guelph, August 1972.

13. There was some discussion concerning the next meeting of Scientific Advisers to Panel A. It was pointed out that it was impossible at the May-June meeting to consider in any detail the results from the immediately preceding season. If the Panel desired to take into account such analysis of the 1972 season in making recommendations for 1973, a mid-term meeting, possibly at or near the time of the ICES Meeting in October 1972, would be necessary. A meeting at this time, or at the time of the Mid-Term Meeting of the Assessments Subcommittee would be necessary if the Panel desired early advice on the results of the analysis of the 1972 season. Otherwise, the Advisers could meet at the time of the regular 1973 meeting of the Commission.

14. Dr A.W. Mansfield was elected Chairman of the Scientific Advisers for the next year.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2864
(D.c.11)

Proceedings No. 8
Appendix III
(also ICNAF Res.Doc. 72/133
- Revised)

ANNUAL MEETING - JUNE 1972

Status of the Harp and Hooded Seal Fisheries and Research Carried Out

by

A.W. Mansfield
Fisheries Research Board of Canada
Ste. Anne de Bellevue, Quebec

Reports on research and catch and effort statistics have been received from Canada, Denmark and Norway.

The following documents are pertinent:

Comm.Doc. No.	Res.Doc. No.
6	50, 59, 85, 127

1. Status of the Fisheries

(a) Harp seal. In 1972 the harp seal fishery operated under an ICNAF quota for the second year. This quota, following recommendations made by Panel A at its Mid-Term Meeting in Copenhagen in October 1971 (Comm.Doc. 72/6), was set at 150,000 divided as follows:

Canadian landsmen and small vessels	30,000
Canadian vessels	60,000
Norwegian vessels	60,000

The actual take in 1972 is believed to be less than the quota. Provisional figures are as follows (Res.Doc. 72/127):

Gulf (Canadian landsmen and small vessels)	5,000*	
Gulf Total		5,000
Front (Canadian vessels)	55,000*	
Front (Canadian landsmen)	10,000*	
Front (Norwegian vessels)	53,515	
Front Total		118,515
Total harp seals		123,515

(b) Hooded seal. There is no quota at present for this species. Catches in 1972 are as follows (Res.Doc. 72/127):

Gulf (Canadian landsmen and small vessels)		
Gulf Total		
Front (Canadian vessels)		
Front (Canadian landsmen)		
Front (Norwegian vessels)	12,181	
Front Total		
Total hooded seals		

* Approximate catch figures supplied by K. Henriksen.

The only Canadian figures available at the time of compilation of this report are for the 1971 season (Res.Doc. 72/50).

2. Research Carried Out

Further research on the assessment of harp seal stocks has been carried out by Canada (Res.Doc. 72/59), Denmark and Norway. Data for the 1972 season have not yet been fully processed and there is little new information beyond that contained in the Report of the Mid-Term Meeting of Panel A in Copenhagen, October 1971 (Comm.Doc. 72/6).

Research work on hooded seals has been continued by Canada, Denmark (Res.Doc. 72/85) and Norway.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2879
(B.b.72)

Proceedings No. 9

ANNUAL MEETING - JUNE 1972

Report of the First Plenary Session

Thursday, 25 May, 1200 hrs

Item 1. Opening. The First Plenary Session of the 22nd Annual Meeting of the Commission was called to order by the Chairman, Mr K. Løkkegaard (Denmark) after the Ceremonial Opening Session which heard an address given by the Under Secretary of Commerce for the United States of America, Mr James T. Lynn (Proc. 2). The Chairman welcomed Delegates from all 15 Member Countries and the Commission's Observers and Guests.

Item 2. Agenda. The Chairman pointed out that terms of reference for the new Standing Committee on International Control (STACTIC) had been drafted by a small group consisting of Captain J.C.E. Cardoso (Portugal), Mr W.L. Sullivan, Jr (USA), and the Executive Secretary (Comm.Doc. 72/10) and should be approved by the Plenary in order that STACTIC could become operative. Following discussion, the Plenary agreed that the small group should redraft the terms of reference in order to include suggested changes and present the redraft to Plenary for possible approval.

The Agenda was approved. It was agreed that the election of a new Vice-Chairman to replace Mr R. Lagarde (France), who was resigning, should be carried out under Agenda Item 38, "Other Business".

Item 3. Publicity. The Plenary agreed that a Committee on Publicity should be set up composed of the Chairman and Vice-Chairman of the Commission with the Chairman of STACFAD and the Executive Secretary.

Items 4, 11, 29, 30, 32-35, 37, and 38. 4. Report of Special Commission Meeting on Herring, 11. Status of Proposals, 29. Report of ICES/ICNAF/IOC Coordinating Group on North Atlantic, 30. Reports of NEAFC, ICES, FAO, IOC, SCOR, OECD, 32. Report of STACFAD, 33. Report of STACREM, 34. Report of STACTIC, 35. Reports of Panels 1-5 and A (Seals), 37. Press Statement, 38. Other Business were set aside for later consideration by the Plenary.

Items 5-10 and 36. 5. Panel Memberships, 6. Administrative Report, 7. Auditor's Report, 8. Financial Statement, 9. Budget Estimate, 10. Budget Forecast, 36. Time and Place of 1973, 1974 and 1975 Annual Meetings. These items were referred to STACFAD.

Items 12-16. 12. Annual Returns of Infringements, 13. Simplification of Trawl Regulations, 14. Differentials for Mesh Materials, 15. Scheme of Joint Enforcement, 16. Standard Logbook. These items were referred to STACTIC.

Item 17. Principle and Problems of Limiting Fishing. This item was referred to STACREM.

Items 18, 23, and 27. 18. Conservation of Atlantic Salmon, 23. Conservation of Cod, 27. Maximum Utilization of Catches of Regulated Species. These items were referred to a joint meeting of Panels 1-5.

Items 19, 22, and 28. 19. Conservation of Haddock in Subareas 4 and 5, 22. Conservation of the Herring in the Convention Area, 28. Uniform Mesh Size for Regulated Species in all Subareas. These items were referred to Panels 4 and 5.

Items 20, 21, and 25. 20. Conservation of Silver and Red Hakes in Subarea 5, 21. Conservation of Yellowtail Flounder in Subarea 5, 25. Conservation of Scallops in Subarea 5. These items were referred to Panel 5.

Item 24. Conservation of American Plaice in Subarea 3. This item was referred to Panel 3.

Item 26. Conservation of Seals in the Convention Area. This item was referred to Panel A (Seals).

Item 31 Report of STACRES. The Chairman of STACRES, Dr A.S. Bogdanov (USSR) was invited to present a summary of the Provisional Report of the STACRES. The summary highlighted presentations on stock assessments, statistics and sampling, environmental studies and the results of joint ICES/ICNAF working parties on salmon and cod and of groundfish surveys. The Chairman of the Commission thanked the Chairman of STACRES, the Chairmen of the various Subcommittees and Working Parties, as well as their memberships, for their extraordinary efforts and useful results. The Plenary tabled the Provisional Report until the final Plenary Session when a complete report would be available for review and approval.

The Plenary recessed at 1230 hrs after agreeing to reconvene at 1445 hrs.

The Plenary reconvened at 1445 hrs.

Item 31 Report of STACRES. The Chairman asked for general remarks regarding the STACRES Provisional Report. None were forthcoming.

Item 34 Terms of Reference for STACTIC. The Chairman drew attention to the redraft of the Terms of Reference for STACTIC which had been prepared. Following a short discussion, the terms as at Appendix I were unanimously adopted by the Plenary.

The Plenary adjourned at 1500 hrs.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2879
(B.b.72)

Proceedings No. 9
Appendix I

ANNUAL MEETING - JUNE 1972

Proposed Terms of Reference for the Standing Committee on International Control (STACTIC)

That the following paragraph be added to Commission Rules of Procedure No. 6:

"6.5. There shall be a Standing Committee on International Control consisting of one representative from each Contracting Government, which would wish to be represented, and who may be assisted by advisers.

The Committee shall:

(a) review the results of national and international measures of control;

(b) develop inspection methodologies;

(c) consider the practical problems of international measures of control;

(d) review reports of inspections and violations;

(e) promote exchanges and cooperative efforts of inspectors in international inspection;

(f) make appropriate recommendations to the Commission.

The Committee shall choose its own Chairman. The Executive Secretary shall be an *ex officio* member of this Committee without vote."

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2880
(B.b.72)

Proceedings No. 10

ANNUAL MEETING - JUNE 1972

Report of the Second Plenary Session

Saturday, 27 May, 1100 hrs

1. The Chairman of the Commission announced that a short meeting of the Plenary had been called in response to a proposal from Panel 4 that national allocation of quotas, because it was of interest to other Panels too, might be considered in a small Commission *ad hoc* working group consisting of representatives from all Member Countries of the Commission. It was suggested that there could be more and rapid progress made in quota allocation in a small group composed of, say, two or three representatives from each Member Country.

2. Following discussion, the Plenary

agreed

that an *ad hoc* Committee on Quota Allocation, composed of two or three members from each national delegation, should be set up to discuss the national allocation of the total catch quotas arrived at in the Panel meetings for those species and stocks for which regulation had been proposed.

3. The Plenary agreed that the first meeting of the *ad hoc* Committee should be held on Monday at 1430 hrs.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2881
(B.e.72)

Proceedings No. 11

ANNUAL MEETING - JUNE 1972

Report of Joint Meeting of Panels 2 and 3

Saturday, 27 May, 1430 hrs
Friday, 2 June, 1000 hrs

1. The Joint Panels met under the chairmanship of Mr A.A. Volkov (USSR).

2. Rapporteur. Dr G.F.M. Smith (Canada) was appointed Rapporteur.

3. Agenda. The only item for Joint Panels was conservation requirements for cod in Divs. 2J, 3K and 3L (Comm.Doc. 72/12).

4. Panel Members. Present from Panels 2 and 3 were Canada, Denmark, France, Fed.Rep. Germany, Japan, Norway, Poland, Portugal, Romania, Spain, USSR, UK, and USA. Italy was not represented.

5. Reports of Chairmen of Scientific Advisers. Dr A.W. May (Canada) presented the Report of the Scientific Advisers to Panel 2 and his Report on the Status of the Fisheries (Appendix I and II), and Dr H.A. Cole (UK) the corresponding reports for Panel 3 (Appendices III and IV).

6. Mesh Regulations. It was noted that the 130-mm mesh regulation was now in force for all countries in Subareas 2 and 3.

7. Statistical Requirements. Norway requested information regarding the specific additional statistical requirements. It was explained that this was not new in nature but was for the detail and timelines already requested on the standard return forms as distributed by the Secretariat. The sampling statistics are in many cases inadequate for the assessment requirements.

8. Conservation Measures and Requirements. Canada presented Comm.Doc. 72/12 concerning conservation measures by quota regulation for cod stocks in Divs. 2J, 3K and 3L. Canada explained that the proposal for a quota within the limits of the Convention Area in Divs. 2J, 3K and 3L of 400,000 tons was here being revised upward to 500,000 tons in the light of further data since Comm.Doc. 72/12 had been prepared. The basis of the present proposal is thus now:

Maximum sustainable yield (MSY) of whole stock	650,000 tons
Estimated catch outside Convention Area	90,000 tons
Quotas for Divs. 2J, 3K, and 3L	500,000 tons
Difference	60,000 tons

The rational for the difference (60,000 tons) between the MSY and the tonnage to be taken is in the hope that exploitation below the MSY would allow for increase in stock abundance and availability to improve the economic aspects of the fishery.

Canada explained that this was an important proposal as the 90,000 tons outside the Convention Area was the support of an immobile and economically depressed fishery in Newfoundland and Labrador which has been decreasing in availability as the offshore fishery increased.

The ensuing discussion revealed concern about the approach that should be taken when some part of the exploitation of a stock took place outside the Convention Area as (a) in the present case - the territorial waters of a coastal state and, (b) as in the case of Statistical Area 6 which is outside the Convention Area. It was finally generally agreed that, in the case of territorial seas, the coastal state had complete control (but could make any agreement it wished) and in the case of non-Convention and non-territorial seas, the interested parties could make suitable bilateral or multilateral arrangements.

Questions were raised concerning the preference to be allowed for the coastal state in a quota allocation. This matter was not pursued to its conclusion as it was to be considered by an *ad hoc* Committee on Quota Allocation set up at the Second Plenary Session (Proc. 10).

Some confusion and misunderstanding existed about the probable size of the stock and especially the yield to be expected from it. These were at least partially removed by further explanation. In the process of further discussion, quotas for Divs. 2J, 3K and 3L were suggested as 600,000 tons by Portugal, and 560,000 tons by Fed.Rep. Germany, UK, Spain and USSR, as an amendment to 500,000 tons proposed by Canada.

The Chairman called for a vote of these three proposals starting with the largest.

The 600,000-ton quota proposal was defeated as not receiving the necessary 2/3 majority vote.

The 560,000-ton cod quota proposal was unanimously approved for Divs. 2J, 3K and 3L.

9. The Joint Meeting of Panels 2 and 3 recessed at 1730 hrs.

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10. The Joint Meeting of Panels 2 and 3 reconvened at 1000 hrs, Friday, 2 June under the chairmanship of Mr A.A. Volkov (USSR), with all Member Countries of Panels 2 and 3 represented. The Joint Meeting was asked to consider five proposals from the *ad hoc* Committee on Quota Allocation for quota control of the fishery on stocks of cod, American plaice and yellowtail flounder in portions of Subareas 2 and 3.

11. Panels 2 and 3

agreed to recommend

that the Commission transmit to the Depositary Government for joint action by the Contracting Governments proposal (2) for international quota regulation of the fishery for cod in Divisions 2J, 3K and 3L of Subareas 2 and 3 (Appendix V); proposal (3) for international quota regulation of the fishery for cod in Subdivision 3Ps of Subarea 3 (Appendix VI); proposal (4) for international quota regulation of the fishery for cod in Divisions 3N and 3O of Subarea 3 (Appendix VII); proposal (8) for international quota regulation of the fishery for American plaice in Divisions 3L, 3N and 3O of Subarea 3 (Appendix VIII); and proposal (9) for international quota regulation of the fishery for yellowtail flounder in Divisions 3L, 3N and 3O of Subarea 3 (Appendix IX).

12. The Joint Meeting of Panels 2 and 3 adjourned at 1030 hrs.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2881
(B.f.5)

Proceedings No. 11
Appendix I

ANNUAL MEETING - JUNE 1972

Report of Meeting of Scientific Advisers to Panel 2

Wednesday, 24 May, 1115 hrs

1. The Executive Secretary informed the meeting that Dr W. Templeman (Canada), who was elected last year as Chairman of Scientific Advisers to Panel 2, had retired and would not be present. He proposed, and it was agreed, that Dr A.W. May (Canada) be Chairman.

2. Mr A.M. Fleming (Canada) was appointed Rapporteur.

3. The Agenda for Panel 2, where relevant, was adopted for the meeting.

4. Scientific Advisers were present from the following Member Countries of the Panel: Canada, France, Fed.Rep. Germany, Poland, Portugal, USSR, and UK. An Observer from Iceland was present.

5. The Chairman's Report on Status of Fisheries and Research Carried Out in Subarea 2 in 1971 (Proc. 11, Appendix II; also Res.Doc. 72/128 - Revised), with minor revisions and additions was adopted.

6. The Scientific Advisers noted that the only ICNAF conservation measure presently in effect for Subarea 2 is the 130-mm mesh size for otter trawls applying to cod, haddock, redfish, halibut, witch, American plaice, and Greenland halibut (Comm.Doc. 72/5).

7. (a) In consideration of conservation requirements for Subarea 2 it was noted that cod in Div. 2J are part of a stock which extends also into Divs. 3K and 3L of Subarea 3, although there are other cod stocks in Div. 3L as well. Additionally, although Divs. 2G and 2H are not included in present conservation proposals, cod in these Divisions form part of a large stock complex extending from Div. 2G to Div. 3L. Total nominal catch of cod from Divs. 2G and 2H in 1971 was 11,000 tons; the intensity of fishing in these northern Divisions depends greatly upon ice conditions.

Mr A.T. Pinhorn (Canada) summarized the results of the latest assessments on the Divs. 2J, 3K and 3L cod stock, indicating that the fishing mortality for fully recruited age-groups fluctuated between 0.3 and 0.6 during 1961-66 but in 1967-70, it was above that which would give the maximum yield-per-recruit (F = 0.4). The good year-classes of the early 1960's contributed to the peak catches in 1968-69. These year-classes have been replaced in the stock by the poorer 1964 and 1965 year-classes, which, in combination with reduced fishing because of severe ice conditions in 1970 and 1971, has resulted in a marked decline in the catch from the stock. However, survey indices indicate that with improved recruitment from the 1966-68 year-classes, there are prospects of some improvement in stock abundance if fishing intensity does not increase at a proportional rate. With average recruitment, fishing at the level giving maximum yield-per-recruit (F_{max}) would produce 600,000 tons annually. Because of better recruitment of the 1966-68 year-classes, fishing mortality of F_{max} would yield 650,000 tons in 1973, whereas fishing at the 1970 level (F = 0.55) would yield a catch of about 800,000 tons in 1973, with catches in later years being below the level that could have been held with F_{max}.

(b) In discussion of the full use of regulated species (Comm.Doc. 72/20), the Scientific Advisers considered the proposal to have greater practical than scientific implications.

8. In consideration of future research requirements in the Subarea, the Chairman referred to the following items from other reports:

i) Report of the Subcommittee on Statistics and Sampling

The Subcommittee recommended that Scientific Advisers to Panels bring to the attention of the various Panels the important conclusions relative to adequacy of biostatistical data on fisheries contained in the Report of the ICES Liaison Committee to NEAFC, which are considered to be equally appropriate to the ICNAF Area, and which are appended to the Report of the Statistics and Sampling Subcommittee.

In summary, these conclusions are:

(a) to achieve necessary improvement of stock assessments, it is essential to greatly improve coverage, accuracy, and speed of reporting national statistics, and to extend substantially the biological sampling programs;

(b) the amount of sampling differs considerably between countries, far from proportional to national catches;

(c) with changes in fisheries and probable introduction of regulatory measures for catch, present abundance indices based upon established fishing practices are not satisfactory, making it essential to replace them with stock size estimates which are independent of catch and effort data (e.g. acoustic surveys, tagging experiments);

(d) provisions must be made for considerable increase in research vessel time and effort, and for expansion of international cooperation for surveys to obtain more reliable estimates of future recruitment to the fishery.

ii) Report of Subcommittee on Environmental Studies

The Advisers endorsed the recommendations of this Subcommittee concerning:

(a) the importance to fisheries research of the Continuous Plankton Recorder survey conducted in Subareas 1-5 by the UK, with collaboration of the USA;

(b) the need for information on sea ice observations and forecasting.

In each case, it was noted that invitations for attendance at ICNAF meetings by the appropriate experts are necessary.

iii) Report of the Working Group on Coordinated Surveys

The Advisers agreed that the stratified sampling survey scheme produced by Dr J. Messtorff (Fed. Rep. Germany) for Subarea 2 (Res.Doc. 72/125) should be adopted by all countries.

9. The time and place of the next meeting should be during the next Annual Meeting of the Commission.

10. There was no other business.

11. It was agreed that the Report be prepared and circulated to a representative of each country for criticism before final reproduction.

12. Dr A.W. May was re-elected as Chairman.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2859
(D.b.71)

Proceedings No. 11
Appendix II
(also ICNAF Res.Doc. 72/128
- Revised)

ANNUAL MEETING - JUNE 1972

Status of Fisheries and Research Carried Out in Subarea 2 in 1971

by

A.W. May
Fisheries Research Board of Canada
Biological Station, St.John's, Nfld., Canada

Reports on research in Subarea 2 were submitted by the following countries: Canada, Fed.Rep. Germany, Poland, Portugal, USSR, and UK. Information pertinent to fisheries and research in Subarea 2 may be found in Research Documents 1-3, 25, 31, 32, 33, 35-45, 57, 82, 108, 109, 124, and 125.

1. Status of Fisheries

Nominal catches of the major species fished in Subarea 2 are listed in Table 1. Total catch of all species was low in relation to the peak years of 1968 and 1969. The cod fishery, which accounts for the major part of the catch, was at its lowest level since 1959. As in previous years, most of the cod catch was taken in Div. 2J. Catches of other species were relatively small, with the exception of roundnose grenadier, for which catches increased from a relatively small amount in 1967-70 to 57,000 tons in 1971. The major part of this catch was reported from Div. 2G.

Table 1. Nominal catches from Subarea 2, 1967-71 ('000 tons round fresh).

	1967	1968	1969[a]	1970	1971
All species	328	482	441	239	247
Cod	298	449	412	224	164
Redfish	17	9	6	11	7
American plaice	+	+	+	2	2
Witch flounder	+	+	+	5	1
Greenland halibut*	5	8	10	4	10
Flounder (not specified)	3	3	7	+	1
Roundnose grenadier	1	7	1	+	57

a Catches by non-member not allocated by subareas and not included
\+ Catch less than 500 tons
* Reported as halibut from 1967-68

Nominal catches of cod by each country fishing in Subarea 2 from 1967 to 1971 are given in Table 2. Catches by all countries were lower than during the peak years of 1968 and 1969, in most cases substantially lower. The inshore small-boat catches remained at the abnormally low level experienced in 1969 and 1970, and in 1971 were less than 15% of the 1960-68 average.

Table 2. Nominal catches of cod in Subarea 2, 1967-71, by country ('000 tons round fresh).

	1967	1968	1969	1970	1971
Canada	28	18	5	2	3
Denmark	-	-	-	+	NA
France	25	39	30	16	6
Germany, Fed.Rep.	32	54	72	50	20
Norway	2	8	7	3	6
Poland	38	70	62	36	17
Portugal	53	60	66	42	34
Romania	-	-	3	3	2
Spain	37	33	33	11	6
USSR	21	104	131	50	62
UK	9	12	2	3	-
USA	-	-	+	1	-
Non-members	53	51	NK*	8	9
Total	298	449	412	224	164

\+ Catch less than 500 tons
* Catches of 55,000 tons of cod in the Convention Area, but not allocated by subareas
NA Not available

2. Work Carried Out

(a) Canada. The hydrographic section off Seal Island was occupied in early August. Distribution and abundance of cod were investigated during a spring research vessel cruise in Div. 2J, sampling of inshore catches was continued, and population assessments using the virtual population technique were carried out. Atlantic salmon were tagged in a Labrador river, on the Labrador coast and in the Labrador Sea.

(b) Fed.Rep. Germany. Hydrographic observations were made in late November, and three sections across the Labrador Shelf were occupied. At the same time, a one-week groundfish survey was carried out.

(c) Poland. Sampling of commercial catches of cod and redfish for age and length was continued.

(d) Portugal. Commercial samples of cod were collected in Div. 2J for studies of size and age composition, growth and maturity.

(e) USSR. Hydrographic observations were made in early November. Biological studies were carried out on cod, Greenland halibut and roundnose grenadier. Fishery forecasts for 1972 were made.

(f) UK. Continuous plankton recorder surveys were continued and over 2,300 miles sampled in 1971.

3. Hydrography

In general, water temperatures in Subarea 2 in 1971 were below normal. In early August, temperatures of the inner portion of the Labrador Current were below the 1951-65 average, and volume of water less than 0°C was above this average; conditions in this respect were similar to those prevailing in 1970. In the offshore portion of the Labrador Current temperatures were much lower than in 1970, and in fact, were close to the 1951-65 average. Temperatures below normal values were also recorded in November, and extended to a depth of 1,000 m.

As in 1970, severe ice conditions hampered fishing operations early in the year. Severe ice conditions, even worse than in the previous two years, also prevailed in 1972.

4. Plankton

Continuous plankton recorders sampled 2,315 miles in Subarea 2 in 1971. Phytoplankton abundance

was below average in the oceanic parts of the area, with the spring peak in May, a month earlier than the long-term mean. Copepods were correspondingly early and highest numbers were again observed in May. In contrast to the copepods, the peak abundance of euphausiids was about a month later than usual in Subarea 2.

5. Cod

The Canadian inshore fishery improved marginally over 1970 (3,320 tons as opposed to 2,038 tons), but in both years was less than 15% of the 1960-68 average. Reductions in inshore catches of cod in these years were due to decreased abundance or lesser availability rather than any decline in inshore effort. The inshore fishery has traditionally depended on mature fish which migrate to the coast after spawning. Immature fish did not form a significant part of the inshore catch even when no offshore fishing existed. It is probable that the reduction in age, and in numbers of mature fish, by the offshore fishery has been responsible for a much less pronounced migration of cod to shore in recent years.

Cod catches, as well as fishing effort, by the Federal Republic of Germany continued the decline begun in 1970. The catch in 1971 was 42% of the record 1969 catch, while effort (days fished) was reduced by 53% from 1969. Fishing was carried on only from early January to mid-February when ice conditions forced the fleet to move. Catch per day was reduced 23% from the 1968-70 average. Over 80% of the cod taken during a groundfish survey in November were 5-8 years old (1963 to 1966 year-classes). Mean lengths were below 50 cm in Divs. 2G to 2J. Fishing operations in 1972 were again restricted by ice, and catches are expected to be lower than in 1971.

The Polish fishery took place mainly in January and February, since ice conditions forced withdrawal of most of the fleet by early March. Cod catches per day fished were lower than in 1970, and fishing effort (hours fished) declined 23% from the previous year. The most abundant year-classes in the catch were those of 1964 to 1966. Average length was below 50 cm.

Most of the cod catch by Portugal was taken in the first quarter of 1971. Biological sampling during the second quarter indicated that the 1964 to 1966 year-classes were most abundant. A very high percentage of the fish sampled were immature.

Cod fisheries by USSR were conducted mainly in January and February, and operations were irregular following departure of the fleet in mid-February due to ice conditions. Catch-per-unit effort was lower than in 1970. Cod of the 1964 to 1966 year-classes were most abundant in the catches, accounting for almost 70% of the fish sampled. An improvement in catches is forecast for 1972 on the basis of recruitment of fish of ages 4 and 5 (1967 and 1968 year-classes). Canadian surveys indicate that the 1967 year-class may be the more abundant of the two, while USSR surveys indicate that the 1968 year-class is more abundant.

Assessments of the cod stock complex extending from Div. 2J to Div. 3L were completed in 1971. Natural mortality from Div. 2J data was estimated to be between 0.15 and 0.21. Fishing mortality estimates for Div. 2J cod for the period 1965 to 1968 show a significant increase in 1968. Overall stock size from 1964-68 was estimated to be about the same as from 1959-63, though numbers of cod of ages 8 and above accounted for less than 20% of the overall stock. For the stock as a whole, it was concluded that fishing mortality rate over the period 1967-70 was in excess of that which would produce the maximum long-term yield per recruit, and some reduction from the 1967-70 level would be necessary to achieve this.

6. Redfish

Commercial sampling of Polish catches gave a length range of 20-47 cm and an age range of 6-16 years, with fish of ages 8, 9 and 10 most abundant.

7. Atlantic Salmon

In May, 24 salmon were tagged from drift nets and 35 from longlines, all in the mid-Labrador Sea. Eight recaptures were reported, 2 from the former group and 6 from the latter, all from Canada. Tagging from a research vessel using drift nets was also carried out on the Labrador coast in July. Most fish tagged were of one year sea age (grilse) and returns were almost entirely from the Labrador coast. Smolts and adults, tagged in a Labrador river in 1970, gave in each case approximately equal returns from Labrador and from Greenland fisheries in 1971.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2881
(B.f.1)

Proceedings No. 11
Appendix III

ANNUAL MEETING - JUNE 1972

Report of Meeting of Scientific Advisers to Panel 3

Wednesday, 24 May, 1400 hrs

1. The meeting was called to order by the Chairman, Dr H.A. Cole (UK). Advisers were present from Canada, France, Japan, Poland, Portugal, USSR, UK and USA. Observers were present from Iceland and Fed.Rep. Germany.

2. The Agenda, as distributed for Panel 3, was followed as applicable.

3. Dr A.W. May (Canada) was appointed Rapporteur.

4. The Chairman reviewed his Report on Status of the Fisheries and Research Carried Out in Subarea 3 in 1971 (Proc. 11, Appendix IV; also Res.Doc. 72/130 - Revised). This was approved with minor amendments and additions, which are incorporated in the revised version for presentation to the Panel.

5. The Chairman drew attention to the fact that notes to the Plenary Agenda contained the information that the 130-mm mesh size, previously recommended for regulated species in Subarea 3, was in effect as of 1 January 1972 for Canada, Poland, Portugal and Spain, and as of 15 April 1971 for all other countries. He also noted that redfish fisheries in the southern Divisions of Subarea 3 were excepted from this regulation.

6. In relation to conservation proposals made to the Commission for a number of stocks in Subarea 3, the Advisers drew attention to the relevant sections of the Assessments Subcommittee Report. It was noted that assessments for these stocks related to the stocks as a whole, without reference to Convention Area boundaries. With respect to various conservation proposals, the Advisers also drew the attention of the Panel to the possibility of diversion of effort from stocks which might come under quota regulation to stocks which are not so regulated. Thus, it was noted that there are no such proposals for cod in Div. 3M and Subdiv. 3Pn, and no proposals for yellowtail flounder in Subarea 3. The latter species occurs in significant amounts in some areas in fisheries for American plaice (for which regulation has been proposed) and for cod. American plaice may also form a significant by-catch in cod and yellowtail flounder fisheries.

In relation to a proposal for full use of regulated species, the Advisers reiterated the importance of reporting discards, particularly in relation to fisheries assessments, but felt that the proposal raised isses that, in general, were of a more practical than a scientific nature.

7. On the subject of future research required, the Advisers wish to endorse very strongly the recommendation of the Statistics and Sampling Subcommittee, which is contained in the STACRES Report, and which refers to the important conclusions relative to adequacy of biostatistical data on fisheries contained in the Report of the ICES Liaison Committee to NEAFC. These are equally appropriate to the ICNAF Area. Thus, in order to improve stock assessments, it is essential that coverage, accuracy, and speed of reporting national statistics be greatly improved. Biological sampling data must be substantially extended. The very nature of regulations now being considered will, if implemented, alter traditional fishing patterns so that estimates of stock size based on fleet data may no longer be possible. Provisions must, therefore, be made for considerable investment in research vessel surveys, which would also provide estimates of future recruitment, and which should be coordinated internationally.

With specific reference to Subarea 3, it was noted that the Chairman's Report gives some idea of the inadequacies of sampling of various species. Other items which require attention in the Subarea are further information on mixtures of species in commercial catches, and assessment of cod stocks in Subdiv. 3Pn, Divs. 3M and 3NO. An assessment for Divs. 3N and 3O may be undertaken this year by Canadian scientists. It was also noted in relation to groundfish surveys that sampling strata should be prepared for Div. 3K. Dr J. Messtorff (Fed.Rep. Germany) agreed to undertake this task.

8. The Advisers endorsed recommendations of the Environmental Subcommittee with reference to presentation and better utilization derived from the UK Plankton Recorder surveys, and concerning ice conditions and ice forecasting. Both items require invitations to appropriate experts to attend STACRES sessions next year.

9. It was agreed that the next meeting of Scientific Advisers should take place before the Panel 3 meeting, at the time and place of the next Annual Meeting.

10. It was agreed that the Chairman and Rapporteur would draft the Report and circulate copies for approval.

11. Dr H.A. Cole (UK) was re-elected Chairman of Scientific Advisers to Panel 3.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2861
(D.b.71)

Proceedings No. 11
Appendix IV
(also ICNAF Res.Doc. 72/130
- Revised)

ANNUAL MEETING - JUNE 1972

Status of Fisheries and Research Carried Out in Subarea 3 in 1971

by

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1. Pertinent Documents

The following Research Documents contain information relating to Subarea 3: 72/1, 4, 14, 15, 16, 25, 30, 31, 32, 33, 35, 36, 37, 39, 40, 41, 42, 43, 44, 45, 46, 52. 56, 60, 63, 84, 86, 87, 88, 90, 92, 94, 96, 98, 99, 100, 102, 103, 104, 105, 106, 107, 109, 110, and 120.

Documents relating solely to salmon have been omitted. The latest information regarding the state of the fish stocks and the most recent assessments are given in the Report of the Assessments Subcommittee, the Report of its Mid-Term Meeting (Res.Doc. 72/1), and the Report of the ICES/ICNAF Joint Working Group on Cod Stocks in the North Atlantic (Res.Doc. 72/33). Cod catch statistics for the years 1958-70 for each Division of Subarea 3 and for the adjacent Subareas are given in Res.Doc. 72/57.

2. Status of the Fisheries

Table 1 gives the total nominal catch from Subarea 3 of all species and of cod, haddock, redfish, and herring considered separately for the year 1971 and the four preceding years.

Table 1. Nominal catches from Subarea 3 ('000 metric tons round fresh).

	1967	1968	1969	1970	1971
All species	1,103	1,144	983	972	951*
Cod	721	734	569	529	492*
Haddock	11	7	5	7	5
Redfish	89	54	88	84	102
Herring	79	145	145	135	118

* Catches of Denmark (F) assumed to be the same as in 1970

Table 2 gives the nominal catches of selected other species taken in Subarea 3 for the years 1969, 1970, and 1971.

Table 3 gives the nominal catches in Subarea 3 by species and countries for the years 1970 and 1971; as noted above these may not be quite complete. If it is assumed that Denmark caught the same weight of fish in 1971 as in 1970, then the total catch of all species decreased by about 20,000 tons. Catches by Spain and USSR increased slightly, while those of Norway and Canada decreased, the latter by about 40,000 tons.

Table 2. Nominal catches from Subarea 3, 1969-71 (metric tons round fresh).

	1969	1970	1971
Halibut	597	842	792*
Greenland halibut	17,690	23,561	14,419
American plaice	70,959	89,436	79,144
Witch	4,477	21,726	26,948
Yellowtail flounder	10,564	26,899	37,686
Flounders (not specified)	37,049	4,997	6,325
Roundnose grenadier	11,682	22,396	18,444

* Catch of Denmark (F) assumed to be the same as in 1970. All catches may be slightly low because of lack of reports from some non-member countries.

Table 3. Nominal catches from Subarea 3 in 1970 and 1971 by species and country ('000 metric tons round fresh).

Species	Year	Total	Canada	Denmark	France	Fed.Rep. Germany	Iceland	Japan	Norway	Poland	Portugal	Romania	Spain	USSR	UK	Non-Member
Cod	1970	529	129	9	14	12	-	-	38	13	91	-	165	60	Ø	Ø
	1971	492	116	NA	17	12	Ø	Ø	2	12	95	-	172	44	5	6
Haddock	1970	7	2	Ø	Ø	-	-	-	Ø	-	-	-	3	Ø	-	-
	1971	5	1	NA	Ø	-	-	-	Ø	-	-	-	3	Ø	Ø	NA
Redfish	1970	84	11	-	1	Ø	-	3	Ø	4	-	Ø	-	58	Ø	6
	1971	102	6	NA	1	Ø	Ø	8	-	6	-	Ø	-	71	Ø	9
Greenland halibut	1970	23	11	-	-	-	-	-	-	7	-	-	-	5	-	NA
	1971	14	9	NA	-	-	Ø	-	-	3	-	-	-	2	-	Ø
American plaice	1970	88	70	NA	Ø	-	-	-	-	Ø	-	-	-	17	-	NA
	1971	79	58	NA	1	-	-	-	-	-	-	-	Ø	20	Ø	-
Witch	1970	22	7	NA	Ø	-	-	-	-	3	-	-	-	12	-	NA
	1971	27	10	NA	Ø	Ø	-	Ø	-	-	-	-	-	16	Ø	Ø
Yellowtail flounder	1970	27	20	-	Ø	-	-	-	-	-	-	Ø	-	3	-	NA
	1971	38	24	NA	Ø	-	-	-	-	-	-	-	-	13	-	-
Herring	1970	135	135	-	-	-	-	-	-	Ø	-	-	-	-	-	-
	1971	118	118	-	-	-	-	-	-	-	-	-	-	-	-	-
Total - All species	1970	972	404	10	18	12	-	4	38**	27	91	3	169	186	Ø	12
	1971	951*	361	NA	20	12	Ø	8	21	27	95	2	176	198	5	16

Ø Catch less than 500 tons
* Catches of Denmark (F) assumed to be the same as in 1970
** Includes some fish caught in Subarea 2

Cod

Although the information is not yet quite complete, it seems that cod catches again declined slightly in 1971. Table 4 below compares the 1971 nominal catches by Divisions with the average catches taken in the 10 years 1961-70 (from Res.Doc. 72/57).

The only Divisions showing a substantial decline from the 10-year average catch were Divs. 3K and 3M, and Subdiv. 3Pn. Some German landings reported as from Div. 3K are to be attributed to Div. 3M (Res. Doc. 72/44 - Revised). The catches from Divs. 3N and 3O were substantially above the 10-year average, while those of Div. 3L and Subdiv. 3Ps continued at the average level. Cod catches by Spain and Portugal remained very stable, but those taken by Canada and the USSR declined slightly. Norway fished to only a small extent in Subarea 3 compared with 1970. As in 1969 and 1970, the heaviest catches were made in the northern part of the Subarea; production from these two Divisions (3K and 3L) was similar to that of 1970.

Table 4. Subarea 3 cod catches by Divisions (metric tons).

Division	3K	3L	3M	3N	3O	3Pn	3Ps	Total
Average 1961-70	106,713	199,822	30,234	52,589	50,620	17,775	61,272	515,062
Provisional catch 1971	81,891	191,633	19,356	67,519	65,596	7,844	61,658	492,000*

* Contains 10,000 tons as estimated catch by Denmark (F) not allocated to Divisions

Landings from the Canadian coastal fisheries again decreased, except for the inshore fishery in Subdiv. 3Ps. The trap catches were dominated by the 1966-68 year-classes but the deep water gillnets took a greater proportion of older fish. On the northeast coast of Newfoundland, the trend among the larger coastal vessels towards fishing by bottom gillnets in deeper water for a variety of species continued, the total weight of other species usually greatly exceeding that of cod (Res.Doc. 72/36).

In Canadian research vessel surveys in Div. 3L with a lined codend in June and October 1971, the 1968 year-class formed 45-50% by numbers.

Portuguese catches were taken mainly in Div. 3L and were dominated by 5-7-year-old cod (Res.Doc. 72/40). In the Spanish catches Divs. 3L and 3O provided 61% of the total (Res.Doc. 72/39).

Polish vessels fished mainly in Div. 3K. The bulk of the catches was made up by the 1964-66 year-classes. The mean yields per hour's fishing for Polish trawlers operating in Subarea 3 during the last 4 years were: 1968 - 1.33 tons; 1969 - 1.58 tons; 1970 - 1.35 tons; and 1971 - 1.61 tons (Res.Doc. 72/43).

The German catches from Labrador and Divs. 3K and 3L were dominated by the year-classes 1963-66 which comprised more than 80% by numbers (Res.Doc. 72/44 - Revised).

Soviet research vessel surveys during May-August 1971, covering all Divisions of Subarea 3 and comprising 240 one-hour hauls, indicated that an improvement in the cod fisheries in Divs. 3N, 3O, and 3P may be expected in 1973 due to the high abundance of the 1968 year-class. This year-class is also likely to be strong in Div. 3M (Flemish Cap) (Res.Doc. 72/42).

Haddock

Landings of haddock fell slightly from the 1970 level and neither Canadian nor Soviet vessel surveys revealed any evidence of incoming year-classes which might restore the fishery (Res.Docs. 72/36, 42, 106, and 107). Nevertheless, significant quantities of haddock were reported as being caught in the inshore fishery along the south and east coasts of Newfoundland (Res.Doc. 72/36).

Redfish

Redfish landings from Subarea 3 increased by more than 20% to give the highest total since 1965. The greater part of the increase was taken by the USSR, but catches by Japan, Poland and probably non-members also increased. Canadian landings decreased. The largest catches were made in Subdiv. 3Ps but all Divisions were productive except for Div. 3L. Little research on redfish was reported but sampling was done by Japan, Germany, Poland and USSR. In a special trawl survey by the USSR during the summer of 1971, which covered the whole of Subarea 3, beaked redfish (*Sebastes mentella*) dominated the catches; the highest average yield per hour's trawling was obtained from Div. 3N, viz. 693 kg (Res.Doc. 72/106). Poland recorded an appreciable quantity of young redfish (mean length 12.2 cm) on Green Bank in Div. 3O (Res.Doc. 72/43).

Herring

All the herring were landed by Canada but the total catch from Subarea 3 was 17,000 tons less than

in 1970. As a new development, 20% of the catch in the 1970/71 season was utilized for human consumption and this trend is expected to continue in the 1971/72 season. Extensive Canadian research on Newfoundland herring is presented in Res.Docs. 72/87, 88, 92, 96, and 100 and is summarized in the Canadian Research Report (Res.Doc. 72/36). New assessments are to be found in the relevant section of the Report of the Assessments Subcommittee.

Flounders

The estimated landings from Subarea 3 of the three most important species of flounders in the period 1968-71 are shown in Table 5.

Table 5. Estimated total nominal catches of flounders from Subarea 3 - all countries.

Year	American plaice	Yellowtail	Witch
1968	89,000	12,000	29,000
1969	90,000	14,500	17,500
1970	89,436	26,899	21,726
1971	79,144	37,686	26,948

(4,997 tons of flounders (not specified) landed in 1970 and 6,325 tons (not specified) landed in 1971 are not included)

The main fishing areas of American plaice are Divs. 3L and 3N, although landings in excess of 10,000 tons are also reported from Div. 3K and Subdiv. 3Ps. Assessments have been prepared for the seemingly separate stocks in Divs. 3L and 3N (Res.Docs. 72/1, 14, 15) and are summarized in the Report of the Assessments Subcommittee.

The yellowtail fishery occurs mainly on the shallower parts of the Grand Banks in Divs. 3L and 3N. There seems to be only one stock and a first assessment is available in Res.Doc. 72/86. It is possible that the yellowtail stock has expanded as the haddock on the Grand Banks have declined. Information on pre-recruit strength is insufficient to indicate whether the recent increase in abundance of yellowtail will continue, but a Canadian research vessel cruise in June 1971 showed that yellowtail has spread to most parts of the Bank less than 90 m in depth and catches equivalent to 460 kg/hr were obtained in several localities (Res.Doc. 72/36).

Very little information is reported concerning witch (grey sole). The most important fishing areas are Divs. 3K and 3L.

Other species

Landings of Greenland halibut declined. Catches by USSR, Poland and Canada (N) were all substantially reduced.

Catches of roundnose grenadier fell slightly from the level of recent years. Only small quantities of argentines were landed, mostly by Japan.

Canadian (N) salmon catches at 1,576 tons were similar to those of 1970 (1,595 tons).

Squid, which had been very scarce in the Newfoundland coastal fishery for several years, increased to about 1,600 tons (Res.Doc. 72/36).

Groundfish landings reported in 1971 as "not specified" were negligible, but "other fish (ns)" increased to 11,893 tons, the bulk being landed by the USSR. "Other shell fish" totalled 3,526 tons, all landed by Canada.

Adequacy of sampling

Sampling efficiency, assessed according to the criteria recommended in 1970 by ICNAF, was either barely adequate or insufficient in respect of almost all species of major commercial importance in Subarea 3 (Res.Doc. 72/63). The figures given below are based on a standard of 1.0 and values below this indicate that the minimum requirement (200 length measurements for each 1,000 tons of a species caught) was not satisfied.

Year	Cod	Haddock	Redfish	Herring	American plaice	Yellowtail	Witch
1969	0.8	15	1.2	0.4	0.4	0.9	1.9
1970	0.8	2.1	0.3	0.8	0.5	0.3	0.0

(In some cases, additional research vessel samples are available.)

3. Research Work

Research studies made in Subarea 3 were reported by Canada, France, Fed.Rep. Germany, Japan, Poland, Portugal, Spain, USSR, UK, and USA.

Hydrography

Hydrographic studies were reported by Canada, Poland, and USSR.

In the spring and early summer of 1971 the water masses of the Labrador Current on the North Newfoundland Bank and the northeastern slope of the Grand Bank were colder than in any year during the period 1957-71. At the same time on the southwestern slope of the Grand Bank, and in the channels between the Grand, Green and Saint Pierre Banks, the temperature was above the norm. Later in the year the temperature in these areas also fell below the norm (Res.Doc. 72/105). The circulation patterns in the South Labrador and Newfoundland areas in 1970-71 are described in detail in the USSR Res.Doc. 72/104.

Plankton

Plankton studies were reported by the UK and USSR. The Plankton Recorder survey was continued by the UK with 13,244 miles sampled in Subarea 3. The data processing of the results is now fully automated and the accessibility of the data has been improved. In 1971 phytoplankton was below average in Subarea 3 with an early spring maximum. *Calanus* abundance was near to the long-term average.

The USSR carried out a survey of ichthyoplankton during April and May covering the area of Divs. 3K, 3L, 3M, and 3N: 234 stations were worked. The mean number of cod eggs in Divs. 3K and 3L was somewhat lower than in 1970 and the larvae hatched later, due to more severe hydrographic conditions. The analysis of the data confirms that the main cod spawning grounds are located near North Labrador and that eggs and larvae drift to Divs. 2H, 2J, 3K, and 3L with the current. Although there is some spawning in these Divisions, it is much less than in Div. 2G (Res.Doc. 72/42).

Groundfish surveys

Progress in the ICNAF Groundfish Survey program is reported in Res.Doc. 72/12: the provisional schedule for 1972 shows surveys by Canada in January (Subdiv. 3Pn), March (Subdiv. 3Ps), May (Divs. 3L and 3N), and November (Subdiv. 3Pn); by the USSR in April (all Divisions); and by France in March and May in Subdivs. 3Ps and 3Pn. Res.Doc. 72/110 gives biomass estimates for selected commercial species from Canadian surveys in Divs. 3L and 3N, and Subdiv. 3Ps. Abundance of young cod in Div. 3K in the years 1969-71 is shown in Canadian Res.Doc. 72/108, and the results of the annual Soviet survey over the whole of Subarea 3 in Res.Doc. 72/42.

Special biological studies

Biological investigations of American plaice, including spawning areas and larval distribution in Subarea 3, are reported in the USSR Res.Doc. 72/103. French investigations on this species in Subdiv. 3Ps are described in Res.Doc. 72/56.

The relation between abundance fluctuation in cod and haddock and hydrographic conditions, especially temperature, is discussed in Res.Doc. 72/107. An inverse dependence between cod and haddock catches on the Grand Bank is suggested. USSR investigations on diurnal variations in catches of cod in relation to feeding habits are reported in Res.Doc. 72/99.

Soviet investigations on the distribution and biology of capelin on the Grand Bank are reported in Res.Doc. 72/102.

Tagging

Tagging activities on fish other than herring were reported only by USSR and Canada. Canada tagged Greenland halibut in Trinity Bay, Newfoundland; recoveries from earlier tagging in this area included two more taken on the edge of the Continental Shelf, indicating, perhaps, that this is a normal migration pattern (Res.Doc. 72/36). USSR recaptures of American plaice from Canadian and USSR taggings in 1970 included 9 fish making long migrations from the open sea shoreward (Res.Doc. 72/62).

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Appendix V

ANNUAL MEETING - JUNE 1972

(2) Proposal for International Quota Regulation of the Fishery for Cod in Division 2J of Subarea 2 and Divisions 3K and 3L of Subarea 3

Panels 2 and 3 jointly recommend that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

"1. That the Contracting Governments take appropriate action to regulate the catch of cod, *Gadus morhua* L., by persons under their jurisdiction fishing in Division 2J of Subarea 2 and Divisions 3K and 3L of Subarea 3 so that the aggregate catch of cod by vessels taking such cod shall not exceed 575,500 metric tons in 1973.

"2. That Competent Authorities from each Contracting Government listed below shall limit in 1973 the catch of cod taken by persons under their jurisdiction to the amount listed from the above-mentioned Divisions:

Canada	71,064	metric tons
Denmark	13,896	" tons
France	51,352	" tons
Fed.Rep. Germany	41,336	" tons
Iceland	6,224	" tons
Italy	6,056	" tons
Japan	6,000	" tons
Norway	17,480	" tons
Poland	40,944	" tons
Portugal	121,384	" tons
Romania	7,008	" tons
Spain	91,512	" tons
USSR	81,536	" tons
UK	19,708	" tons

"3. That each Contracting Government mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of the date on which its vessels have ceased a specialized fishery for cod in Division 2J of Subarea 2 and Divisions 3K and 3L of Subarea 3.

"4. That the Contracting Governments take appropriate action to ensure that all vessels under their jurisdiction which take cod, record their catches on a daily basis according to position, amount, date, type of gear, amount of effort, i.e., number of sets (or hooks) x time gear on the bottom (otter trawl) or fishing (midwater trawl, lines, other gear), discards and disposition of catch.

"5. That the allocations in paragraph 2 above are without prejudice to future allocations of catches for this or other stocks."

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Serial No. 2881
(A.a.4)

Proceedings No. 11
Appendix VI

ANNUAL MEETING - JUNE 1972

(3) Proposal for International Quota Regulation of the Fishery for Cod in Subdivision 3Ps of Subarea 3

Panel 3 recommends that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

"1. That the Contracting Governments take appropriate action to regulate the catch of cod, *Gadus morhua* L., by persons under their jurisdiction fishing in Subdivision 3Ps of Subarea 3 so that the aggregate catch of cod by vessels taking such cod shall not exceed 50,500 metric tons in 1973.

"2. That Competent Authorities from each Contracting Government listed below shall limit in 1973 the catch of cod taken by persons under their jurisdiction to the amount listed from the above-mentioned Subdivision:

Canada	9,200 metric tons
Denmark	2,000 " tons
France	4,400 " tons
Fed.Rep. Germany	500 " tons
Iceland	500 " tons
Italy	500 " tons
Japan	500 " tons
Norway	2,500 " tons
Poland	500 " tons
Portugal	1,100 " tons
Spain	23,000 " tons
USSR	3,900 " tons
UK	1,900 " tons

"3. That each Contracting Government mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of the date on which its vessels have ceased a specialized fishery for cod in Subdivision 3Ps of Subarea 3.

"4. That the Contracting Governments take appropriate action to ensure that all vessels under their jurisdiction which take cod, record their catches on a daily basis according to position, amount, date, type of gear, amount of effort, i.e., number of sets (or hooks) x time gear on the bottom (otter trawl) or fishing (midwater trawl, lines, other gear), discards and disposition of catch.

"5. That the allocations in paragraph 2 above are without prejudice to future allocations of catches for this or other stocks."

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2881
(A.a.4)

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Appendix VII

ANNUAL MEETING - JUNE 1972

(4) Proposal for International Quota Regulation of the Fishery for Cod in Divisions 3N and 3O of Subarea 3

Panel 3 recommends that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

"1. That the Contracting Governments take appropriate action to regulate the catch of cod, *Gadus morhua* L., by persons under their jurisdiction fishing in Divisions 3N and 3O of Subarea 3 so that the aggregate catch of cod by vessels taking such cod shall not exceed 103,500 metric tons in 1973.

"2. That Competent Authorities from each Contracting Government listed below shall limit in 1973 the catch of cod taken by persons under their jurisdiction to the amount listed from the above-mentioned Divisions:

Canada	12,700	metric tons
Denmark	2,909	" tons
France	601	" tons
Fed.Rep. Germany	1,009	" tons
Iceland	909	" tons
Italy	909	" tons
Japan	909	" tons
Norway	3,309	" tons
Poland	1,109	" tons
Portugal	7,709	" tons
Romania	909	" tons
Spain	41,409	" tons
USSR	27,100	" tons
UK	2,009	" tons

"3. That each Contracting Government mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of the date on which its vessels have ceased a specialized fishery for cod in Divisions 3N and 3O of Subarea 3.

"4. That the Contracting Governments take appropriate action to ensure that all vessels under their jurisdiction which take cod, record their catches on a daily basis according to position, amount, date, type of gear, amount of effort, i.e., number of sets (or hooks) x time gear on the bottom (otter trawl) or fishing (midwater trawl, lines, other gear), discards and disposition of catch.

"5. That the allocations in paragraph 2 above are without prejudice to future allocations of catches for this or other stocks."

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Serial No. 2881
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Appendix VIII

ANNUAL MEETING - JUNE 1972

(8) Proposal for International Quota Regulation of the Fishery for American Plaice in Divisions 3L, 3N and 30 of Subarea 3

Panel 3 recommends that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

"1. That the Contracting Governments take appropriate action to regulate the catch of American plaice, *Hippoglossoides platessoides* (Fab.), by persons under their jurisdiction fishing in Divisions 3L, 3N and 30 of Subarea 3 so that the aggregate catch of American plaice by vessels taking such American plaice shall not exceed 60,000 metric tons in 1973.

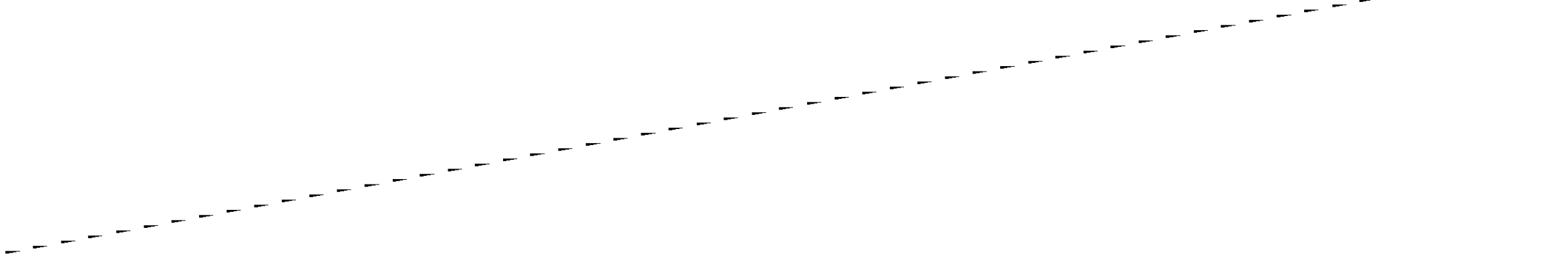
"2. That Competent Authorities from each Contracting Government listed below shall limit in 1973 the catch of American plaice taken by persons under their jurisdiction to the amount listed from the above-mentioned Divisions:

Canada	41,600	metric tons
Denmark	100	" tons
France	1,242	" tons
Fed.Rep. Germany	100	" tons
Iceland	100	" tons
Italy	100	" tons
Japan	742	" tons
Norway	100	" tons
Poland	1,142	" tons
Portugal	742	" tons
Romania	942	" tons
Spain	742	" tons
USSR	11,400	" tons
UK	842	" tons
USA	100	" tons

"3. That each Contracting Government mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of the date on which its vessels have ceased a specialized fishery for American plaice in Divisions 3L, 3N and 30 of Subarea 3.

"4. That the Contracting Governments take appropriate action to ensure that all vessels under their jurisdiction which take American plaice, record their catches on a daily basis according to position, amount, date, type of gear, amount of effort, i.e., number of sets (or hooks) x time gear on the bottom (otter trawl) or fishing (midwater trawl, lines, other gear), discards and disposition of catch.

"5. That the allocations in paragraph 2 above are without prejudice to future allocations of catches for this or other stocks."



INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

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Appendix IX

ANNUAL MEETING - JUNE 1972

(9) Proposal for International Quota Regulation of the Fishery for Yellowtail Flounder in Divisions 3L, 3N and 3O of Subarea 3

Panel 3 recommends that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

"1. That the Contracting Governments take appropriate action to regulate the catch of yellowtail flounder, *Limanda ferruginea* (Storer), by persons under their jurisdiction fishing in Divisions 3L, 3N and 3O of Subarea 3 so that the aggregate catch of yellowtail flounder by vessels taking such yellowtail flounder shall not exceed 50,000 metric tons in 1973.

"2. That Competent Authorities from each Contracting Government listed below shall limit in 1973 the catch of yellowtail flounder taken by persons under their jurisdiction to the amount listed from the above-mentioned Divisions:

Canada	35,500	metric	tons
Denmark	100	"	tons
France	700	"	tons
Fed.Rep. Germany	100	"	tons
Iceland	100	"	tons
Italy	100	"	tons
Japan	700	"	tons
Norway	100	"	tons
Poland	100	"	tons
Portugal	700	"	tons
Romania	800	"	tons
Spain	700	"	tons
USSR	9,500	"	tons
UK	700	"	tons
USA	100	"	tons

"3. That each Contracting Government mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of the date on which its vessels have ceased a specialized fishery for yellowtail flounder in Divisions 3L, 3N and 3O of Subarea 3.

"4. That the Contracting Governments take appropriate action to ensure that all vessels under their jurisdiction which take yellowtail flounder, record their catches on a daily basis according to position, amount, date, type of gear, amount of effort, i.e., number of sets (or hooks) x time gear on the bottom (otter trawl) or fishing (midwater trawl, lines, other gear), discards and disposition of catch.

"5. That the allocations in paragraph 2 above are without prejudice to future allocations of catches for this or other stocks."

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2882
(B.c.72)

Proceedings No. 12

ANNUAL MEETING - JUNE 1972

Report of Meeting of STACFAD

Monday, 29 May, 1145 hrs

1. The meeting was opened by the Chairman, Mr Wm.L. Sullivan, Jr (USA).

2. Membership of the Committee consisted of the Executive Secretary (Mr L.R. Day) and nominees from Canada (Dr A.W. May), Denmark (Mr J. Nørgaard), USSR (Mr A. Volkov), UK (Mr A.J. Aglen), and USA (Mr H. Beasley).

3. The Assistant Executive Secretary (Mr V.M. Hodder) was requested to be Rapporteur.

4. The Agenda was approved without change.

5. Panel Membership. The Committee noted that Spain had applied for membership in Panel 5, and

recommends

that the Commission approve Spain's application for membership in Panel 5, effective 1 July 1972.

6. Auditor's Report. The Executive Secretary reported that the Auditor's Report covering the Commission's accounts to 30 June 1971 had been distributed to each Contracting Government in October 1971, and noted that no comments had been received. There being no comments from the Committee, STACFAD

recommends

that the Auditor's Report for 1970/71 be adopted.

7. Administrative Report and Financial Statements (Comm.Doc. 72/2). The Executive Secretary reviewed the Administrative Report for the year ending 30 June 1972 (estimated from 1 May 1972). He indicated that the position of Assistant Executive Secretary was filled in September 1971, and commented on the high morale of the Secretariat staff despite their working under difficult conditions during the past few months due to inadequate office accommodation. Additional office space had been requested some months ago, and 220 square feet is expected to be made available soon. The Committee noted with satisfaction the appointment of Mr V. M. Hodder to the long-vacant position of Assistant Executive Secretary, and the valuable contributions he has already made to the work of the Secretariat.

The Committee examined in detail Financial Statements 1, 2 and 3 together with the Appendix (Comm. Doc. 72/2). The Executive Secretary reported that the Commission was now exempt from Federal Sales Tax (12%) and Nova Scotia Hospital Tax (7%). He also indicated that cost of superannuation for Secretariat staff members would be increased in the near future. The Committee noted that total obligations for the year 1971/72 were estimated at $129,091, which would be $6,909 less than the amount appropriated by the Commission at the 1971 Annual Meeting. The Working Capital Fund is estimated at $43,642 and the Miscellaneous Fund at $16,761 as of 30 June. STACFAD

recommends

that the Administrative Report with the financial statements for 1971/72 be adopted.

8. Working Capital Fund. The Committee, noting that the WCF was estimated at $43,642, agreed that it was in excess of the Commission's needs and should be reduced to an approximate level of $20,000. Considering ICNAF's proposed participation in the joint ICES/ICNAF/IBP Seal Symposium, Guelph, Ontario, Canada, August 1972 and that about $20,000 was available to reduce the amount to be appropriated from Member Countries. STACFAD

recommends

(i) that $5,000 be appropriated from the WCF to support the 1972 Seal Symposium;

(ii) that $20,000 be appropriated from the WCF and transferred immediately to the Miscellaneous Fund to reduce the amount to be appropriated from Member Countries in 1972/73.

9. Budget 1972/73. The Committee examined in detail the preliminary budget estimates for 1972/73 (Appendix I to STACFAD Agenda). The Executive Secretary proposed some revisions which reduced the estimated ordinary expenditures for 1972/73 from $155,000 to $150,425 (see Appendix I). The Committee noted a significant decrease in cost of publications from $18,000 to $12,000 due largely to a decrease in the cost of producing the Statistical Bulletin, while an increase of $4,500 in Other Contractual Services is due largely to the acquisition of machinery to facilitate the more efficient production of the Commission's publications including Meeting Documents and the adaptation of automatic data processing methods to the compilation and publication of statistics. STACFAD

recommends

(i) that the ordinary expenditures of the Commission for the fiscal year 1972/73 be $150,425;

(ii) that, after $20,000 from the WCF and an estimated $16,761 from the Miscellaneous Fund is applied against that amount, approximately $113,664 be appropriated from Member Countries in 1972/73.

In recommending adoption of the 1972/73 Budget (as appended) the Committee recommended approval of the additional position of Clerk-Statistician, and made every effort to reduce as far as possible the contributions from Member Countries. The Committee also reviewed the salary scale for the position of Executive Secretary, noting adjustments which have been made in the Executive Salary Scale of the Public Service of Canada and in the United Nations (FAO) salary scale, and recommended that the scale for the Executive Secretary be set at $23,500 to $29,500 with annual increments of $600, and with a 1972/73 level of $28,300.

10. Budget Forecast 1973/74. The Committee considered the Budget Forecast for 1973/74 as presented in Appendix II to the STACFAD Agenda, and noted that $168,500 was required to cover ordinary expenditures (see Appendix II). The Committee noted that an important symposium was being planned for 1973 jointly with other international agencies - Acoustic Methods in Fishery Research, June 1973. STACFAD

recommends

that the Commission give consideration at the 1973 Annual Meeting to authorize

(a) appropriation of $168,500 for the ordinary expenses of the Commission,
(b) appropriation of $5,000 from the WCF to support the joint ICES/ICNAF/FAO Symposium on Acoustic Methods in Fishery Research to be held at Bergen, Norway, June 1973.

11. Publication Matters. The Executive Secretary, referring to the Administrative Report (Comm.Doc. 72/2), indicated that since June 1971 the Secretariat has issued 1,916 pages of printed material in eight publications. All but two of these publications (Annual Proceedings, Vol. 21 (63 pages) and Research Bulletin No. 8 (92 pages) were produced by the Secretariat, and it is hoped that the Annual Proceedings may be printed at the Secretariat in the future. The Executive Secretary noted that printing cost for Statistical Bulletin Vol. 20 was less than $1,500 in contrast to $8,000 for Vol. 19.

12. Billing Date for 1972/73. STACFAD

recommends

that the Contracting Governments be billed by the Commission for payments due, under the 1972/73 administrative budget, in accordance with Article XI of the Convention, on 15 August 1972.

13. Time and Place of 1973, 1974 and 1975 Annual Meetings. The Committee took note of the recommendation of STACRES that a weekend intervene between the end of the Scientific Meetings and the beginning of Plenary, and of the increasingly heavy agenda of the Annual Meeting, and STACFAD

recommends

(i) that the 1973 Annual Meeting of the Commission be held at Copenhagen, Denmark, 5-13 June 1973, with the possible extension of the meeting to 15 June 1973 depending on the need of the Commission;

(ii) that the 1974 Annual Meeting be held at the Commission Headquarters at a date to be agreed later, if no other invitation is extended;

(iii) that the 1975 Annual Meeting be held at the Commission Headquarters at a date to be agreed later, if no other invitation is extended.

14. (a) Meeting Documents. The Committee noted that the attempts made by the Secretariat to reduce the quantity of paper circulated as Meeting Documents had not been fully realized. The Committee again considered the need for a third Document series to cover such documents as national research reports, statistical tabulations, reports of Subcommittees and *ad hoc* Working Groups, and Reports of Scientific Advisers, and

recommends

(i) that a Document series to be known as Summary Documents (abbreviated "Sum.Doc.") with a distinctive colour be instituted for future Annual Meetings, and

(ii) that this new series contain Mid-Term Meeting Reports, Joint Working Party Reports, Reports of Scientific Advisers to Panels, Reports on Status of Fisheries, special Statistical Documents prepared by the Secretariat and any other scientific documents considered important for Commissioners' attention.

The Standing Committee noted that the Secretariat is now equipped to provide meeting documentation on 8-1/2" x 11" paper, and therefore

recommends

that the Commission adopt the use of 8-1/2" x 11" paper for meeting documents.

14. (b) Dr A.W. May (Canada) reported that the financial aspects of the 1972 Salmon Tagging Experiment was being borne by contributions from interested Member Governments and that the Fund was being administered by ICES.

14. (c) The Committee noted that the terms of reference for the Standing Committee on International Control (STACTIC) have been approved by the Commission by a Plenary on 25 May 1972.

15. Mr Wm.L. Sullivan, Jr (USA) was unanimously re-elected Chairman of the Committee for the year 1972/73.

16. The meeting adjourned at 1400 hrs.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2882
(B.c.72)

Proceedings No. 12
Appendix I

ANNUAL MEETING - JUNE 1972

Preliminary Budget Estimate 1972/73

			Proposed estimates 1972/73
1.	Personal Services		
	(a)	Salaries	$ 85,000
	(b)	Superannuation	1,800
	(c)	Additional help	-
	(d)	Group medical and insurance plans	825
	(e)	Contingencies	3,000
	(f)	Forecast increase	6,000
2.	Travel		6,500
3.	Transportation		500
4.	Communications		6,000
5.	Publications		12,000
6.	Other Contractual Services		10,500
7.	Materials and Supplies		5,000
8.	Equipment		1,000
9.	Annual and Mid-Year Meetings		10,000
10.	Contingencies		2,300
	Total Ordinary Expenditures		$150,425
	Special appropriation WCF		
	(i)	Transfer to Miscellaneous Fund	20,000
	(ii)	Seal Symposium, 1972	5,000

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2882
(B.c.72)

Proceedings No. 12
Appendix II

ANNUAL MEETING - JUNE 1972

Preliminary Budget Forecast 1973/74

		Forecast estimate 1973/74
1.	Personal Services	
	(a) Salaries	$ 91,000
	(b) Superannuation	2,200
	(c) Additional help	1,300
	(d) Group medical and insurance plans	1,000
	(e) Contingencies	6,000
	(f) Forecast increase	-
2.	Travel	7,000
3.	Transportation	1,000
4.	Communications	7,500
5.	Publications	14,000
6.	Other Contractual Services	10,000
7.	Materials and Supplies	6,000
8.	Equipment	5,500
9.	Annual and Mid-Year Meetings	10,000
10.	Contingencies	6,000
	Total Ordinary Expenditures	$168,500
	Special appropriation WCF	
	(i) Acoustic Symposium, June 1973	5,000

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2883
(B.e.72)

Proceedings No. 13

ANNUAL MEETING - JUNE 1972

Report of Joint Meeting of Panels 1-5

Tuesday, 30 May, 0930 hrs
Friday, 2 June, 0930 hrs

1. Opening. The Chairman of the Commission, Mr K. Løkkegaard (Denmark), opened the meeting and called for nominations for a meeting chairman. The Panels agreed unanimously that Mr Løkkegaard should be the Chairman for the Joint Panel Meeting.

2. Rapporteur. The Executive Secretary, Mr L.R. Day, was appointed Rapporteur.

3. Agenda. The Agenda was adopted without change.

4. Under Plenary Agenda Item 27, Maximum Utilization of Catches of Regulated Species, the Chairman drew attention to the Canadian proposal prohibiting the discard of any fish of a regulated species weighing over one-half kilogram (Comm.Doc. 72/20). It was pointed out that some of the Panels had already discussed this matter and that they had agreed that STACRES should look closely at the matter of discards and their significance. The Joint Meeting of Panels endorsed this proposal.

5. Under Plenary Agenda Item 28, Adoption of 130-mm Mesh Size, the Chairman said that the 1971 Annual Meeting of the Commission had suggested this matter be considered at the 1972 Meeting. He noted that Subareas 1-3 had 130-mm mesh size in effect and that Panels 4 and 5 were considering extending the new mesh size to Subareas 4 and 5. The results of the Panels' deliberations would be reported to the Commission in the Reports of the Panels to the Commission in Plenary Session.

6. Under Plenary Agenda Item 18, Conservation Measures for Atlantic Salmon in the Convention Area, the Chairman asked the US delegate to introduce the Proposal Regarding Conservation of Atlantic Salmon by Denmark, Norway, the United Kingdom, and the United States (Comm.Doc. 72/33).

(i) The US delegate recalled the lengthy debates on this subject which had taken the attention of the Commission for the last five or six years, and reviewed the actions taken at the 1968, 1969, 1970, and 1971 Annual Meetings in adopting a resolution and regulatory proposals on the Atlantic salmon. These regulatory proposals had taken effect, but not for all Contracting Governments, and thus far, it had not been possible to find a solution to the problem which would be acceptable to all. Since the last Annual Meeting, intensive discussions had taken place among those Member Countries principally concerned with the problem, particularly between Denmark and the United States, which has resulted in the four-party proposal before the Commission. This proposal is barely acceptable to the various sponsors which had different views on and different interests in the fishery, but it is acceptable to them and this represents the best chance of finally resolving the problem. The United States continues to favour a total ban, but wants a workable solution now. The United States thus hopes that the Commission will favourably consider the four-party proposal and adopt it unanimously.

(ii) The Danish delegate pointed out that the four-party proposal had come about as a result of discussions and an understanding reached between Denmark and USA who felt that a solution to the high seas salmon problem should be found within the framework of ICNAF. Since the proposal represented a step towards a total ban, already accepted by the majority of Member Countries, he felt that there was good reason to ask for and to expect support for the proposal by all Member Countries. He pointed out that the changes in Danish policy from opposition to a total ban not based on scientific evidence was no easy matter for his Government and that the draft proposal does not prejudice the Danish view that a ban on fishing for salmon on the high seas encourages a tendency towards a deviation from the recognized principle of the freedom of the high seas fisheries. The Danish Government considers that the salmon stocks in home waters are affected not only by commercial and sport fishing and by pollution, but also by commercial fishing on the high seas but that the reports of the Joint Salmon Working Party do not contain any definite conclusions about the effect of the high seas fishery, although this year's report strikes a note of warning but more life history and behaviour information is needed before final conclusions can be reached. He pointed out that Denmark's membership in the European Common Market would have the effect of reducing considerably the Danish and

Faroese salmon catches inside the 12-mile limit. Salmon drift netting has resulted in the destruction of large numbers of a Greenland sea-bird, the guillemot, which are very important as food for the Greenlanders. As regards maintaining the Greenlander's fishery for salmon, he explained that the Greenland fishermen are very poor and completely dependent on the fisheries. As a consequence, the salmon fishery has become of great importance to them. Danish and Faroese catches, both inside and outside the 12-mile limit, would be phased out and be brought to a complete stop on 1 January 1976. The phasing-out period in the four-party proposal, he said, was necessary to assist Danish and Faroese fishermen from suffering great economic loss and allow them to shift gradually to other fishing activities. He recommended the draft resolution as a means of getting the proposal effective as soon as possible, as the Greenland and Danish authorities will have to issue special regulations into effect and it was necessary for the Faroese Islands to approve the proposal in its Legislative Assembly. He hoped Member Countries would find it possible to accept the four-party proposal as a far-reaching contribution to the conservation of the salmon stocks.

The Norwegian delegate said that he was prepared to vote for the four-party proposal and the draft resolution.

The UK delegate, in support of the four-party proposal, recognized that an immediate ban on high-seas salmon fishing had not been acceptable and that compromises were necessary. He recognized the special position of the Greenland fishermen and the effort Denmark had made to resolve the salmon problem. The four-party proposal, he thought, was a reasonable method of avoiding a very difficult situation if the fishery were suddenly halted. He considered that the special nature of the salmon with its life history in the river and in the sea required special treatment to which the principle of freedom of fishing on the high seas does not apply in the same way as for exploited main species.

The Canadian delegate said that in 1969, Canada proposed to ICNAF a prohibition of fishing of salmon on the high seas of the Convention Area. All but two Member Countries of the Commission supported this resolution. The two reasons for such a prohibition are even more valid today than they were then. First, effective management of the salmon fisheries requires that runs be harvested when they separate as they approach their home rivers, so that those in poor condition can be protected and those in good condition can be cropped in accordance with their capacities. Second, the costs of maintaining the quality and accessibility of salmon rivers and of the various positive measures to produce more salmon, entitle the country of origin to reap the benefits. Otherwise, such costs will not long be borne and salmon will disappear. The continuing decline of the salmon runs makes these reasons even more valid today than they were in 1969. He noted that in spite of this measure, supported by so strong a majority, two ICNAF Member Countries have continued to fish salmon on the high seas of the Convention Area off Greenland, half of which originate in Canada and half on the other side of the Atlantic. This fishery has continued to grow while catches of these salmon in home waters have continued to decline. In 1970 these two countries supported a resolution adopted by ICNAF, clearly intended to freeze the fishing in Greenland waters in 1970 at its 1969 level. It included a prohibition of the use of monofilament nets purchased after 30 June 1970, but it so happened that enough nets were available to the fleet for an almost complete conversion to monofilament nets in 1971. At the 1971 Annual Meeting of ICNAF, Canada proposed a 20% reduction in the fishery as a conservation measure, being influenced by a decline in two-sea-year salmon which had caused Canada to curtail its own commercial salmon fishery in 1971. This proposal failed to be adopted, and Canada reluctantly voted for a continuation into 1972 and 1973 of the 1970 attempt to hold the fishery at its 1969 level. This measure is still in force. He pointed out that, in 1971, the fishing in Greenland waters reached an all time high. The catch of two-sea-year salmon in home waters continued to decline and in some major rivers reached an all time low. In spite of this, there is before us a resolution giving approval to a high seas catch by Denmark and Norway in Greenland waters considerably higher than in 1969. In the meanwhile, the two-sea-year salmon which are the mainstay of spawning have reached such low levels in some of Canada's salmon rivers that Canada has closed large sections of her commercial fishery this year for an indefinite period, and nine hundred fishermen have lost their accustomed means of livelihood at a time when alternative employment is scarce. The numbers of spawners in many Canadian rivers, especially those tributary to the Gulf of St. Lawrence fell in 1971 far below the numbers needed to make full use of their productive capacities. The abundance of salmon in both home and Greenland waters will be seriously affected. Under these circumstances, Canada can hardly be expected to support a measure which does nothing in 1972, and little in 1973, to reduce the catch of potential spawners which are already so scarce--so far below the numbers the future of the fishery demands. As the representative of Canada, he then moved an amendment (Appendix I) to the proposal by Denmark, Norway, the United States of America and the United Kingdom (Comm.Doc. 72/33). He said that Canada does not believe that the reduction of the catch in Greenland waters, which Canada has just proposed, is in itself an adequate conservation measure to reduce the stocks of salmon from their perilous condition. Canada intends to discuss the problem with the governments concerned with Atlantic salmon, hoping to reduce the catch in the Greenland inshore waters to a more acceptable level.

The Spanish delegate supported the Canadian position. He said that Spanish rivers contributed to the high seas salmon fisheries in the West Greenland area and that his Government would like to see adequate conservation measures applied. He said that Spain was not fishing for salmon now, but this did not rule out the possibility of a fishery being established in the future.

The Danish delegate advised that his delegation had strict instructions from his Government not to

accept any amendment to the four-party proposal which was a package deal.

The French delegate said that his Government has always favoured proposals aimed at the protection of salmon, even by a total ban for salmon fishing on the high seas, which was not considered as contrary to the principle of the freedom for fishing on the high seas. This position was reinforced by the results of recaptures in Greenland waters of salmon tagged as smolts in the French rivers as reported by the Joint Working Party on Salmon (Comm.Doc. 72/32). He expressed gratitude to the four Governments which had tried to work out a valuable compromise to take into account the particular difficulties arising in some countries. But the Canadian amendment to the four-party proposal went further in the field of protection for salmon and seemed more adequate to the present situation. Therefore, his delegation was in favour of the Canadian amendment.

The Polish delegate said that he could accept the four-party proposal.

The Icelandic delegate reported that salmon fishing by Icelanders is not allowed inside or outside fishing limits. His country has a large-scale salmon-rearing program. The Canadian amendment to the four-party proposal seemed to meet the Icelandic requirements and he could support it.

The Japanese delegate said that "Japan believes that anadromous fish such as salmon, as in the case of any other fish resources, should be exploited as well as managed as the joint responsibility among countries concerned and that conservation measures for such fish should, therefore, be considered as the equal burden and responsibility among countries concerned. Japan cannot go along with the view that only those countries which possess spawning rivers should be allowed to fish for salmon and other countries should be totally prohibited, even though such arrangement would be for the purpose of conservation of resources. What I have just stated is the Japanese basic view which we have reiterated on every possible occasion in the past, and now I would like to make it clear that Japan holds the same view with regard to Atlantic salmon as well. However, Japan has no intention to fish for Atlantic salmon. Japan joined the ICNAF in 1970 at the time when the Commission's recommendation had been adopted concerning total ban of Atlantic salmon fishing on the high seas. May I add that despite the aforementioned position of Japan, it is not to be denied that Japan is automatically bound by that recommendation."

The USSR delegate said that at the previous ICNAF meetings the Soviet delegation had stated its principal position on the Atlantic salmon conservation matters. The Soviet Union undertakes big efforts and expensive measures to conserve and reproduce that species, and is thus interested in the rational exploitation of salmon stocks. To characterize those efforts he indicated three major directions of Soviet fishery institutions activities.

(a) To provide favourable conditions for natural reproduction of salmon: to this end, more than 1,000 inspectors of the Fish Protection Service enforce implementation of laws prohibiting rafting in northern rivers and pollution of those rivers by sewage waters from industrial enterprises. On USSR's northern rivers, where there are hydro-electric dams, fish passes of the staircase type are built to allow salmon to move upstream to spawning grounds.

(b) USSR undertakes large-scale artificial salmon-rearing programs in the Atlantic area. For that purpose, 7 fish-rearing plants have been built and are in operation now. In 1971, 1.7 million yearlings and 600,000 2- and 3-year-old salmon and downstream migrants were released from them into rivers. That work is to be continued. It is planned to release into rivers 950,000 yearlings and more than 1 million 2- and 3-year-olds in 1975.

(c) During the last 15 years a unique experiment has been carried out in the USSR on transplantation of Pacific salmon, in particular, pink salmon, into the North Atlantic. In recent years, 4.7 million young-of-the-year pink salmon, reared from the fertilized eggs, delivered by planes from the Pacific coast, are released into northern rivers annually. In 1972, 7 million fish are to be released. Every year a record is kept of the adult pink salmon returning to Soviet rivers. In 1971, 28,000 such fish were registered. Pink salmon in large numbers are entering rivers of other countries as well. The USSR is entitled to expect higher economic return on the funds and efforts our country contributes to reproduce salmon. However, a number of things hinder that, in particular the sea-salmon fishery. Due to understandable reasons, our country is not fishing for salmon at sea, considering it to be irrational.

And that determines the position of the Soviet delegation. The USSR is ready to support proposals to prohibit fishing for Atlantic salmon at sea. However, provided such a prohibition is impossible to implement, it is prepared to support measures directed towards strict limitation of that sea fishery on conditions equally applied to all ICNAF Members without exclusion. In this case, the USSR request no privileges, although it has a moral right to certain advantages. But, the USSR cannot agree to any measures of a discriminating character, like those adopted at the previous meetings of the Commission, which provided advantages to the countries intending to conduct sea fisheries for salmon. The USSR has made a pertinent reservation on that matter. He said that his delegation was prepared to think that the Canadian amendment was the most suitable, although there might be difficulties in accepting the date of 31 March 1973 but that this date could be altered.

The delegate of the Federal Republic of Germany said that his Government still held the view that the Convention does not allow the Commission to ban fishing on the high seas, that there was no evidence of salmon overfishing and that a ban would encourage and had indeed encouraged tendencies towards nationalization of the resources of the high seas in violation of the international principle of the freedom of the high seas. He said the four-party proposal was, with reluctance, acceptable for them because it was accepted--for other than biological or legal reasons--by the states mainly concerned, and that the Canadian amendment was not acceptable. He said that Fed.Rep. Germany does not fish for salmon in the ICNAF Area and does not intend to do so. He felt the draft resolution to effect the four-party proposal earlier than by the normal procedure was a dangerous step in this case, as the salmon matter was not as serious and urgent as the case for herring conservation where the same "early effecting" procedure was accepted.

The Portuguese delegate said that his country had no sea fishery for salmon and that it was interested in a solution to the salmon question which could be accepted by everyone. He felt that the four-party proposal was acceptable and suggested that paragraph 3 of this proposal be divided into two paragraphs, the second to start at "At the request ...". He also pointed out that paragraph 4 referred to a 12-mile zone where it was only necessary, in his opinion, to say inside the 3-mile Convention limit.

The US delegate recognized the confusion which might arise concerning the wording of paragraph 4. This language depends on the wording of the 1969 salmon proposal, which refers to waters "outside national fisheries limits". Thus, paragraph 4 depends on this. He said that the proposed division of paragraph 3 was acceptable.

The Romanian delegate reported no sea fishery for salmon and that his Government could agree to the four-party compromise proposal.

The Italian delegate also supported the compromise proposal.

The US delegate, in response to a question from the Portuguese delegate regarding use of the term "off Greenland" in paragraph 1, noted that this usage is a practical way of defining the present salmon fishery.

The Portuguese delegate asked that it be recorded that the boundary of the Convention Area is the 3-mile limit only.

The Chairman, then, with the concurrence of the delegates of the Member Countries, called for a vote on the Canadian amendment to the four-party proposal (Appendix I). Voting YES were Canada, France, Iceland, and USSR. Voting NO were Denmark, Fed.Rep. Germany, Italy, and Norway. ABSTAINING were Japan, Poland, Portugal, Romania, Spain, United Kingdom, and the United States, i.e., 4 Yes, 4 No, and 7 abstentions. The Canadian amendment was, therefore, defeated.

The Icelandic delegate suggested that paragraph 2 of the four-party proposal be amended to state that catches over the quota amount should be deducted from the quota amount for the following year, but that catches less than the quota amount should not be added to the quota amount for the following year.

The Chairman, with the approval of the Meeting, called for a vote on the proposed Icelandic amendment to the substance of paragraph 2 of the four-party proposal. Voting YES were Canada, France, Iceland, and USSR. Voting NO were Denmark and Portugal. ABSTAINING were Fed.Rep. Germany, Italy, Japan, Norway, Poland, Romania, Spain, the United Kingdom, and the United States. The Icelandic amendment was defeated by 4 Yes, 2 No, and 9 abstentions.

The Chairman then called for votes, first on the four-party proposal including changes approved by the Meeting (Appendix II), and second, on the draft resolution presented by the four parties (Appendix III).

Voting on the four-party proposal (Appendix II) was as follows: YES - Denmark, France, Fed.Rep. Germany, Iceland, Italy, Japan, Norway, Poland, Portugal, Romania, the United Kingdom, and the United States; NO - Canada; ABSTAINING - Spain and USSR. The four-party proposal as at Appendix II was thus accepted by the Meeting of Panels 1-5 by 12 Yes, 1 No, and 2 abstentions.

Voting on the draft resolution (Appendix III) was as follows: YES - Denmark, France, Italy, Japan, Norway, Poland, Romania, the United Kingdom, and the United States; ABSTAINING - Canada, Fed.Rep. Germany, Iceland, Portugal, Spain, and USSR. The draft resolution as at Appendix III was forwarded by the Meeting of Panels 1-5 to the Commission for consideration.

7. Salmon Tagging Experiment. The Chairman drew attention to the Report of the Joint Working Party on Salmon (Res.Doc. 72/32), and its appendix on plans for the Salmon Tagging Experiment at West Greenland. Mr B.B. Parrish (UK), Chairman of the Working Party, reviewed the plans for the experiment. The Canadian delegate drew attention to the possibility of poor returns of tags due to high mortalities of tagged fish as found from Pacific salmon taggings. He also questioned the high natural mortality rates used by the Working Party in its calculations. He drew attention to the much lower rates estimated for Baltic salmon.

Mr Parrish acknowledged the limitations of the tagging experiment and pointed out that the Working Party had used higher natural mortality rates than that for Baltic salmon because of the greater distances over which the Greenland salmon were subject to mortality.

The Chairman expressed best wishes for a successful experiment.

8. Under Plenary Agenda Item 22, Conservation of Herring, the Chairman drew attention to the draft report of the Special Commission Meeting on Herring held in Rome in January 1972 with its proposals for conservation of stocks in Subareas 4 and 5, and noted that Panel 4 would be reviewing a Canadian proposal for consideration by the scientists of the need for management of the herring stocks in Div. 4V and part of Div. 4W (Comm.Doc. 72/11).

9. Under Plenary Agenda Item 23, Conservation of Cod, the Chairman pointed out that the *ad hoc* Committee on Quota Allocation was considering proposals for cod conservation in Subareas 2, 3, 4, and 5.

10. There being no other business, the Joint Meeting of Panels 1-5 was recessed at 1245 hrs to reconvene at a date and time to be announced later.

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11. The Joint Meeting of Panels 1-5 was reconvened at 0930 hrs, 2 June, by the Chairman of the Commission, Mr K. Løkkegaard (Denmark). He drew attention to the draft report of the earlier session of the Joint Meeting of Panels 1-5. This was accepted by the delegates following the addition of "and that the said vessels would stop salmon fishing inside national fishing limits at Greenland as of 1 January 1976" to the end of paragraph 1 of Appendix II and the addition of drafting points from delegates.

12. The Chairman then drew attention to the 14 proposals for national allocation of catch quotas for cod, American plaice, yellowtail flounder, silver hake and red hake in portions of Subareas 2, 3, 4, and 5 which were worked out by the *ad hoc* Committee on Quota Allocation which was set up by the Commission at its Second Plenary Session (Proc. 10). The *ad hoc* Committee had met on 29, 30, 31 May and 1 June under the chairmanship of Mr A.J. Aglen (UK).

13. At the suggestion of the Chairman, the Joint Meeting of Panels 1-5 recessed at 1000 hrs in order that a joint meeting of Panels 2 and 3 (Proc. 11), and meetings of Panels 3 (Proc. 5), 4 (Proc. 6) and 5 (Proc. 7) could be reconvened to consider the *ad hoc* Committee's proposals.

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14. The Chairman reconvened the Joint Meeting of Panels 1-5 and thanked the Chairmen of the various Panels for their good efforts. The US delegate urged that governments with reservations to inspection of catch under the Joint Inspection Scheme withdraw those reservations. This was particularly important in view of the international regulations involving fish size. The Portuguese delegate stated his Government would withdraw its reservations in relation to those countries with which Portugal does not maintain diplomatic relations. The USSR delegate said his Government was studying the possibility of partial withdrawl of their reservation regarding inspection of catch and gear. The Romanian delegate said his Government was ready to accept inspection below deck.

15. The Chairman drew attention to a resolution relating to the 1972 proposals for the conservation of various fish stocks in Subareas 2, 3, 4 and 5 (Proc. 16, Appendix I), drafted after the format of the resolution relating to the 1972 proposals for the conservation of herring stocks in Subareas 4 and 5 and adopted by the Commission on 7 March 1972. The draft resolution related to the applicability of the regulations outside the Convention Area and inside territorial waters. He pointed out that, in accordance with the wishes of the delegates, the resolution would be presented to the Final Plenary Session for Commission approval.

16. The Joint Meeting of Panels 1-5 adjourned at 1245 hrs, 2 June.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2883
(A.a.4)

Proceedings No. 13
Appendix I

ANNUAL MEETING - JUNE 1972

Proposed Canadian Amendment
Proposal Regarding Conservation of Atlantic Salmon

by

Denmark, Norway, the United Kingdom, and the United States

1. That all Contracting Governments which are not bound by proposal number 1 adopted by the Commission on 6 June 1969, concerning the prohibition of salmon fishing in the Convention Area outside national fishing limits, consider accepting that proposal not later than 31 March 1973.

2. That notwithstanding the provision of paragraph 1, fishing for Atlantic salmon by local Greenland fishermen in the Convention Area off Greenland may be maintained at the approximate level of annual catches measured from 1964 through 1971 or less. The Commission has taken into account the statement made by the Danish Commissioner to the effect that catches taken by local Greenland fishermen within the 3-mile limit off West Greenland will be included in the said amount. At the request of any Contracting Government, a review of the status of the salmon stocks may take place within five years. Such review would take into account the need for conservation of the species as well as the special importance to local fishermen of the salmon fisheries and might lead to recommendations for adjustment of the catch level referred to in this paragraph.

3. That on the effective date of this proposal, the proposal number 1 adopted by the Commission on 4 June 1971 shall cease to be effective.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2883
(A.a.4)

Proceedings No. 13
Appendix II

ANNUAL MEETING - JUNE 1972

(1) Proposal regarding conservation of Atlantic salmon

by

Denmark, Norway, the United Kingdom, and the United States

Panels 1-5 recommend that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

"1. That the Contracting Governments take appropriate action to regulate the catch of Atlantic salmon, *Salmo salar*, by persons under their jurisdiction fishing in the Convention Area off Greenland so that the catch in round weight taken shall not exceed the amount listed:

	1972	1973	1974	1975
		(in metric tons)		
Denmark (Mainland and Faroe Islands)	800	600	550	500
Norway	300	225	210	195
Other Contracting Governments	10	10	5	5

it being expected that non-members of the Commission will catch not more than 10 metric tons in 1972 and 1973 and not more than 5 metric tons in 1974 and 1975. In establishing these quotas the Commission has taken into account the statement made by the Danish Commissioner to the effect that catches by mainland and Faroe Islands based vessels taken within the 3-mile limit off West Greenland will be included in the said quotas, and that the said vessels would stop salmon fishing inside national fishing limits at Greenland as of 1 January 1976.

"2. That catches differing from the amounts pursuant to paragraph 1 above in any year would be followed by an adjustment in the following year's catch.

"3. That notwithstanding the provision of paragraph 1, fishing for Atlantic salmon by local Greenland fishermen in the Convention Area off Greenland may be maintained so as to be at the approximate level of annual catches measured from 1964 through 1971 in round weight, which is estimated to be 1,100 metric tons. The Commission has taken into account the statement made by the Danish Commissioner to the effect that catches taken by local Greenland fishermen within the 3-mile limit off West Greenland will be included in the said amount.

"4. At the request of any Contracting Government, a review of the status of the salmon stocks may take place within five years. Such review would take into account the need for conservation of the species as well as the special importance to local fishermen of the salmon fisheries and might lead to recommendations for adjustment of the catch level referred to in the preceding paragraph.

"5. That Contracting Governments having coast lines adjacent to the Convention Area, take appropriate action to ensure the application of conservation measures within the 12-mile zones which would correspond in effect to the measures taken by Denmark (i.e., using the catch levels of 1969 as a base).

"6. That all Contracting Governments which are not bound by proposal number 1 adopted by the Commission on 6 June 1969, concerning the prohibition of salmon fishing in the Convention Area outside national fishing limits, consider accepting that proposal not later than 1 January 1976. The Commission has taken into account statements made by the Danish and Norwegian Commissioners to the effect that Denmark and Norway would adhere to that proposal not later than 1 January 1976.

"7. That the allocations in paragraphs 1 and 3 above are without prejudice to future allocations of catches for these or other stocks.

"8. That on the effective date of this proposal, the proposal number 1 adopted by the Commission on 4 June 1971 shall cease to be effective."

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2883
(A.a.4)

Proceedings No. 13
Appendix III

ANNUAL MEETING - JUNE 1972

Resolution regarding Conservation of Atlantic salmon

by

Denmark, Norway, the United Kingdom, and the United States

Panels 1-5 recommend the following resolution for adoption by the Commission:

The Commission

Noting Article IX, Article XII, and Article XIII of the Convention, 1949,

Having Considered and Adopted a proposal for the conservation and protection of Atlantic salmon,

Noting that non-members of the Commission have or may participate in the exploitation of Atlantic salmon in the Convention Area,

Being Aware of the time period before the proposal referred to above may enter into effect pursuant to the provisions of Article VIII of the Convention, as amended, and the desirability of taking appropriate steps for the implementation of measures for the conservation and protection of Atlantic salmon prior to the effective date of the proposal and the desirability of reducing the time period before the proposal takes effect,

1. Invites the attention of all Contracting Governments to the above matters,

2. Requests all Contracting Governments fishing for Atlantic salmon to anticipate the coming into effect of the above-mentioned proposal later in 1972 and to institute appropriate measures as soon as possible to ensure the effectiveness of the proposal when it becomes effective under the terms of the Convention,

3. Urgently requests all Contracting Governments to notify promptly, if possible before 1 August 1972, the Depositary Government of their acceptance of the above-mentioned proposal as well as of their willingness to be bound by it at an earlier date than provided under the normal procedure.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2884
(B.e.72)

Proceedings No. 14

ANNUAL MEETING - JUNE 1972

Report of Joint Meeting of Panels 4 and 5

Wednesday, 31 May, 0930 hrs

1. It was agreed that Ambassador McKernan (USA) would act as Chairman of the Joint Meeting of Panels 4 an d 5.

2. Dr A.W. May (Canada) was appointed Rapporteur.

3. It was agreed that the meeting would consider items on mesh regulation and on conservation of haddock which had been referred from Panel 4 and Panel 5.

4. Consideration of increase to 130-mm mesh size for regulated species. USA noted that as it appeared that Canada might object to a 130-mm mesh with respect to boats under 65 feet in length fishing in Div. 4X, USA might also find itself obliged to object because of domestic statutory reasons, and suggested that the problem might be solved by adopting the 130-mm mesh for regulated species in the Convention Area, excepting Div. 4X. USSR noted that the 130-mm mesh proposal was a conservation measure, and exceptions in Div. 4X were not consistent with the overall conservation philosophy of the Commission. However, USSR could accept a temporary exclusion for Div. 4X on the basis that the subject would be reviewed again next year, and in the meantime, urged countries which had difficulty in accepting their proposal for Div. 4X to consider doing so. Canada stated that notwithstanding the possible exception of Div. 4X from a general 130-mm mesh regulation, Canada would be prepared to apply such a regulation to all its vessels except those less than 65 feet in length. Panel 4

agreed to recommend

that the Commission transmit to the Depositary Government a proposal (21) for amendment of the international trawl regulation of the fishery for cod, haddock, witch, yellowtail flounder, winter flounder and American plaice in Subarea 4 by increasing the mesh size to 130 mm in the codend by 1 January 1974, with an exception for Div. 4X, subject to review at the 1973 Annual Meeting (Appendix I).

5. Conservation measures for haddock in Subareas 4 and 5. The Chairman referred to Comm.Doc. 72/18 and a US proposal in reference to the document which had been tabled at a meeting of Panel 5. Canada proposed that there be no change in the current regulations, but wished the meeting to consider a proposal for a closed area in Div. 4W. USA proposed that the Subarea 5 fisheries be closed, but could not contemplate a closure in Subarea 5 unless the fisheries in Divs. 4X and 4W were closed also. Canada agreed that total closures, to be enforceable would have to apply in both Subareas 4 and 5, but since this was not acceptable to Canada for Subarea 4, again suggested that the regulations for 1972 be continued in force for 1973, with consideration of a closed area in Div. 4W. USSR could not agree to a closed area in Div. 4W because of interference with other fisheries. Canada agreed to withdraw its proposal for a closed area and USA agreed to withdraw its proposal for closure of haddock fisheries in Subarea 5. It was noted that the global quotas now in force for 1972 are for haddock in Subarea 5 - 6,000 tons, Div. 4X - 9,000 tons, and Div. 4W - 4,000 tons. USA stated that it intended to introduce amendments to the closed area regulations in Subarea 5 at the Panel 5 meeting.

The Joint Panels 4 and 5

agreed to recommend

that the Commission transmit to the Depositary Government, proposal (18) for continuing the 1971 haddock quota regulation in Div. 4X of Subarea 4 without change for the year 1973 (Appendix II), proposal (19) for continuing the 1971 haddock quota regulation in Div. 4W of Subarea 4 without change for the year 1973 (Appendix III), and proposal (17) for continuing the 1971 haddock quota regulation in Subarea 5 without change for the year 1973 (Appendix IV) (see also Proceedings No. 7, Appendix VI, for proposal (16) for change to closed area boundary in Subarea 5).

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2884
(A.a.4)

Proceedings No. 14
Appendix I

ANNUAL MEETING - JUNE 1972

(21) Proposal for International Mesh Regulation of the Trawl Fishery for Cod, Haddock and Flounders in Subarea 4

Panel 4, in joint session with Panel 5, recommends that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

That paragraph 1 of the Trawl Regulations for Subarea 4 adopted at the Twenty-First Annual Meeting (Annual Proceedings, Vol. 21, 1970-71, page 31) and entered into force 1 January 1972, be replaced by the following, effective 1 January 1974, with the understanding that paragraph 1(a) of the Trawl Regulations adopted at the Seventeenth Annual Meeting (Annual Proceedings, Vol. 17, 1966-67, page 20) and entered into force on 1 January 1970 will follow and remain part of the new regulation, except that the Commission shall determine at the Twenty-Third Annual Meeting the effective date for the proposal to replace paragraph 1 of the aforesaid Trawl Regulations with respect to Division 4X of Subarea 4:

"1. That the Contracting Governments take appropriate action to prohibit (except as provided in paragraph 2) the taking of cod, *Gadus morhua* L.; haddock, *Melanogrammus aeglefinus* (L.); and flounders: witch, *Glyptocephalus cynoglossus* (L.); yellowtail, *Limanda ferruginea* (Storer); winter flounder, *Pseudopleuronectes americanus* (Walb.); and American plaice, *Hippoglossoides platessoides* (Fab.) in Subarea 4 by persons under their jurisdiction with trawl nets having in any part of the net other than the codend, meshes of dimensions less than 114 mm or 4-1/2 inches, and having in the codend of nets, meshes of dimensions of less than 130 mm or 5-1/8 inches measured by the ICNAF gauge specified below. These mesh sizes relate to manila twine netting when measured wet after use or the equivalent thereof when measured dry before use. The Commission, may on the basis of scientific advice as to selectivity equivalents, determine the appropriate mesh sizes when trawl nets made of materials other than manila are used or when seine nets are used."

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2884
(A.a.4)

Proceedings No. 14
Appendix II

ANNUAL MEETING - JUNE 1972

(18) Proposal for International Quota Regulation of the Fishery for Haddock in Division 4X of Subarea 4

Panel 4, in joint session with Panel 5, recommends that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

That paragraphs 1 and 5 of the Haddock Quota Regulation for Division 4X of Subarea 4 adopted at the Twenty-First Annual Meeting of the Commission (Annual Proceedings, Vol. 21, 1970-71, pages 33-34) and entered into force on 1 January 1972, be replaced by the following:

"1. That the Contracting Governments take appropriate action to regulate the catch of haddock, *Melanogrammus aeglefinus* (L.), by persons under their jurisdiction fishing in Division 4X of Subarea 4 so that the aggregate landings of haddock by vessels taking haddock in Division 4X of Subarea 4 in the year 1973 shall not exceed 9,000 metric tons.

"5. That the Contracting Governments take appropriate action to prohibit persons under their jurisdiction from using fishing gear in a manner capable of catching demersal species during March, April and May of 1973 in that part of Division 4X of Subarea 4 bounded by straight lines connecting the following coordinates in the order listed:

65°44'W, 42°04'N
64°30'W, 42°40'N
64°30'W, 43°00'N
66°32'W, 43°00'N
66°32'W, 42°20'N
66°00'W, 42°20'N."

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Proceedings No. 14
Appendix III

ANNUAL MEETING - JUNE 1972

(19) Proposal for International Quota Regulation of the Fishery for Haddock in Division 4W of Subarea 4

Panel 4, in joint session with Panel 5, recommends that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

That paragraph 1 of the Haddock Quota Regulation for Division 4W of Subarea 4 adopted at the Twenty-First Annual Meeting of the Commission (Annual Proceedings, Vol. 21, 1970-71, pages 34-35) and entered into force 1 January 1972, be replaced by the following:

"1. That the Contracting Governments take appropriate action to regulate the catch of haddock, *Melanogrammus aeglefinus* (L.), by persons under their jurisdiction fishing in Division 4W of Subarea 4 so that the aggregate landings of haddock by vessels taking haddock in Division 4W of Subarea 4 in the year 1973 shall not exceed 4,000 metric tons."

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Serial No. 2884
(A.a.4)

Proceedings No. 14
Appendix IV

ANNUAL MEETING - JUNE 1972

(17) Proposal for International Quota Regulation of the Fishery for Haddock in Subarea 5

Panel 5, in joint session with Panel 4, recommends that the Commission transmit to the Depositary Government the followin g proposal for joint action by the Contracting Governments:

That paragraph 1 of the Haddock Quota Regulation for Subarea 5 adopted at the Twenty-First Annual Meeting (Annual Proceedings, Vol. 21, 1970-71, pages 32-33) and entered into force on 1 January 1972, be replaced by the following:

"1. That the Contracting Governments take appropriate action to regulate the catch of haddock, *Melanogrammus aeglefinus* (L.), by persons under their jurisdiction fishing in Subarea 5 so that the aggregate annual catch of haddock by vessels taking haddock in Subarea 5 in the year 1973 shall not exceed 6,000 metric tons."

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2885
(B.u.72)

Proceedings No. 15

ANNUAL MEETING - JUNE 1972

Report of Meeting of STACTIC

Thursday, 25 May, 1500 hrs
Wednesday, 31 May, 1200 hrs

1. The meeting of the Standing Committee on International Control (STACTIC) was called to order by the Commission Chairman, Mr K. Løkkegaard (Denmark). Captain J.C.E. Cardoso (Portugal) was elected Chairman of STACTIC. Representatives from all Member Countries were present.

2. Rapporteur. Mr William G. Gordon (USA) was appointed Rapporteur.

3. Adoption of Agenda. The provisional agenda, as circulated, was adopted with minor revisions.

4. Terms of Reference for STACTIC. The Chairman noted that Comm.Doc. 72/10, as redrafted by Captain Cardoso (Portugal), Mr W.L. Sullivan, Jr (USA) and the Executive Secretary, was unanimously approved by the First Plenary Session (Proc. 9, Appendix I).

5. Scheme of Joint Enforcement.

(a) Review of Operation of Scheme, 1 July 1971-30 June 1972. The Chairman requested a report from each Member Country on their participation in the International Inspection Scheme. A summary of each Member Country's statement follows:

(i) Canada. Have limited resources and are not yet fully equipped to participate in the Scheme. Will be ready to participate fully next year.
(ii) Denmark. Limited capacity to participate in Scheme. Expect to be ready to inspect next year.
(iii) Federal Republic of Germany. Introduced Scheme on 1 February 1972 and inspectors recently have been nominated. Have not yet carried out inspections. German nationals are now subject to inspection by foreign inspectors.
(iv) France. Have nominated one inspector and named ship on board of which inspector will embark. Prepared to accept inspections.
(v) Iceland. Presently have limited capacity to participate in Scheme. Expect to be ready within next year.
(vi) Italy. Not in position to answer.
(vii) Japan. Named three inspectors to participate in Scheme for 1972. One inspector was on duty aboard commercial trawler at a time. No infringements were noted. Expect to continue same effort for 1973.
(viii) Norway. Have joined Scheme. No inspection vessels are available and will probably not inspect this year.
(ix) Poland. Have joined Inspection Scheme. As yet not able to provide special inspection vessel. Have nominated international inspectors for Scheme.
(x) Portugal. Have nominated one inspector and named ship where inspector will be stationed. Prepared to accept inspections and will inspect foreign nationals.
(xi) Romania. Expects to participate in Scheme 1 January 1973. Name of inspectors will be forwarded soon.
(xii) Spain. Inspector will be placed aboard commercial fishing vessel. Name of inspector and vessel will be forwarded to ICNAF.
(xiii) USSR. Have been prepared to participate since 1 July 1971. Have allowed inspections aboard commercial vessels and are inspecting foreign nationals.
(xiv) UK. Have implemented Scheme. Will inspect others only on intermittent schedule.
(xv) USA. Participated in Scheme since 1 August 1971. Since August 1971 have inspected vessels from participating nations. Presently several inspectors and vessels are in Convention Area.

(b) Review of Report of NEAFC Administrators and Inspectors Meeting, Lisbon, March 1972 (Comm.Doc. 72/21). The Chairman reviewed the meeting and commented on the comparison of the NEAFC and ICNAF Questionnaires. Several revisions and additions to the ICNAF Questionnaire were noted and approved. The US delegate requested and was permitted the opportunity to prepare a draft providing greater compatibility between the

ICNAF and NEAFC Report of Inspection and Questionnaire for later review and approval.

The Chairman strongly suggested that only reports indicating infringements should be forwarded to the Executive Secretary. This proposal was accepted by the Committee.

6. Statement by the Portuguese Delegation re Withdrawal of their Reservation as Regards International Control (Comm.Doc. 72/28). The Portuguese delegate stated his country's intention to withdraw its reservation as regards international control. The USSR delegate noted that they were prepared to accept reciprocal inspection. The Romanian delegate said his country was ready to accept inspectors from participating countries on their vessels. The Committee accepted the Portuguese statement.

7. Revised Questionnaire from Inspector to Skipper and Report of Inspection. The Chairman requested consideration of the revisions proposed by the US delegate. Minor revisions were noted and incorporated in the appropriate forms.

The US delegate reviewed his country's position regarding the intent of these changes. He pointed out that revision of the Questionnaire from Inspector to Skipper under the Scheme of Joint Enforcement includes the words "appear to be" in several places. See Revised Questions 26-27. He stated that the understanding of the US delegation was that these changes, and other word changes made to increase the parallelism between the ICNAF and NEAFC Questionnaires do not carry any implication with respect to the status of the inspector. With particular attention to the changes to the two indicated questions, he stated that the position of his delegation was that insertion of the "appearance" language was not intended to suggest a diminution of the status of the inspector in any sense. The US delegate indicated his belief that this was the understanding of the entire Committee when the changes were made, and expressed his hope that the presentation of these views in this more formal manner would help to preserve this understanding for the future.

The Committee

recommended

that the revised Questionnaire and Report of Inspection (Appendix I) be adopted by the Commission.

8. Need for Amendments (Agenda Item 6 (c)). The Chairman recognized the statement of the USA regarding withdrawal of apparently improper nets from use by application of a seal by inspectors (Appendix II). After some discussion by the delegates, it was agreed that the intent of the Scheme was not to confiscate fishing gear but to note apparent infringements for possible later action by the flag state. The Committee agreed that all participating nations review this issue with the view to possible further discussion at the next Annual Meeting.

The US delegate noted that the national allocation scheme for herring called for inspection of fish on board and suggested an amendment to the Report of Inspection for this purpose. The Chairman suggested that the outcome of this Annual Meeting might require other changes and that an inspector from a participating nation could best report his findings during the current year in the section entitled "Comments and/or observations by Inspector" in the Report of Inspection. He further suggested that the Committee should consider the matter further at the next meeting. The USSR delegate reviewed their reservation regarding inspection of the catch. He noted that when reservation was made, ICNAF conservation measures dealt only with mesh size. As conservation measures are now changing, he stated that the USSR is studying partial withdrawal of their previous reservation concerning inspection of fish on the deck. The Romanian delegate stated that they expected to fully participate in the Scheme beginning 1 January 1973 and that Romania would withdraw their reservation at that time. The US delegate noted that the herring conservation scheme called for member nations to report to the Executive Secretary at such time as the specialized fishery for herring by the nationals ceased. Such reports of closure would be available to participating nations for use by their inspectors. The Chairman suggested that inspection be continued on a modest basis providing time to work out problem areas.

9. Annual Returns of Infringements, 1971 (Comm.Doc. 72/4). After clarifying comments from the USSR delegate and the Canadian delegate, the Committee adopted the Report.

10. The Committee received from the US delegation a draft recommendation on Returns of Infringements to be studied for possible adoption at the 23rd Annual Meeting (Appendix III).

In view of lack of time to study the standard logbook, the Committee agreed to urge the members to consider all the material available and to forward to the Secretariat any remarks they would wish to make on the subject.

11. As there was no other business, the Committee agreed to meet at the next ordinary meeting of the Commission and to approve the report by the traditional system of circulating the draft report for approval.

12. The meeting adjourned at 1300 hrs, 31 May.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2885
(B.u.72)

Proceedings No. 15
Appendix I

ANNUAL MEETING - JUNE 1972

Proposed Revised Questionnaire from Inspector to Skipper and Report of Inspection

The attached documents are a revised copy of the Report of Inspection and the Questionnaire from Inspector to Skipper (Annex I), to reflect the changes discussed at the first session of the STACTIC Meeting. In addition to those changes, two minor amendments are incorporated in this draft. See Questions 8, 36, where clarifying new matter is in brackets ([]).

As previously indicated, some difficulty has been experienced by United States inspectors, due to the predictable tendency of Masters of boarded vessels to attempt to correlate the numbering systems on the Questionnaire and on the Report Form. Accordingly, on the attached copy of the Questionnaire, the numbers used to designate the blocks have been deleted. Using this form, much of the difficulty could be removed if, as indicated on the revised Questionnaire draft, the questions were couched in language which would refer to a particular place on the Report Form to which the inspector could draw the attention of the Master. See Questions 8, 10, 33, 34, 35, and 37. Use of the "in the space I am indicating" format should be an improvement, and is recommended.

A proposed change to the Report Form (Annex II) is also incorporated, at the bottom of the obverse of the Form, to provide a tabular presentation of the data by species.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

SCHEME OF JOINT ENFORCEMENT

QUESTIONNAIRE FROM INSPECTOR TO SKIPPER

1. I am an Inspector under ICNAF. Here is my identity card. I would like to inspect your nets/and catch.
2. Who is the Master of this vessel?
3. Please give me your name.
4. I require your collaboration with the examination of the nets, the catch and documents (nationality papers/logbooks). If you do not give your collaboration as I have requested, I will report your refusal to your flag state.
5. Please check that the time is ..... GMT.
6. I am reporting your position as .....° lat .....° long at ..... GMT. Do you agree?
7. Would you like to check your position with my instruments on board the inspection ship?
8. Do you now agree [that is] your position? If not, you should write your estimated position on the Report Form in the space I am indicating.
9. Please show me the documents establishing the nationality of your vessel and logbooks, if any.
10. Please write down the name and address of the owners of this vessel in the space I am indiating on the Report Form.
11. Are you fishing for regulated species?
12. Are you fishing for industrial purposes?
13. I agree (Yes).
14. I do not agree (No).
15. Are you aware that you are fishing within a closed area?
16. Where are (a) your working spaces, (b) your fish-holds?
17. Do you use any net attachment? If so, what type? Please write it down in the space I am indicating.
18. Please switch on these lights.
19. I wish to measure that net.
20. Show me the other nets you have on board.
21. Show me your net gauge, if any.
22. Ask your men to hold that net so that I can measure it.
23. Please make that dry net wet for ten minutes under water.
24. I have inspected ..... meshes in this net.
25. See that I have recorded accurately on the Form in the space I am indicating the width of the meshes I have measured.
26. I have found the average width of the meshes I have measured in that net is ..... mm. This appears to be below the minimum applicable mesh size, and will be reported to your flag state.
27. I have found net attachments which appear to be illegal. This will be reported to your flag state.

28. I shall now affix the identification mark to this net attachment which is to be surrendered to a fisheries inspector of your flag state at his demand.

29. I wish to inspect your catch. Have you finished sorting the fish?

30. Will you please lay out those fish?

31. I have found ..... undersized fish in the number I inspected. I shall report this to your flag state.

32. I have found no infringement of the regulations and I will so report to your flag state.

33. I have recorded the infringement to which I drew your attention in my report. You may make your observations in your own language if you so wish in the space I am indiating on the Report Form.

34. Do you wish to make any observations concerning this inspection? If so, please do so in your own language in the space I am indicating on the Report Form on which I have set out my findings. Please sign any observations.

35. Do you have any witnesses who wish to make observations? If so, they may do so in their own language in the space I am indicating on the Report Form.

36. Please certify the photographs listed in the report, by adding the date and [your] signature.

37. Please sign the report on the last line.

38. I am leaving. Please check that the time is ..... GMT.

39. Thank you. Bon voyage.

International Commission for the Northwest Atlantic Fisheries – Scheme of Joint Enforcement

Report of Inspection

(Inspector: Please use block letters)

AUTHORIZED INSPECTOR

Name ..... Nationality .....

Name and identifying letters and/or number of ship carrying him .....

INFORMATION ON VESSEL INVOLVED

Nationality .....

Vessel's name and registration .....

Master's name .....

Owner's name and address .....

Position as determined by inspector at ..... GMT, latitude ..... longitude .....

Position as determined by fishing vessel's master at ..... GMT, latitude ..... longitude .....

DATE AND TIMES THE INSPECTION COMMENCED AND FINISHED

Date ..... Time arrived on board ..... Time of departure .....

FACTS RESULTING FROM INSPECTION

	1st Net	2nd Net	3rd Net	4th Net	5th Net
Type of net (trawl net, seine net, etc.)					
Material (chemical category, if possible)					
Single or double twine					
Average mesh size of each net measured					
On or below deck					
Type of net attachment inspected Remarks					
Average mesh size of gear measured					

NET INSPECTIONS – SAMPLES OF 20 MESHES OF THE CODEND MEASURED IN MILLIMETRES

Codend

	Width (mesh size)																				Average Width	Legal Size
1st Net																						
2nd "																						
3rd "																						
4th "																						
5th "																						

Chafer

	Width (mesh size)																				Average Width	Legal Size
1st Net																						
2nd "																						
3rd "																						
4th "																						
5th "																						

Statements showing to which nets and net attachment, if any, identification marks were attached by inspecting officer .....

.....

Statements of photographs taken with description of subjects (photographs to be attached to copy of report submitted to flag state). .....

.....

.....

.....

RESULT OF INSPECTION OF FISH OBSERVED ON BOARD

List of species taken in last tow	Approximate weight or percentage of each

Comments and/or observations by inspector .....

Statements by witness(es) .....

Signature of Witness(es) .....

Signature of Authorized Inspector .....

Comments and/or observations by the master of the vessel .....

Signature of the Master .....

(He should be the last to sign. All other people to sign in his presence.)

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2885
(B.u.72)

Proceedings No. 15
Appendix II

ANNUAL MEETING - JUNE 1972

US Statement Respecting Withdrawal of Improper Nets from Use by Application of Seal by Inspectors

The US delegation invites the attention of the Committee to the provisions of the Scheme of Joint International Enforcement relating to the inspection and marking of nets by Inspectors. The Scheme, at present, authorizes the Inspector to "affix an identification mark..... to any net which appears to have been used in contravention of the Commission's recommendations....." Paragraph 11. Question has been raised as to whether it was the intention of the drafters to authorize the inspector to apply the seal device to the contravening portion of the net in such a manner as to prevent the fishing vessel Master from using the net until it had been made available to Flag State authorities for examination.

Such withdrawal of the net from use during the remainder of the particular voyage could work a hardship on vessels, depending upon the nature of the voyage and the equipment of the vessel. Withdrawal could be viewed as inappropriate where the same vessel might desire to use the gear in an area or for a species where the gear was not in violation of the Convention.

Factors suggesting the desirability, on the other hand, of withdrawal of the net from use include the perspective that continued use of a net which violates the Commission's recommendations, is to be discouraged in the interest of advancing the Convention's conservation objectives. Also, if the net is returned to use after the seal is affixed, there is often a substantial possibility that the seal will become dislodged due to such use. For purposes of punitive action by the Flag State, this would mandate reliance on photographic evidence and live testimony as to the illegal feature of the net.

The US delegation, having reviewed the Scheme and the proceedings of the 21st Annual Meeting of the Commission at Halifax, N.S., would solicit the views of other delegations concerning their understanding of the intent of the Scheme in this regard. This delegation's position on this important question is that such removal is not contemplated by the Scheme in its present form. However, the USA would urge that all nations participating in the Scheme review in the coming year the juridical and practical sides of the issue, with a view to further discussion and possible change of the Scheme at the 23rd Annual Meeting next year.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2885
(B.u.72)

Proceedings No. 15
Appendix III

ANNUAL MEETING - JUNE 1972

US Proposed Recommendation on Annual Returns of Infringements

Noting that the purposes of the Convention will be best served by voluntary compliance by fishermen with the Commission's recommendation, and

Recognizing that such voluntary compliance will minimize the inconvenience necessarily associated with at-sea boardings under the Scheme of Joint Enforcement, and

Believing that the level of voluntary compliance will increase as fishermen of all Contracting Governments gain confidence in the vigor with which infringement reported by Inspectors are pursued,

The Committee

recommends

that, in addition to the present Annual Returns of Infringement summary, each Contracting Government to which an infringement report is sent originating from an Inspector of another Contracting Government, transmit to the Commission Secretariat and to the reporting Inspector's Government a timely report of the specific judicial or administrative disposition of each infringement.

The US delegation would urge that all nations participating in the Scheme review in the coming year the practical side of this proposal with the view toward further discussion and possible adoption at the 23rd Annual Meeting.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2886
(B.b.72)

Proceedings No. 16

ANNUAL MEETING - JUNE 1972

Report of the Third Plenary Session

Friday, 2 June, 1400 hrs

1. The Chairman, Mr K. Løkkegaard (Denmark), opened the meeting. Representatives of all Member Countries with Observers were present.

2. The Report of the Ceremonial Opening (Proc. 2) was accepted.

3. The draft report of the Proceedings of the Special Commission Meeting on Herring, Rome, January-February 1972 was approved. The US delegate reported that the 1972 herring proposals were still not in effect and requested that those governments which have not yet accepted the proposals might do so as soon as possible. The Portuguese delegate said that he would do his best to speed up the procedure. The Polish delegate explained that acceptance was slow only for procedural reasons and that the Polish herring quotas had already been divided among their fishing companies and were being implemented. The Romanian delegate said that his government was in the process of accepting the proposals but that it considered their quota was quite low.

4. The Report of Panels 1-5 (Proc. 13) was presented. Section 6 of the Report "Conservation Measures for Atlantic Salmon in the Convention Area" was examined carefully and the Plenary prepared for a vote on the four-party proposal (1) for phasing out the high seas salmon fishery off West Greenland by 1 January 1976 (Proc. 13, Appendix II) and the resolution for early implementation and bringing into force of the four-party salmon proposal (Proc. 13, Appendix III). Voting on the four-party proposal was as follows: YES - Denmark, France, Fed.Rep. Germany, Iceland, Italy, Japan, Norway, Poland, Portugal, Romania, Spain, UK, and USA; NO - Canada; ABSTAINING - USSR. The four-party salmon proposal as at Proceedings No. 13, Appendix II, was thus adopted by the Plenary. Voting on the salmon resolution was as follows: YES - Canada, Denmark, France, Iceland, Italy, Japan, Norway, Poland, Romania, Spain, UK, and USA; ABSTAINING - Fed.Rep. Germany, Portugal, and USSR. The salmon resolution was thus adopted by the Plenary. The Report of Panels 1-5 was approved.

5. The Chairman asked the delegates to consider the draft Resolution Relating to 1972 Proposals for the Conservation of Various Stocks in Subareas 2, 3, 4 and 5 regarding applicability of regulations outside the Convention Area and inside territorial waters (Appendix I). The draft resolution was read by the Chairman and a vote was taken on the resolution which gave the following results: YES - Canada, Denmark, France, Fed.Rep. Germany, Italy, Japan, Poland, Portugal, Spain, UK, USSR, and USA; ABSTAINING - Iceland. The resolution as at Appendix I was adopted by the Plenary.

6. The Report of Panel 2 (Proc. 4) was presented by the Chairman, Mr R. Letaconnoux (France), and adopted without change.

7. The Report of Panel 1 (Proc. 3) was presented by the Chairman, Dr D. Booss (Fed.Rep. Germany), and adopted without change.

8. The Report of Panel A (Seals) (Proc. 8) was presented by the Chairman, Mr O. Lund (Norway), and adopted without change.

9. The Report of Panel 4 (Proc. 6) was presented by the Chairman, Captain J.C.E. Cardoso (Portugal). The Icelandic delegate said that his government was of the opinion that the coastal states had the prime responsibility for the marine resource and the prime right to use these resources, therefore, he must reserve his approval of the quota system and the so-called package deal. However, he said that he would not vote against the quota proposals. The Plenary adopted the Panel Report including the proposal (5) for quota regulation of cod in Subdiv. 4Vs and Div. 4W of Subarea 4 (Proc. 6, Appendix III).

10. The Report of STACFAD (Proc. 12) was presented by the Chairman, Mr Wm.L. Sullivan, Jr (USA). Following discussion of the location and duration of the mid-term meetings of the assessment scientists and the Commission, the Plenary agreed that the Chairman and Executive Secretary should arrange for the time and place of the mid-term meetings, having in mind the possibility of again holding them at FAO, Rome, over the

same time period at the end of January-early February in 1973.

The delegate of Norway raised the question of whether the $500 Commission membership fee should be increased and the panel membership payments decreased. Following a suggestion by the US delegate, the Plenary agreed that the Executive Secretary should solicit the views of the Contracting Governments regarding increase of the $500 Commission membership fee.

The matter of financial support for the IABO/FAO/ICES Symposium on the Early Life History of Fish, Oban, Scotland, 17-23 May 1973 was raised. Due to the conflict in timing with the 1973 STACRES meeting preparations and the Commission's mounting financial commitments, the Plenary agreed that the Commission was not able to support the Symposium financially.

The Plenary adopted the STACFAD Report including the necessary changes.

11. Under Plenary Agenda Item 11, Status of Commission Proposals, the Chairman drew attention to Comm. Doc. 72/3. The US delegate reported that Japanese adherence to the Protocol relating to Amendments to the Convention had been deposited on 1 June 1972. The Canadian, Romanian and Spanish delegates said that approval was going forward. The delegates of Poland, Portugal and Romania said that acceptances of the 1972 herring proposals were in process.

The Plenary took note of the status of proposals.

12. The Report of STACTIC (Proc. 15) which included consideration of Plenary Agenda Items 12-16 on trawl regulations and international control, was presented by the Chairman, Captain J.C.E. Cardoso (Portugal). The Plenary adopted the STACTIC Report.

13. The Report of Panel 3 (Proc. 5) was presented by the Chairman, Mr A. Volkov (USSR). The delegate of Iceland repeated his country's reservation regarding catch quotas and the package deal. The Plenary adopted the Panel Report without change.

14. The Report of Joint Panels 2 and 3 (Proc. 11) was presented by the Chairman, Mr A. Volkov (USSR), and adopted without change, including proposals (2), (3) and (4) for cod quota regulation in Divs. 2J, 3K-L, Subdiv. 3Ps, and Divs. 3N-O (Proc. 11, Appendices V, VI and VII respectively), proposal (8) for American plaice quota regulation in Divs. 3L-N-O (Proc. 11, Appendix VIII), and proposal (9) for yellowtail flounder quota regulation in Divs. 3L-N-O (Proc. 11, Appendix IX).

15. The Report of Panel 5 (Proc. 7) was presented by the Chairman, Mr D. McKernan (USA), and adopted without change, including a proposal (23) for scallop regulation (Proc. 7, Appendix IV); a proposal (22) for 130-mm mesh size (Proc. 7, Appendix V); a proposal (16) for change in closed area boundary for haddock (Proc. 7, Appendix VI); a proposal (15) for red hake quota regulation of the Southern New England stock (Proc. 7, Appendix VII); proposals (12), (13) and (14) for silver hake quota regulation in Div. 5Y (Proc. 7, Appendix VIII), in Subdiv. 5Ze (Proc. 7, Appendix X), of the Southern New England stock (Proc. 7, Appendix IX); proposals (10) and (11) for yellowtail flounder quota regulation east of 69°W (Proc. 7, Appendix XII) and west of 69°W (Proc. 7, Appendix XIII); and proposals (6) and (7) for cod quota regulation in Div. 5Y (Proc. 7, Appendix XV) and in Div. 5Z (Proc. 7, Appendix XIV).

16. The Report of Joint Panels 4 and 5 (Proc. 14) was presented by the Chairman, Mr D. McKernan (USA). At the request of the US delegate, the Plenary took note of the agreement in the meetings of the *ad hoc* Committee on Quota Allocation that Member Countries of the Commission, except USA and Canada, have no intention of fishing for haddock in Subareas 4 and 5. The Plenary adopted the Joint Panel Report without change, including a proposal (21) for 130-mm mesh size in Subarea 4 (Proc. 14, Appendix I); proposal (18) for haddock quota regulation in Div. 4X (Proc. 14, Appendix II); proposal (19) for haddock quota regulation in Div. 4W (Proc. 14, Appendix III); and proposal (17) for haddock quota regulation in Subarea 5 (Proc. 14, Appendix IV).

17. The Report of STACRES (Proc. 1 with addendum) was presented by the Chairman, Dr A.S. Bogdanov (USSR), and adopted.

Both the Canadian and US delegates drew attention to the Report of Statistics and Sampling Subcommittee (Proc. 1, Appendix IV) and to the Reports of Panels, all of which urge that better biostatistical data are required as a basis for reliable scientific assessment and sound advice to the Commission on management of the Northwest Atlantic fish stocks.

It was also pointed out that the NEAFC Special Meeting at the Level of Ministers, Moscow, December 1971, had agreed on the importance of

(a) extending the range and scope of fisheries research,
(b) increasing cooperation in joint scientific programs, and
(c) improving the supply of statistics by Member Countries to the scientific bodies concerned.

Also, the ICES Liaison Committee Report to NEAFC 1972 contained an urgent plea for better biostatistical reporting. The Plenary, having recognized these problems and the need for greater effort in their solution as urged by the Panels and STACRES, strongly urges

(a) that Member Countries make every effort to greatly improve the coverage, accuracy and speed of reporting of national statistics and to extend the biological sampling programs,
(b) that Member Countries give strong support to programs designed to obtain estimates of stock size independent of catch and effort data, e.g. acoustic surveys and tagging experiments,
(c) that Member Countries give strong support in research vessel time and effort to programs designed to give a reliable estimate of future recruitment to the fishery, e.g. larval, O-group and groundfish surveys.

18. Under Plenary Agenda Item 29, Report of the Fourth Meeting of ICES/ICNAF/IOC Coordinating Group for North Atlantic Oceanography, the Executive Secretary drew attention to Comm.Doc. 72/7. He said that the Group was continuing to exchange information in order to prevent overlap in programs. The Report was noted by the Plenary.

19. Under Plenary Agenda Item 30, Reports of Meetings, the Chairman pointed out that reports were available from NEAFC (Comm.Doc. 72/30), from ICES (Res.Doc. 72/34), and from OECD (Comm.Doc. 72/27). Mr J. Gulland, the Observer from FAO, spoke briefly congratulating the Commission on its rapid progress in establishing management measures and emphasized the need for better statistics and sampling data. Mr Sv.Aa. Horsted, the Observer from ICES, stressed the continued good cooperation and collaboration between the two international agencies.

20. The Report of the First Plenary Session (Proc. 9) was presented and adopted without change.

21. The Report of the Second Plenary Session (Proc. 10) was presented and adopted without change. The Commission noted with satisfaction that with the help of the *ad hoc* Committee on Quota Allocation, which was set up at the Second Plenary Session under the chairmanship of Mr A.J. Aglen (UK), agreement had been reached during the meeting on the allocation among Contracting Governments of global catch limits for seventeen different fish stocks in the Convention Area. The *ad hoc* Committee had agreed that there should be no record of its deliberations, but its conclusions are embodied in the recommendations on quotas put forward by the appropriate Panels and adopted by the Commission.

22. Under Plenary Agenda Item 38, Other Business, the Chairman drew attention to the resignation of Mr R.A. Lagarde (France) as Vice-Chairman of the Commission and from the French Government service, to become Executive Secretary of the International Commission for South-east Atlantic Fisheries (ICSEAF). He expressed the best thanks of the Commission for Mr Lagarde's good efforts on behalf of the Commission and its work over the past ten years and wished him success in his new work. The delegate of France, Mr J.L. Touya, said how much he regretted the loss of Mr Lagarde from the French fisheries service and wished him well.

Following this, Mr M. Fila (Poland) was unanimously elected Vice-Chairman of the Commission to replace Mr Lagarde.

The Canadian delegate, speaking for all the meeting participants, thanked the Chairman, Mr K. Løkkegaard, for his able handling of a very complicated and difficult meeting. Mr Løkkegaard, in response, said he felt much more at ease as a Danish delegate where he could be more involved in the discussions. He said that this had been a historic meeting, that a good start had been made but that continued hard work was necessary to maintain wise use of the Northwest Atlantic fish stocks.

23. There being no other business, the Chairman declared the Twenty-Second Annual Meeting adjourned at 1615 hrs.

NOTE: PLEASE SUBSTITUTE THIS PAGE FOR PAGE 3 OF PROCEEDINGS NO. 16 OF THE 1972 PROCEEDINGS OF THE 22ND ANNUAL MEETING.

3 October 1972 ICNAF Secretariat

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2727
(B.t.)

Proceedings No. 2
Appendix II

SPECIAL MEETING ON HERRING - JANUARY-FEBRUARY 1972

Agenda

1. Opening by Chairman of Commission, Mr K. Løkkegaard
2. Adoption of Agenda
3. Election of Rapporteur
4. Report from Mid-Term Meeting of Assessment Subcommittee on Herring, FAO, Rome, 24–25 January 1972 (see 1971 Meeting Proceedings No. 13, paragraph 11 and No. 16, paragraph 4)
5. Possible conservation actions
6. Other business

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2727
(B.t.)

Proceedings No. 2
Appendix III

SPECIAL MEETING ON HERRING - JANUARY-FEBRUARY 1972

Address by Mr F.E. Popper, Assistant Director-General (Fisheries), FAO, to ICNAF Special Meeting on Herring - Rome, 31 January 1972

Mr Chairman, distinguished Commissioners, ladies and gentlemen,

It is my pleasant duty to welcome you on behalf of the Director-General to FAO. We are honoured and pleased that the Commission has accepted FAO's invitation to hold this important special session at our Headquarters. Honoured because your Commission is one of the oldest and at the same time one of the most active of the regional bodies tackling the growing problem of the management of fishery resources which is becoming of greater and greater concern to governments and to industry. We are pleased because your presence here testifies to our mutual desire to continue and further enhance the close cooperation between our two organizations which has existed for these past twenty years especially in those essential steps towards management, the assembly of statistics and stock assessment. Although this is the first time the Commission has met here, we have had the pleasure of hosting the large Environmental Symposium organized by you in 1964, and your Assessment Subcommittee has met in this building in 1965, and again, on our Department of Fisheries' home ground, last week.

I can say with confidence that this collaboration between your Commission and the Department of Fisheries at FAO has been mutually beneficial. I hope that it will not only continue so but that we will find even better ways and wider areas for our collaboration. I can assure you of our willingness to help you and indeed all similar bodies to the best of our ability and that we would welcome suggestions from you collectively and individually. May I in this context extend a warm invitation to all participants in this session to visit my Department's offices, to discuss matters of mutual interest with members of the staff and to inform themselves about our activities.

Having said this much in - as it were - my official capacity, may I interject a purely personal remark? I would like to tell you how happy I am to have this opportunity, so soon after assuming my new office, to speak before the most distinguished gathering of fishery administrators and scientists one could wish for and which includes also a gathering of so many old friends.

Mr Chairman, honour and pleasure are, however, not the only emotions I feel at this moment. There is also concern and even apprehension. As you, Mr Chairman, pointed out so clearly when opening the session this morning, this is a critical time for world fisheries. Never was there greater need to make the most of the living resources of the Oceans, but also never was there as great a danger of misusing them as there is today. It is clear, I think, to most people concerned with these issues that more effective means must be employed quite urgently to ensure the full and rational utilization of the world's fishery resources; but as yet we are not as close to agreement as we ought to, on what these means should be. While many people believe that what is most necessary is for individual governments to assume more responsibility for, and more power over fisheries, in wider areas off their shores, many people also think that inter-governmental bodies such as yours must play an essential part in world fisheries and must be strengthened and be made more effective to this end.

I personally feel, Mr Chairman, that these two approaches are by no means irreconcilable and I have been strengthened in this feeling by what I have heard from people concerned with these questions in a number of countries, including those with whom I have talked during my travels in Africa from which I have just returned. There undoubtedly could be a role - an important one - for international commissions in the regime of world fisheries, whatever its basis in international law might be. The question is whether the commissions are, or will be, capable of playing that role. About this there is real and, I am afraid, growing doubt and even scepticism in many people's minds. If this doubt is to be dispelled the commissions, yours included, must demonstrate their ability to deal in an effective and timely manner with the problems before them. From this point of view, your work this week assumes a significance far beyond the immediate problem that you are tackling, important though it is.

Mr Chairman, I have spoken of your Commission as one of the most active. Its record is impressive. Your Commission has introduced, as the need became established at intervals during its existance, mesh

regulations for many of the most important fisheries in its area. It has also recently introduced catch quotas for haddock and yellowtail flounder. The latter stocks are now so small that only two countries are presently to have any substantial concern in their exploitation. This week you face the much harder problem of introducing controls of the amount of fishing in a fishery in which there are more numerous participants whose interests diverge more widely. If you can ensure that the catches of herring are kept within appropriate limits, and also make some further progress towards an equitable division of this overall total, this will be encouraging to those attempting to tackle similar problems elsewhere and to those who see in the international commissions their best hope for the rational management of world fishery resources. I hope very much, therefore, that your efforts this week will be crowned with success.

Let me say, however, Mr Chairman, that I do not think that this will be enough. If the international commissions are to regain the confidence of governments and of industry, they will have to take action when needed more promptly and more decisively than in the past. They must adapt their actions and where necessary their powers to changing requirements and must be able to do so quickly. They must take management measures more promptly, and where necessary more stringently, than they have often done. To this end they will have to modify their practices in regard to the scientific basis for their actions, improving it as necessary and, more importantly, taking adequate action as soon as the need for it becomes apparent without waiting until such need is proved beyond doubt; because at that point it may already be too late to prevent depletion of the resource. There must also, I think, be a change as regards acceptance of recommendations made by international commissions. The old objections procedure by which the government of a single country, sometimes acting under considerable internal political pressure, can in effect block the application of management measures generally recognized as necessary, seems to me outmoded and will have to be replaced by something else, perhaps by decisions by a qualified majority and by recource to a form of arbitration. In this direction also might possibly lie a way of finding solutions to problems which need to be settled quickly but on which it is difficult to reach agreement by negotiation. I have in mind particularly the allocation of national quotas, but there are others. Lastly, there is the need to ensure and to demonstrate to all concerned that management measures are universally applied. This is not only a question of inspection and enforcement but also of jurisdiction. This I know is a problem fraught with political difficulties but not, I think, as insoluble one, provided it is tackled with goodwill and courage.

Mr Chairman, I have perhaps abused your kindness and patience. You may feel that much of what I have said goes far beyond the task set the Commission at this time. I will not deny this. But I felt I had to grasp this opportunity to place some ideas before so competent an audience in the hope that, if there is any merit in them, they will be taken into consideration some time. Meanwhile, let me again wish you success in your important immediate task.

Thank you, Mr Chairman.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2728
(B.t.)

Proceedings No. 3

SPECIAL MEETING ON HERRING - JANUARY-FEBRUARY 1972

Report of Joint Meeting of Panels 4 and 5

Monday, 31 January 1972, 1440 hrs
Tuesday, 1 February 1972, 0930 hrs
Wednesday, 2 February 1972, 0930 & 1430 hrs
Thursday, 3 February 1972, 1640 hrs
Friday, 4 February 1972, 1135 hrs

1. The Chairman of the Commission, Mr K. Løkkegaard (Denmark) opened the meeting of Panels 4 and 5 which was convened at the request of the Plenary (1972 Special Meeting Proceedings No. 2) to give further and detailed consideration to the conservation of herring stocks in Subareas 4 and 5 and in Statistical Area 6 (Plenary Item 4). Mr Løkkegaard was elected Chairman with the Executive Secretary, Mr L. R. Day, as Rapporteur. Delegates from Canada, Denmark, France, Fed.Rep. Germany, Iceland, Italy, Japan, Norway, Poland, Spain, UK, USSR and USA were present with Observers from EEC and FAO.

2. Following further discussion of the Report of STACRES (1972 Special Meeting Proceedings No. 1) and the Polish reservation, it was agreed that the Report be accepted as a basis for proceeding with consideration of conservation needs for the Georges Bank, Gulf of Maine and Nova Scotian herring stocks. The Joint Meeting expressed appreciation of the efforts of STACRES and Assessments scientists and noted that plans were being made for a further and more elaborate program of research.

3. Possible Conservation Measures. In opening discussion on the possible conservation measures for the herring stocks, the Chairman drew attention to the memoranda on conservation of herring submitted by USA (Special Meeting Comm.Doc. 72/1, Serial No. 2680) and Canada (Special Meeting Comm.Doc. 72/2, Serial No. 2685) which were distributed to Member Countries of ICNAF well before the meeting. Attention was also directed to the discussions and proposals on herring from the 1971 Annual Meeting (1971 Meeting Proceedings No. 11, paragraphs 1-14 and Appendix 1; No. 13, paragraphs 6 and 11; and No. 16, paragraphs 4 and 9).

4. General consensus was that effective conservation measures were needed to prevent further deterioration of the herring stocks, particularly of the Georges Bank, Gulf of Maine and Nova Scotia stocks. The need was even more urgent in the light of the STACRES report on the present state of the stocks. Studies by the Standing Committee on Regulatory Measures (STACREM) had indicated that limiting fishing was the most effective regulatory measure (1969 ICNAF Meeting Proceedings No. 11). All member countries agreed that global or total catch quotas would be possible. However, USSR wished to see restrictions placed on fishing for both adults and for juveniles at the same time, as well as introduction of a 9-10" size limit and a 10% weight exemption clause in Subareas 4 and 5. Poland preferred closed seasons and areas, a minimum size limit and a ban on fishing for juvenile herring. Canada and USA called attention to the entry into force on 15 December 1971 of the 1969 Protocol Relating to Regulatory Measures which allowed the Commission to set national quotas. They believed that national allocation was necessary to allow for well-planned and efficient fisheries. In summary, Member Countries agreed that there was a need for conservation, with quota and other measures possible, but that other measures alone were not acceptable.

5. Canadian Conservation Proposal for Nova Scotia Stock. As a basis for detailed discussion and not as a persuasive precedent, Canada presented a proposal (Appendix I) accepting the results of the STACRES report as it affects the Nova Scotia stock. The proposal featured a total quota for adult herring recommended by STACRES with national allocation using STACREM guidelines (1969 ICNAF Meeting Proceedings No. 11, Appendix I), *i.e.* 80% historical performance (40% on 3-year basis and 40% on 7-year basis), 10% for coastal states and 10% for new interests and non-members to operate retroactively from 1 January 1972. Canada and USA pointed out that severe national limitations (minimum size limit of 4-1/2" and all fish under 7" to be used for human food only) had already been placed on the juvenile fisheries which took place almost entirely within territorial waters. USSR wished the addition of a minimum size limit throughout Subareas 4 and 5 (Appendix IV) to ensure a package solution to the protection of both the juvenile and adult stocks. Poland suggested as an alternative to quotas, closed seasons and areas for spawning adults with a minimum size limit for the juveniles.

6. General agreement was evident among the Member Countries that a total quota of 60-70,000 tons for the Nova Scotia stock was reasonable. However, national allocation of the total quota raised difficulties. There was need to take account of the various needs and interests of each country. The USSR raised the question of the need for setting up a reliable system of registration of catches and their location, mandatory for all countries. It was noted that a standard logbook was being developed by STACTIC which could serve the purpose. Development could be speeded up. The question of the contravention of the 6-month non-objection procedure for bringing Article VIII proposals into effect by attempting to make the herring proposals retroactive to 1 January 1972 was raised. It was pointed out that the Convention does not require the non-objection procedure to be used. Member Countries could agree on a date for entry into force and the proposals would come into force on that date. The question of data collection for international enforcement with national quotas and minimum size limits was recognized. It was suggested that STACTIC study these problems and make recommendations to the 1972 Annual Meeting.

7. US Conservation Proposals for Georges Bank and Gulf of Maine Stocks. US proposals for conservation of the Georges Bank adult stock (Appendix II) and the Gulf of Maine adult stock (Appendix III) featured total quotas of 70,000 tons and 28,000 tons respectively and the STACREM sliding scale concept (1971 ICNAF Meeting Proceedings No. 9), coastal state preference and prohibition of any new fishing effort as a basis for national allocation. A number of Member Countries felt that Contracting Governments not now fishing should not be prohibited from entering the fishery. Some Member Countries could not agree to a coastal state preference or use of the sliding scale guideline. It was pointed out that the US allocation formula resulted in unequal sacrifice which was unacceptable to some of the Member Countries. USSR agreed to consider total and national quotas but reiterated the need for solution of the catch registration problem and the juvenile problem at the same time. Canada agreed to prepare a memorandum on the juvenile problem (Special Meeting Comm.Doc. 72/3) and suggested that STACRES be asked to look into the problem for the 1972 Annual Meeting.

8. At this point the Chairman suggested that a small Working Group(s), comprised of those countries fishing the three herring stocks being considered, might speed up deliberations and negotiations by taking the problem stock by stock. Canada, Fed.Rep. Germany, Japan, Poland, USSR and USA requested participation.

9. The Joint Meeting of Panels 4 and 5 recessed at 1100 hrs, Wednesday, 2 February to await a report from the Working Group on Subarea 4 and 5 Herring Management on possible conservation measures for the Georges Bank stock.

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10. The Joint Meeting of Panels 4 and 5 reconvened at 1430 hrs, Wednesday, 2 February under the Chairman, Mr K. Løkkegaard. The Chairman of the Working Group, Dr A.W.H. Needler (Canada), reported on the progress toward conservation measures for the Georges Bank herring stock. At this point Mr Løkkegaard expressed his great regret at having to leave the chair because of a national commitment. He thanked the participants for their cooperation and expressed his best wishes for success in the continuing search for solutions. The Vice-Chairman of the Commission, Mr R. Lagarde (France), was invited to take the chair to elect a new Chairman for the Joint Meeting of Panels 4 and 5. Mr Lagarde was unanimously elected to replace Mr Løkkegaard. The Joint Meeting recessed at 1500 hrs to reconvene at 0930 hrs, Thursday, 3 February.

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11. The Joint Panels reconvened at 1640 hrs, Thursday, 3 February under its Chairman, Mr R. Lagarde (France). Dr Needler, Chairman of the Management Working Group reported that a consensus was developing. Discussions included juvenile fisheries, size limits, closed seasons and areas, global quotas and national allocation. The Joint Meeting agreed that the Management Working Group should continue and move to discussion of other stock areas as required. The Joint Meeting recessed at 1720 hrs, Thursday, 3 February.

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12. The Joint Panels reconvened at 1135 hrs, Friday, 4 February, under the Chairman, Mr R. Lagarde. After hearing the Management Working Group Chairman, Dr Needler, report that there had been no agreement yet on conservation measures for the three herring stocks but that there had been progress and compromises, the meeting of Joint Panels 4 and 5 resolved into a Plenary Session of the Commission under the chairmanship of Mr R. Lagarde (France), the Vice-Chairman of the Commission, to consider further possible courses of action (1972 Special Meeting Proceedings No. 2).

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2728
(B.t.)

Proceedings No. 3
Appendix I

SPECIAL MEETING ON HERRING - JANUARY-FEBRUARY 1972

Canadian Proposals for the Nova Scotia Stock (Div. 4Xa-4Wb)

Canada accepts the report of STACRES as it affects the Nova Scotia (Div. 4Xa-4Wb) stock. In particular it agrees to a catch limitation on the adults of this stock for 1972 at 60,000 tons and wishes the Commission to note that this is the lowest figure in the range of estimates given in that report. Further, Canada points out that the STACRES report states that the juvenile fisheries of Nova Scotia do not in any way affect recruitment to either the Gulf of Maine stock or the Georges Bank stock.

Because the two large fisheries on the adults of this stock (those of Canada and the USSR) exploit the stock at two different times of the year Canada firmly believes that a national allocation of the overall quota is the only way in which catch limitation can be achieved without injustice to one of the parties.

Canada bases its calculation of the subdivision of the total quota on what is considered to be the best consensus achieved at the STACREM meeting. That is:

(1) That 80% of the total quota be allocated on the basis of historical performance, 40% on a short term and 40% on a long term.

(2) That the short term should be a period of the three latest years, for which complete statistics are available (1968-70) and the long term the preceding seven years (the longest term for which reliable statistics are available).

(3) That performance be calculated for each country on basis of the total weight of catch in each period and not on the basis of the percentage of the total catch taken by each country in each year.

The national allocation quota of the quota of adults (and the catch statistics on which it is based) applies only to the Nova Scotia stock. The gillnet fishery of the Nova Scotia Atlantic coast exploits a local stock and is fished entirely outside the convention area.

The national allocation quota of 80% of the total calculated on an historical basis in this way gives the following figures:

Canada: 19,000 tons short term, 24,000 tons long term = 43,000 tons total
USSR: 5,000 tons short term, - tons long term = 5,000 tons total

The coastal state allocation is proposed to be 10%. The remaining 10% would be available for new entrants to the fishery and non-member countries.

Canada does not believe that it is appropriate to consider larger allocation of the quota to new entrants in view of the admitted serious condition of the stock.

Canada proposes that such a subdivision of quotas on a national basis should be accepted for a period of 2 years and should be applied to quota levels recommended by STACRES over this period. In the meantime discussions might be held to develop improved guidelines for quota allocation. Because the STACRES assessment on which the quota is based applies to the year 1972, Canada proposes that it should operate retroactively from 1 January 1972. If between this date and the time the quota allocation is formally accepted any member country exceeds its national quota, the amount by which it is exceeded should be subtracted from its quota allocation for 1973 and should be considered a delayed contribution to the recuperation of the stock.

Canada wishes the Commission to note that a substantial proportion of the Canadian catch by her purse-seine fleet is taken outside the Convention Area, near the south-eastern shore of the Nova Scotia side of the Bay of Fundy and near the entrance to St. Mary Bay. However it is impracticable to separate the catch into the two components and would invite misreporting of catch by fishermen. Canada is therefore prepared to include all of the catch of the purse-seine fishery as part of her quota.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2728
(B.t.)

Proceedings No. 3
Appendix II

SPECIAL MEETING ON HERRING - JANUARY-FEBRUARY 1972

United States Proposal for International Regulation of
the Fishery for Herring from the Georges Bank - Subarea 6 Stock

1. That the Contracting Governments take appropriate action to regulate the catch of herring, *Clupea harengus* L., by persons under their jurisdiction fishing on the stock found on Georges Bank (Div. 5Z of Subarea 5) and in Statistical Subarea 6 so that the aggregate annual catch of herring by vessels taking herring from this stock shall not exceed 70,000 metric tons per annum.

2. That Competent Authorities from each Contracting Government listed below shall limit the catch of herring taken by persons under their jurisdiction to the amount listed from the above-mentioned stocks:

Canada	-	* metric	tons
Fed. Rep. Germany	-	"	tons
Iceland	-	"	tons
Japan	-	"	tons
Norway	-	"	tons
Poland	-	"	tons
Romania	-	"	tons
USSR	-	"	tons
USA	-	* "	tons

* 20,000 tons total with relative coastal preference to be determined. It being understood that non-members of the Commission presently engaged in the fishery are expected to catch not more than metric tons.

3. Each Contracting Government mentioned in paragraph 2 above shall prohibit the catching of herring in Div. 5Z of Subarea 5 and in Statistical Subarea 6 by persons under its jurisdiction within 10 days of a determination by each such Contracting Government that the accumulative catch, the quantity estimated to be taken before closure could be introduced, and the likely incidental catch for the remainder of the year equal 100% of the allowable catch for that Contracting Government as listed in paragraph 2. Such Contracting Governments shall promptly notify the Executive Secretary of such closure date, who shall promptly notify every other Contracting Government.

4. That each other Contracting Government shall prohibit the catching of herring in Div. 5Z of Subarea 5 and in Statistical Subarea 6 by persons under its jurisdiction.

5. That this proposal shall be in effect only as long as the stock of herring referred to in paragraph 1 above is in a depressed state, and that the Commission shall review the allowable catch provided in paragraphs 1 and 2 above at each Annual Meeting, and shall propose such changes as are necessary from time to time, or a new regulatory proposal at such time as the stock referred to in paragraph 1 above has recovered to a normal state, taking into account such factors as fishing, natural variations in abundance, natural variations in spawning, economic factors, and the desire of Contracting Governments to increase their fishery on or to enter the fishery on the stock referred to in paragraph 1 above.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2728
(B.t.)

Proceedings No. 3
Appendix III

SPECIAL MEETING ON HERRING - JANUARY-FEBRUARY 1972

United States Proposal for International Regulation of the Fishery for Herring in Div. 5Y of Subarea 5

1. That the Contracting Governments take appropriate action to regulate the catch of herring, *Clupea harengus* L., by persons under their jurisdiction in Div. 5Y of Subarea 5 so that the aggregate annual catch of such herring by vessels taking such herring shall not exceed 28,000 metric tons per annum.

2. That Competent Authorities from each Contracting Government listed below shall limit the catch of herring taken by persons under their jurisdiction to the amount listed from the above-mentioned area:

Canada	-	metric tons*
Fed. Rep. Germany	-	1,400 metric tons
USA	-	metric tons*

* 26,000 tons total with relative amounts to be determined. It being understood that non-members of the Commission presently engaged in the fishery are expected to catch not more than 600 metric tons.

3. Each Contracting Government mentioned in paragraph 2 above shall prohibit the catching of herring in Div. 5Y of Subarea 5 by persons under its jurisdiction within 10 days of a determination by each such Contracting Government that the accumulative catch, the quantity estimated to be taken before closure could be introduced, and the likely incidental catch for the remainder of the year equal 100% of the allowable catch for that Contracting Government as listed in paragraph 2. Such Contracting Government shall promptly notify the Executive Secretary of such closure date, who shall promptly notify every other Contracting Government.

4. That each other Contracting Government shall prohibit the catching of herring in Div. 5Y of Subarea 5 by persons under its jurisdiction.

5. That this proposal shall be in effect only as long as the herring in Div. 5Y of Subarea 5 is in a depressed state, and that the Commission shall review the allowable catch provided in paragraphs 1 and 2 above at each Annual Meeting, and shall propose such changes as are necessary from time to time, or a new regulatory proposal at such time as the herring in Div. 5Y of Subarea 5 has recovered to a normal state, taking into account such factors as fishing, natural variations in abundance, natural variations in spawning, economic factors, and the desire of Contracting Governments to increase their fishery on or to enter the fishery on herring in Div. 5Y of Subarea 5.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2728
(B.t.)

Proceedings No. 3
Appendix IV

SPECIAL MEETING ON HERRING - JANUARY-FEBRUARY 1972

Proposal of the USSR Delegation

The Soviet Delegation holds a view that during consideration of measures for protecting herring stocks such regulations should be adopted, which set the minimum allowable size for herring caught.

Taking into account the specific characteristics of herring, it would be unexpedient to set limitations on the mesh size in the herring fishery, since that fish, having escaped from the net, becomes unviable. Thus, regulation of fish size appears to be a more effective means to protect juvenile fish, having an advantage of being independent of its dislocation in the subarea.

The Soviet Delegation proposes to add to the international regulatory measures for the herring fishery the following provision:

The Joint Meeting of Panels 4 and 5 recommends that:

"1. The Contracting Governments shall take appropriate measures to ensure that the herring which is caught in Subareas 4 and 5, and which is of a size, measured from the tip of the snout to the end of the tail fin, smaller than 10 inches (25.2 cm) shall be treated as undersized, and shall not be landed, exposed or offered for sale, or sold by persons under its jurisdiction.

2. The Contracting Governments permit persons under their jurisdiction to catch herring having a size smaller than that specified in paragraph 1, in the amount not exceeding 10% by weight of all herring on board a vessel."

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2729
(B.t. and B.G.22)

Proceedings No. 4

SPECIAL MEETING ON HERRING - JANUARY-FEBRUARY 1972

Report of the Working Group on Subarea 4 and 5 Herring Management

Wednesday, 2 February, 1100 and 1500 hrs
Thursday, 3 February, 0930 and 1730 hrs
Friday, 4 February, 0900 and 1515 hrs
Saturday, 5 February, 0900 hrs
Monday, 7 February, 1500 hrs

1. The Working Group, as proposed by the Joint Meeting of Panels 4 and 5, elected Dr A.W.H. Needler (Canada) as Chairman. Representatives from Canada, Fed. Rep. Germany, Japan, Poland, USSR and USA were present.

2. Following discussion a group comprising Mr Volkov (USSR), Mr Sullivan Jr (USA), Dr Booss (Fed. Rep. Germany) and Mr Fila (Poland) was appointed to draft a resolution regarding (1) the bringing into effect of any conservation proposals for herring at as early a date as possible, (2) the need for conservation of the juvenile herring stocks and (3) the need for conservation action on the Statistical Area 6 portion of the Georges Bank stock.

3. Total Quotas. All countries represented agreed to the setting of a total quota for each of the three stocks. The total quota of 28,000-30,000 tons, recommended by STACRES for the Gulf of Maine stock, was acceptable and that of 60,000-65,000 tons, recommended by STACRES for the Nova Scotia stock, was not critized. However, proposals for a total quota for the Georges Bank stock ranged from 250,000 tons, the 1971 catch, to 70,000 tons, the STACRES recommendation for maintaining the 1971 stock size. It was argued that the Georges Bank quota could be greater than 70,000 tons because the STACRES recommendation was based on limited scientific data, becuase of the high larval abundance recorded by the larval surveys and the increase in Polish catch per unit of effort in late years. For these reasons and for economic and technical considerations, Canada, Fed. Rep. Germany, Japan and USSR could agree to a total quota of 150,000 tons for 1972 only which amounted to a reduction of over 42% from the 1971 catch. Poland felt that the more practical conservation measure would be to establish closed seasons and areas, but if there was to be a total quota, it should be based on the 1971 catch. After discussion of possible closure periods and areas, the Working Group concluded that there should be a resolution asking STACRES to consider the effect of closed seasons and areas on yields from the three stocks and provide the best possible information to the Commission at its 1972 Annual Meeting. USA on the other hand, felt the 150,000-ton quota, in itself, had little conservation value and could accept an amount higher than the STACRES recommendation of 70,000-95,000 tons for 1972 only if there was an additional commitment made at the same time which would ensure no further reduction to the spawning stock during 1973, based on STACRES recommendations prepared for a Special Commission Meeting on Herring in January of 1973.

4. USSR Proposal for Minimum Size Limit in Subareas 4 and 5. USSR again raised the need for a minimum size limit in order to protect the juvenile stocks in Subareas 4 and 5 (Special Meeting Proceedings No. 3, Appendix IV) as a subsidiary to quota regulation of the adults. Canada could accept a 9.5-inch size limit in areas where there was quota regulation but with a reservation in the northern portion of Div. 4X (north of 43°50'N lat) where the traditional Canadian sardine fishery was prosecuted and already under severe national restriction. USA raised the question of how size limit could be enforced. All country representatives agreed to a size limit restriction but there were varying negotiable positions taken regarding the areas of restriction and the amount of the size limit. The Working Group agreed to recommend that STACTIC be asked to look at the size-limit enforcement problem which included reservations by USSR, Poland and Romania to the ICNAF Scheme of Joint Enforcement relating to examination of catch.

5. National Allocation - Georges Bank Stock. Canada proposed the use of the STACREM guidelines, *i.e.* 80% historic, 10% coastal and 10% new entries and non-members for national allocation of a total quota. However, Canada could not agree to the allocation proposed by the USA which used the sliding scale for coastal states allocation only plus a slight increase for the coastal states because this gave the coastal states an increase in catch for 1972. Following a discussion of whether coastal states should have the privilege of not contributing to the percentage decrease in the 1972 catch quota level, Canada, Fed. Rep. Germany and USSR could accept a preference for the coastal states but could not accept any increase for the coastal states. It was pointed out that the Georges Bank herring fishery had a very short historic period and that perhaps the

best way to allocate was by negotiation and not by formula. A proposal using a total quota of 150,000 tons gave 15% to the USA and Canada as coastal states and allocated the remainder a proportion of the average catch over the last three years. However, some countries could not agree to a 3-year, 5-year or 10-year or combination of the three because of the inequality of sacrifice. The USSR position was that the formula or principles for allocation should be the same for all three stock areas. The majority of countries felt there should be a fairer allocation.

6. The Working Group recessed to report on progress to a Joint Meeting of Panels 4 and 5 at 1640 hrs, 3 February. The Working Group reconvened to continue its deliberations at 1730 hrs.

7. Review of Discussion. After reconvening the Working Group, the Chairman in reviewing the status of discussions pointed out that a "package" deal of regulatory measures was considered desirable by all countries; that national restrictions in force on the juvenile fisheries should be listed and that USA and Canada should be urged to maintain these restrictions and if possible, extend then; that a size limit of 9-10 inches was acceptable where there were quota regulations except for the Canadian reservation in the northern portion of Div. 4X and except for the US fear of a resulting increase of fishing effort on the older spawning fishes; that closure of spawning grounds to stop the most efficient fishing is of doubtful value economically; that if quotas are acceptable then it is possible to have national allocation, that four of six countries have agreed to a total quota of 150,000 tons for the Georges Bank adult stock, of 28,000 tons for the Gulf of Maine adult stock and that all countries have not criticized a total quota of 60,000-65,000 tons for the Nova Scotia adult stock. Therefore, the greatest problem was national allocation of the total quota. Use of previous formulae had been difficult for all countries to accept due to inequalities of sacrifice. Therefore it was agreed that the principle of equal sacrifice should be applied where each country would reduce its catch to reach the level of the agreed quota for each stock area.

8. Applications of Principle of Equal Sacrifice for National Allocation. Application of the principle of equal sacrifice to reach a catch quota of 150,000 tons for 1972 for the Georges Bank stock from the 1971 catch of 261,000 tons required a reduction of 42.5% by each fishing country. Poland preferred a 20% only. USA again drew attention to the STACRES recommendation of a 65-75% reduction required to maintain the 1971 stock size and could not accept the 42.5% reduction unless there was some assurance that the 1973 global quota would be set at a level which would not reduce the stock still further based on the STACRES recommendation, and unless the small US 60-foot dragger fleet fishing on a daily basis could be alloted about 5,000 tons. It was agreed that USA and Canada should have a combined allocation of 9,800 tons under the 42.5% reduction scheme and negotiate individual quotas. With the US difficulties taken into account, Poland, although it preferred a 20% reduction only, agreed to report that all other countries had accepted the 42.5% reduction scheme and try to obtain his Government's acceptance. The Working Group, recognizing the need for further and detailed studies on the state of the stocks and the effect of the quota regulations on them, agreed to recommend that the Herring Assessments Working Group be elevated from *ad hoc* status in STACRES to a full Working Group status under the chairmanship of Mr D. Iles (Canada) and that its studies should include the effects of a 9-inch minimum size limit on yields, the effects of closed areas and seasons on yields, information on the juvenile fishery and its effects, and the effects on the stocks of the 1972 quotas. It was further agreed to recommend that another Special Herring Meeting be held in January of 1973 to hear the reports of STACRES and consider the need for alterations to the herring quotas for 1973.

9. The Working Group agreed to apply the principle of equal sacrifice for national allocation to reach a catch quota of 65,000 tons for 1972 for the Nova Scotia stock from the 1971 catch of 68,000 tons. Canada and USSR agreed to the required reduction of 4.4%. However, Japan could not accept a quota less than that allocated to non-members. It was agreed that non-members, and other Contracting Governments should be considered separately and that each group should be given a quota. Also, where stocks were in a better state, allocations for non-members and new entrants could be higher. All countries represented agreed that the 9-inch size limit should also be applied in the Nova Scotia stock, except for the Canadian reservation in the northern part of Div. 4X (north of 43°50'N lat) and of Div. 4W (north of 44°52'N lat) to complete a package arrangement.

10. The Working Group agreed to apply the principle of equal sacrifice for national allocation to reach a catch quota of 30,000 tons for 1972 for the Gulf of Maine stock from the 1971 catch of 46,000 tons. This required a reduction of 34.8% in catch for each country. Canada and USA combined their quota and reached agreement on national allocation. Fed. Rep. Germany negotiated to a 50% reduction, leaving 500 tons to be allocated equally between non-members and other Contracting Governments as new entrants. The Working Group agreed that the 9-inch size limit would also apply in the stock area.

11. Allocation to New Entries and Non-Member Countries. Considerable discussion took place regarding the allocations to non-members of the Commission and to Contracting Governments who had not been given a quota and who might decide to enter the fishery for the first time. For the Georges Bank stock, the 42.5% reduction formula was applied to the 1971 catch by the fleets of non-member governments and resulted in a reduction from 16,000 tons to 9,200 tons. Members of the Working Group agreed that there should be 1,000 tons allocated for other Contracting Governments which might wish to enter the fishery for the first time. This left an agreed allocation of 8,200 tons for the non-members of the Commission. For the Gulf of Maine stock, in order to discourage new entries into the fishery on the stock which was in a poor state, it was

agreed that the allocation for the non-members and new entrants should be small and shared equally. For the Nova Scotia stock, allocation was based on the better state of the stock and it was agreed that the allocation should be equal.

12. Drafting of Proposals and Resolutions. The Working Group then instructed the Executive Secretary to prepare draft proposals and resolutions based on the Working Group's conclusions regarding total quotas and national allocations for 1972 in the three stock areas with a 9-inch size limit in each stock area, except for the Canadian reservation north of 44°52'N latitude in Div. 4W and north of 43°50'N latitude in Div. 4X, a 10% annual weight exemption for the 9-inch size limit, a requirement for reporting periodically by new entries into the fishery, mandatory catch registration, retroactivity of proposals to 1 January 1972, regulations binding only for 1972 without prejudice and national management of allocations.

The Working Group requested that the draft proposals on Article VIII items, a draft resolution relating to the 1972 proposals regarding the applicability of regulations on the Georges Bank stock to Statistical Area 6, regulation of the juvenile fisheries in territorial waters and speeding up the effective date for the proposals being prepared by a small drafting group and a draft resolution regarding the Commission's herring research program, be available for consideration mid-day Monday, 7 February. The Working Group recessed at 1900 hrs, Saturday, 5 February.

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13. Recommendations to Panels 4 and 5. The Working Group reconvened at 1500 hrs Monday, 7 February, and agreed to recommend to Panels 4 and 5 proposals for international quota regulation of the fishery for herring from the Georges Bank stock (Appendix I), for herring in Div. 5Y of Subarea 5 (Appendix II), for herring in Div. 4X and part of Div. 4W of Subarea 4 (Appendix III), for international size limit regulation of the fishery for herring in Subareas 4 and 5 (Appendix IV) and two resolutions, one relating to 1972 proposals for the conservation of herring stocks in Subareas 4 and 5 (Appendix V) and one regarding the Commission's herring research program (Appendix VI).

14. Adjournment. The Working Group Chairman, Dr Needler, pointed out that this was the first time national allocation of catch quotas had been effected in a multi-nation fishery. He thanked the members of the Working Group for their excellent cooperation and efforts in finding an equitable solution to a very difficult and important problem. The Working Group members joined in thanking Dr Needler for his wisdom and patience as Chairman. The Working Group adjourned at 2050 hrs, Monday, 7 February.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2729
(E.t.)

Proceedings No. 4
Appendix I

SPECIAL MEETING ON HERRING - JANUARY-FEBRUARY 1972

(1) Proposal for International Quota Regulation of the Fishery for Herring from the Georges Bank Stock.

Panel 5 recommends that the Commission transmit to the Depositary Government the following proposals for joint action by the Contracting Governments:

"1. That the Contracting Governments take appropriate action to regulate the catch of herring, *Clupea harengus* L., by persons under their jurisdiction fishing on the Georges Bank stock found in Division 5Z of Subarea 5 and in the adjacent waters to the west and south so that the aggregate catch of herring by vessels taking herring from this stock shall not exceed 150,000 metric tons in 1972.

"2. That Competent Authorities from each Contracting Government listed below shall limit in 1972 the catch of herring taken by persons under their jurisdiction to the amount listed from the above-mentioned stock:

Canada	5,800	metric	tons
Federal Republic of Germany	31,600	"	tons
Japan	1,200	"	tons
Poland	49,400	"	tons
Romania	600	"	tons
USSR	48,200	"	tons
USA	4,000	"	tons
Other Contracting Governments	1,000	"	tons,

it being expected that non-members of the Commission will catch no more than 8,200 metric tons.

"3. That each Contracting Government mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of the date on which its vessels have ceased a specialized fishery for herring. Each Contracting Government not mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary if its vessels engage in a specialized fishery for herring, together if possible with an estimate of the projected catch. Each Contracting Government not mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of specialized or incidental catches of herring in increments of 100 tons. The Executive Secretary shall promptly inform all other Contracting Governments of such notifications. The Executive Secretary shall notify each Contracting Government of the date on which accumulated catch and estimated catch of herring, the quantity estimated to be taken before closure could be introduced, and the likely incidental catch for the remainder of the year equal 100 percent of the allowable catch designated as for "Other Contracting Governments" in paragraph 2 above. Within 10 days of receipt of such notification from the Executive Secretary, each Contracting Government not mentioned by name in paragraph 2 above shall prohibit the catching of herring from the Georges Bank stock by persons under its jurisdiction, except for small incidental catches.

"4. That the Contracting Governments take appropriate action to ensure that all vessels under their jurisdiction which take herring, record their catches on a daily basis according to position, amount, date, type of gear, unit of effort, discards and disposition of catch.

"5. That the Commission shall establish at a special meeting in January 1973, (a) the level of catch which will neither further reduce spawning stocks already at a low level nor reduce productivity by lowering the yield per recruit during 1973 based on the recommendations of its Standing Committee on Research and Statistics, and (b) the allocation of that catch for 1973, both of which will be substituted for the catch and the allocation thereof in paragraphs 1 and 2 above respectively.

"6. That the allocations in paragraph 2 above are without prejudice to future allocations of catches for this or other stocks. Nothing in this proposal shall prejudice the future possibility of the Contracting Governments entering into mutual arrangements for the management of the allocations of herring catches or re-allocating the allocations of herring catches given in paragraph 2 above by such agreements as they may enter into, all such arrangements and re-allocations to be reported to all other Contracting Governments through the Executive Secretary.

"7. This proposal shall become effective only at such times as the herring quota proposals adopted in February 1972 by Panels 4 and 5 for Division 4W and Division 4X of Subarea 4 and Division 5Y of Subarea 5 become effective as well as the proposal for size limit regulations of the fishery for herring in Subareas 4 and 5."

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Serial No. 2729
(B.t.)

Proceedings No. 4
Appendix II

SPECIAL MEETING ON HERRING - JANUARY-FEBRUARY 1972

(2) Proposal for International Quota Regulation of the Fishery for Herring in Division 5Y of Subarea 5.

Panel 5 recommends that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

"1. That the Contracting Governments take appropriate action to regulate the catch of herring, *Clupea harengus* L., by persons under their jurisdiction in Division 5Y of Subarea 5 so that the aggregate catch of herring by vessels taking such herring shall not exceed 30,000 metric tons in 1972.

"2. That Competent Authorities from each Contracting Government listed below shall limit in 1972 the catch of herring taken by persons under their jurisdiction to the amount listed from the above-mentioned area:

Canada	6,000	metric tons
Federal Republic of Germany	2,500	" tons
USA	21,000	" tons
Other Contracting Governments	250	" tons

it being expected that non-members of the Commission will catch no more than 250 metric tons.

"3. That each Contracting Government mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of the date on which its vessels have ceased a specialized fishery for herring. Each Contracting Government not mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary if its vessels engage in a specialized fishery for herring, together if possible with an estimate of the projected catch. Each Contracting Government not mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of specialized or incidental catches of herring in increments of 100 tons. The Executive Secretary shall promptly inform all other Contracting Governments of such notifications. The Executive Secretary shall notify each Contracting Government of the date on which accumulated catch and estimated catch of herring, the quantity estimated to be taken before closure could be introduced, and the likely incidental catch for the remainder of the year equal 100 percent of the allowable catch designated as for "Other Contracting Governments" in paragraph 2 above. Within 10 days of receipt of such notification from the Executive Secretary, each Contracting Government not mentioned by name in paragraph 2 above shall prohibit the catching of herring in Division 5Y of Subarea 5 by persons under its jurisdiction, except for small incidental catches.

"4. That the Contracting Governments take appropriate action to ensure that all vessels under their jurisdiction which take herring, record their catches on a daily basis according to position, amount, date, type of gear, unit of effort, discards and disposition of catch.

"5. That the Commission shall establish at a special meeting in January 1973, (a) the level of catch which will neither further reduce spawning stocks already at a low level nor reduce productivity by lowering the yield per recruit during 1973 based on the recommendations of its Standing Committee on Research and Statistics, and (b) the allocation of that catch for 1973, both of which will be substituted for the catch and the allocation thereof in paragraphs 1 and 2 above respectively.

"6. That the allocations in paragraph 2 above are without prejudice to future allocations of catches for this or other stocks. Nothing in this proposal shall prejudice the future possibility of the Contracting Governments entering into mutual arrangements for the management of the allocation of herring catches or re-allocating the allocations of herring catches given in paragraph 2 above by such agreements as they may enter into, all such arrangements and re-allocations to be reported to all other Contracting Governments through the Executive Secretary.

"7. This proposal shall become effective only at such times as the herring quota proposals adopted in February 1972 by Panels 4 and 5 for Division 4W and Division 4X of Subarea 4 and Division 5Z of Subarea 5 become effective as well as the proposal for size limit regulation of the fishery for herring in Subareas 4 and 5."

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Appendix III

SPECIAL MEETING ON HERRING - JANUARY-FEBRUARY 1972

(3) Proposal for International Quota Regulation of the Fishery for Herring in Division 4X and Part of Division 4W of Subarea 4.

Panel 4 recommends that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

"1. That the Contracting Governments take appropriate action to regulate the catch of herring, *Clupea harengus* L., by persons under their jurisdiction fishing in that portion of Division 4W south of 44°52'N latitude and in Division 4X of Subarea 4 so that the aggregate catch of herring by vessels taking such herring shall not exceed 65,000 metric tons in 1972.

"2. That Competent Authorities from each Contracting Government listed below shall limit in 1972 the catch of herring taken by persons under their jurisdiction to the amount listed from the above-mentioned area:

Canada	35,700 metric tons
Japan	1,000 " tons
USSR	26,300 " tons
Other Contracting Governments	1,000 " tons

it being expected that non-members of the Commission will catch not more than 1,000 metric tons.

"3. That each Contracting Government mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of the date on which its vessels have ceased a specialized fishery for herring. Each Contracting Government not mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary if its vessels engage in a specialized fishery for herring, together if possible with an estimate of the projected catch. Each Contracting Government not mentioned by name in paragraph 2 above shall promptly notify the Executive Secretary of specialized or incidental catches of herring in increments of 100 tons. The Executive Secretary shall promptly inform all other Contracting Governments of such notifications. The Executive Secretary shall notify each Contracting Government of the date on which accumulated catch and estimated catch of herring, the quantity estimated to be taken before closure could be introduced, and the likely incidental catch for the remainder of the year equal 100 percent of the allowable catch designated as for "Other Contracting Governments" in paragraph 2 above. Within 10 days of receipt of such notification from the Executive Secretary, each Contracting Government not mentioned by name in paragraph 2 above shall prohibit the catching of herring in the area mentioned in paragraph 1 above by persons under its jurisdiction, except for small incidental catches.

"4. That the Contracting Governments take appropriate action to ensure that all vessels under their jurisdiction which take herring, record their catches on a daily basis according to position, amount, date, type of gear, unit of effort, discards and disposition of catch.

"5. That the Commission shall establish at a special meeting in January 1973, (a) the level of catch which will neither further reduce spawning stocks already at a low level nor reduce productivity by lowering the yield per recruit during 1973 based on the recommendations of its Standing Committee on Research and Statistics, and (b) the allocation of that catch for 1973, both of which will be substituted for the catch and the allocation thereof in paragraphs 1 and 2 above respectively.

"6. That the allocations in paragraph 2 above are without prejudice to future allocations of catches for this or other stocks. Nothing in this proposal shall prejudice future possibility of the Contracting Governments entering into mutual arrangements for the management of the allocations of herring catches or re-allocating the allocations of herring catches given in

paragraph 2 above by such agreements as they may enter into, all such arrangements and reallocations to be reported to all other Contracting Governments through the Executive Secretary.

"7. This proposal shall become effective only at such times as the herring quota proposals adopted in February 1972 by Panel 5 for Division 5Y and Division 5Z of Subarea 5 become effective as well as the proposal for size limit regulation of the fishery for herring in Subareas 4 and 5."

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Appendix IV

SPECIAL MEETING ON HERRING - JANUARY-FEBRUARY 1972

(4) Proposal for International Size Limit Regulation of the Fishery for Herring in Subareas 4 and 5.

Panels 4 and 5 recommend that the Commission transmit to the Depositary Government the following proposal for joint action by the Contracting Governments:

"1. That the Contracting Governments take appropriate action to prohibit the taking or possession of herring, *Clupea harengus* L., less than 9 inches (22.7 cm), measured from the tip of the snout to the end of the tail fin, by persons under their jurisdiction, except as provided in paragraph 2 below, in those portions of Division 4W south of 44°52'N latitude and Division 4X south of 43°50'N latitude of Subarea 4 and in Subarea 5.

"2. That the Contracting Governments may permit persons under their jurisdiction to take herring with a vessel in any year less than 9 inches (22.7 cm) measured as specified in paragraph 1 above in an amount not exceeding 10 percent by weight of all herring caught in the areas specified in paragraph 1 above by that vessel during that year."

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Appendix V

SPECIAL MEETING ON HERRING - JANUARY-FEBRUARY 1972

Resolution Relating to 1972 Proposals for the Conservation of Herring Stocks in Subareas 4 and 5

Panels 4 and 5 recommend the following draft resolution for adoption by the Commission:

The Commission

Noting Article VI, paragraph 1; Article VIII, paragraph 2(a); Article IX, Article XII and Article XIII of the Convention, 1949,

Having Considered measures for the conservation of stocks of herring found in Subareas 4 and 5 of the Convention Area and having adopted four proposals for the conservation of those stocks,

Being Aware that the stock of herring found on Georges Bank (Division 5Z of Subarea 5) migrates westward and southward into an area designated by the Commission as Statistical Area 6 and is exploited there,

Considering that juvenile herring are exploited within territorial waters and the measures which have been taken for their conservation by coastal states,

Noting that non-members of the Commission participate in the exploitation of herring in the Convention Area and Statistical Area 6,

Holding the View that measures for the conservation of the herring stocks shall be applied also to Statistical Area 6 and to the territorial waters of the coastal states, where a part of the stocks are found,

Being Aware of the time period before the proposals referred to above may enter into effect pursuant to the provisions of Article VIII of the Convention as amended, the desirability of taking appropriate steps for the implementation of measures for the conservation of herring prior to the effective date of the proposals referred to above and the desirability of reducing the time period before these proposals take effect,

1. Invites the attention of all Contracting Governments to the above matters,

2. Urges the coastal states to ensure that appropriate conservation measures are undertaken in the juvenile fishery within territorial waters to protect the stocks and limit the catch,

3. Requests all Contracting Governments fishing for herring to anticipate the coming into effect of the above-mentioned proposals later in 1972 and to institute appropriate measures as soon as possible to ensure the effectiveness of the proposals when they become effective under the terms of the Convention,

4. Further Requests all Contracting Governments fishing the stock of herring which migrates between Division 5Z of Subarea 5 and Statistical Area 6 to institute appropriate measures to regulate the fishery in Statistical Area 6 to ensure the effectiveness of the Commission's proposal for that stock, either by further international agreements or on a national basis,

5. Calls On the Contracting Governments to invite the attention of non-members of the Commission fishing for herring in the above-mentioned areas to these matters, and

6. Urgently Requests all Contracting Governments to notify promptly, if possible before 15 April 1972, the Depositary Government of their acceptance of the above-mentioned proposals and their willingness to be bound by them at an earlier date than provided under the normal procedure.

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Proceedings No. 4
Appendix VI

SPECIAL MEETING ON HERRING - JANUARY-FEBRUARY 1972

Resolution re Commission's Herring Research Program

Panels 4 and 5 recommend the following draft resolution for adoption by the Commission:

In order to assure the effectiveness of the herring conservation program, the Commission requests:

1. that a STACRES Herring Working Group be established under the chairmanship of Mr D. Iles (Canada)

2. that the Working Group meet with the Assessments Subcommittee in May of 1972 and again in January 1973 to provide the best possible information for each major herring stock on

   (a) Effects on the stocks of the 1972 quotas

   (b) Effects of minimum fish size regulation on yields, with particular reference to the 9-inch size limit proposed by the Commission

   (c) Effects of closed areas and seasons on yields

   (d) The level of catch in 1973, that will maintain the stock size at the level obtaining in the beginning of 1973

   (e) The relationship of catch to yield per recruit

   (f) Effects on stock size of various catches in 1974

   (g) The size, season, distribution and effects of the juvenile fishery

3. that the Chairman of the Working Group work throughout 1972 to arrange for compilation and exchange of data and for adequate separate analyses in preparation for the January 1973 meeting

4. that all nations fishing the herring stocks in the Northwest Atlantic provide complete data on catch, effort, size and age composition of catch for 1971 for the May 1972 meeting and preliminary data by months for 1972 for the January 1973 meeting

5. that the attention of Contracting Governments be drawn to the research recommendations in the section "Research Requirements" of Appendix I of the STACRES Report of January 1972.

The Commission considers it important that all Contracting Governments provide adequate support for the studies required.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2730
(B.t.)

Proceedings No. 5

SPECIAL MEETING ON HERRING - JANUARY-FEBRUARY 1972

Report of Meeting of Panel 5

Monday, 7 February, 2050 hrs

1. A meeting of Panel 5 was convened by the Executive Secretary to consider three proposals from the meetings of the Working Group (1972 Special Meeting Proceedings No. 4) for quota control and size limit regulation of the fishery on stocks of herring in Subarea 5 and two resolutions, one relating to the quota and size limit regulations proposed for Subarea 5 and the other regarding the Commission's herring research program.

2. Representatives of all Member Countries, except Romania, were present.

3. The Executive Secretary asked for nominations for Chairman. Mr V. Kamentsev (USSR) was unanimously elected, with the Executive Secretary as Rapporteur.

4. The Chairman polled the Panel Members who, by a vote of 5 affirmative (Canada, Fed. Rep. Germany, Japan, USSR and USA), 1 abstention (Poland) and 1 absent (Romania), agreed to recommend that the Commission transmit to the Depositary Government the proposal for international quota regulation of the fishery for herring from the Georges Bank stock (1972 Special Meeting Proceedings No. 4, Appendix I) for joint action by the Contracting Governments.

5. By a vote tally identical to that in paragraph 4 above, the Panel agreed to recommend that the Commission transmit to the Depositary Government the proposal for international quota regulation of the fishery for herring in Division 5Y of Subarea 5 (1972 Special Meeting Proceedings No. 4, Appendix II).

6. By a vote of 6 affirmative (Canada, Fed. Rep. Germany, Japan, Poland, USSR and USA) and 1 absent (Romania), the Panel agreed to recommend that the Commission transmit to the Depositary Government the proposal for international size limit regulation of the fishery for herring in Subareas 4 and 5 (1972 Special Meeting Proceedings No. 4, Appendix IV).

7. By a vote of 6 affirmative (Canada, Fed. Rep. Germany, Japan, Poland, USSR and USA) and 1 absent (Romania), the Panel agreed to recommend to the Commission the resolution relating to 1972 proposals for the conservation of herring stocks in Subareas 4 and 5 (1972 Special Meeting Proceedings No. 4, Appendix V).

8. By a vote tally identical to that in paragraph 7 above, the Panel agreed to recommend to the Commission the resolution re Commission's herring research program (1972 Special Meeting Proceedings No. 4, Appendix VI).

9. The Panel adjourned at 2105 hrs.

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2731
(B.t.)

Proceedings No. 6

SPECIAL MEETING ON HERRING - JANUARY-FEBRUARY 1972

Report of Meeting of Panel 4

Monday, 7 February, 2110 hrs

1. A meeting of Panel 4 was convened by the Executive Secretary to consider two proposals from the meetings of the Working Group (1972 Special Meeting Proceedings No. 4) for quota control and size limit regulation of the fishery on stocks of herring in Subarea 4 and two resolutions, one relating to quota and size limit regulations proposed for Subarea 4 and the other regarding the Commission's herring research program.

2. Representatives of all Member Countries, except France, Spain and Romania, were present.

3. The Executive Secretary asked for nominations for Chairman. Mr W. Terry (USA) was unanimously elected with the Executive Secretary as Rapporteur.

4. By a vote of 7 affirmative (Canada, France by telephone in accordance with Panel Rule of Procedure 2.3, Fed. Rep. Germany, Italy, Japan, USSR and USA), 1 abstention (Poland), and 2 absent (Spain and Portugal), the Panel agreed to recommend that the Commission transmit to the Depositary Government the proposal for international quota regulation of the fishery for herring in Division 4X and part of Division 4W of Subarea 4 (1972 Special Meeting Proceedings No. 4, Appendix III) for joint action by the Contracting Governments.

5. By a vote of 8 affirmative (Canada, France by telephone, Fed. Rep. Germany, Italy, Japan, Poland, USSR, and USA), and 2 absent (Spain and Romania), the Panel agreed to recommend that the Commission transmit to the Depositary Government the proposal for international size limit regulation of the fishery for herring in Subareas 4 and 5 (1972 Special Meeting Proceedings No. 4, Appendix IV) for joint action by the Contracting Governments.

6. By a vote tally identical to that in paragraph 5 above, the Panel agreed to recommend to the Commission the resolution relating to 1972 proposals for the conservation of herring stocks in Subareas 4 and 5 (1972 Special Meeting Proceedings No. 4, Appendix V).

7. By a vote tally identical to that in paragraph 6 above, the Panel agreed to recommend to the Commission the resolution re the Commission's herring research program (1972 Special Meeting Proceedings No. 4, Appendix VI).

8. The Panel adjourned at 2120 hrs.

RESTRICTED

INTERNATIONAL COMMISSION FOR THE NORTHWEST ATLANTIC FISHERIES

Serial No. 2732
(B.t.)

Supplement

SPECIAL MEETING ON HERRING - JANUARY-FEBRUARY 1972

Supplement to Report of Proceedings

by the Executive Secretary

1. On 7 February 1972, a two-thirds majority of the Commissioners representing the Member Countries of Panels 4 and 5 agreed to recommend that the Commission transmit to the Depositary Government three proposals for international quota regulation of the fishery for herring in parts of Subareas 4 and 5, a proposal for international size limit regulation of the fishery for herring in parts of Subarea 4 and Subarea 5 and agreed to recommend that the Commission adopt two resolutions, one relating to the four proposals and the other regarding a herring research program (see 1972 Special Meeting Proceedings No. 4, Appendices I-VI; and Proceedings 5 and 6).

2. Under cover of a letter from the Executive Secretary dated 15 February 1972, the Panel 4 and 5 recommendations relating to herring conservation referred to in paragraph 1 above and approved by the Panels on 7 February 1972, were forwarded to the Head of Delegation of each of the Contracting Governments to the Commission, requesting that he register his vote on the six recommendations as soon as possible by cable with the Executive Secretary in accordance with Commission Rule of Procedure 2.4. The letter further advised that, in accordance with Article II (2) of the Convention, a decision of the Commission shall be taken by a two-thirds majority (10) of the votes of the Heads of Delegations of the Contracting Governments (15).

3. The Commission, by a two-thirds majority vote, which was recorded by the Executive Secretary on 7 March 1972 adopted the two resolutions and agreed to transmit the four herring proposals to the Depositary Government for joint action by the Contracting Governments. Affirmative votes were registered with the Executive Secretary by Canada (by letter 28 February 1972), Denmark (by cable 28 February 1972), France (by cable 24 February 1972), Fed. Rep. Germany (by cable 28 February 1972), Norway (by cable 1 March 1972), Poland (by cable 7 March 1972), Portugal (by cable 25 February 1972), Spain (by letter 21 February 1972), United Kingdom (by cable 23 February 1972) and the United States of America (by telephone 28 February 1972). To date votes by the Heads of Delegations for Iceland, Italy, Romania and Union of Soviet Socialist Republics have not been received by the Executive Secretary.* The Executive Secretary is corresponding with Japan regarding understanding of paragraph 6 of the resolution regarding the 1972 proposals for the conservation of herring stocks in Subareas 4 and 5.

4. On 7 March 1972, the Executive Secretary, on behalf of the Chairman of the Commission, transmitted to the Depositary Government the four 1972 proposals for international regulation of the fisheries for herring by catch quota and size limitation in Subareas 4 and 5 and the resolution regarding the 1972 proposals for the conservation of herring stocks in Subareas 4 and 5 for transmission to the Contracting Governments in accordance with Article VIII (6) of the Convention.

* Romania (by cable 10 March 1972)
Union of Soviet Socialist Republics (by cable 13 March 1972)
Iceland (by cable 21 March 1972)