

SECTION III

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Report of the Fisheries Commission and its Subsidiary Body (STACTIC), 18th Annual Meeting 09-13 September 1996 St. Petersburg, Russia

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PART I

Report of the Meeting of the Fisheries Commission

(FC Doc. 96/13)

18th Annual Meeting, 09-13 September 1996 St. Petersburg, Russia

1. Opening Procedures (items 1-5 of the Agenda)

- 1.1 The meeting was called to order by the Chairman, Mr. H. Koster (EU) on 10 September 1996 at 15:45 hours. Representatives from the following Contracting Parties were present: Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland), Estonia, the European Union (EU), France (in respect of St. Pierre et Miquelon), Iceland, Japan, the Republic of Korea, Latvia, Lithuania, Norway, Poland, Russia, and the United States of America. (Annex 1)
- 1.2 Mr. P. Moran (United States) was appointed Rapporteur.
- 1.3 Opening statements were made by Denmark, Canada, United States, the EU, and France. (Annexes 2-6). The Chairman welcomed new Contracting Parties and members of the Fisheries Commission - France (in respect of St. Pierre et Miquelon) and the United States of America - and noted that their support for NAFO Conservation and Enforcement Measures would help to restore the resources and provide more fish in the future.
- 1.4 The provisional Agenda was **adopted**. (Annex 7)
- 1.5 For admission of observers, the Fisheries Commission had not invited any non-member Government or international organization to the meeting (Rule 1.2 of the Rules of Procedure). There have further been no applications received by the NAFO Secretariat for observer status.
- 1.6 It was **agreed**, for item 5 of the FC Agenda, that the normal NAFO practice regarding publicity should be followed and that no statements would be made to the media until after the meeting, when a press release would be adopted by the General Council and issued by the NAFO Secretariat to the public.

2. Administrative (items 6-7)

- 2.1 The review of the Commission membership was discussed at the opening session of the General Council (under the provisions of Article XIII.1 of the NAFO Convention), and the two (2) new Contracting Parties - France and the United States of America, were admitted to the Fisheries Commission.
- 2.2 It was **agreed** that item 7 of the FC Agenda, Participation of Intergovernmental and Non-governmental Organizations, was covered in the morning session of the General Council and needed no further discussion by the Fisheries Commission.

3. Conservation and Enforcement Measures (items 8-9)

- 3.1 Regarding item 8 of the FC Agenda, Consideration of Improved Planning and Control of Research Vessels in the Regulatory Area, a revised version of the proposed Canadian amendments to Part III, Section C of the NAFO Conservation and Enforcement Measures was distributed (NAFO/FC Working Paper 96/1, Revised). The Representative of the EU questioned the length of the proposed notification period (60 days), requesting a 30 day notification period. He further asked that the proposed measures apply to research on NAFO regulated species throughout the entire Convention Area. The Representative of Denmark expressed the view that 30 days was too short of a time for response from the scientists of other Contracting Parties. Regarding the area of application, the Canadian delegation suggested that paragraph 7 read, "...stocks fully within the Regulatory Area or straddling stocks managed by NAFO in the Convention Area". Denmark then asked that the addition be made "...and applying only to permanent research vessels", as defined in page 14, Section C of the Conservation and Enforcement Measures. **No consensus was reached** regarding this proposal and the issue was referred to the 1997 Meeting.
- 3.2 For item 9 of the FC Agenda, Report of STACTIC at the Annual Meeting, the Chairman of STACTIC, Mr. D. Bevan (Canada), reported the conclusions and recommendations of STACTIC to the following items of its agenda:
- (a) Review of Annual Return of Infringements; it was noted that although deadlines are currently prescribed in the Conservation and Enforcement Measures (NAFO/FC Doc. 96/1), there are difficulties in timely reporting. It was agreed that STACTIC should recommend that the Fisheries Commission reinforce with Contracting Parties that deadlines for reporting on the disposition of apparent infringements do exist and that these deadlines be vigorously adhered to. This recommendation was **adopted** by the Fisheries Commission.
 - (b) Review of Surveillance and Inspection Reports; A report by Canada reviewing Canada's surveillance activities and inspections in the Regulatory Area (STACTIC Working Paper 96/1) was accepted by STACTIC and forwarded to the Fisheries Commission.
 - (c) Review of the NAFO Observer Scheme and Satellite Tracking Pilot Project; a number of Contracting Parties made oral reports on the Observer Scheme Pilot Project. Written reports (found in STACTIC Working Papers 96/3 and 96/8) were also made and it was noted by STACTIC that the NAFO Pilot Observer Scheme has been implemented. Reports were also made regarding Satellite Tracking, with written reports found in STACTIC Working Papers 96/3, 96/9, 96/12 and 96/13. After further discussion, STACTIC concluded that the Pilot Project for Satellite Tracking was only partially implemented and that, while many Contracting Parties have installed appropriate equipment on their vessels, the Secretariat is currently unable to process and transmit those data to Contracting Parties with patrol vessels in the Regulatory Area.
- The Representative of the Secretariat at the STACTIC Meeting noted that extra funds and special equipment would be required in the NAFO Secretariat to communicate with vessels equipped with satellite tracking devices and process their information. Considering the recommendation by STACTIC Working

Group (FC Doc. 95/24, item 10) on testing several systems of satellite tracking, there could be some technical difficulties and substantial cost implications at the Headquarters to communicate and accommodate such many diverse systems.

Two options regarding this issue were forwarded to the Fisheries Commission for consideration; Option #1 called for convening a meeting of technical experts to deal specifically with the development of appropriate infrastructure within the Secretariat to deal with satellite tracking data effectively. Option #2 asked for expanding the mandate outlined above to include evaluation of possibilities to expand the satellite tracking program. Option #1 was **adopted** by the Fisheries Commission.

- (d) Review of Operation of the Hail System; five Contracting Parties and the NAFO Secretariat reported on the operation of the hail system. The Representative of the Secretariat drew the attention of STACTIC to its Report explaining that there is a full account of the NAFO Secretariat work on the Pilot automated system with a very clear recommendation to the Contracting Parties to utilize the system (Annex 2, Part II). Discussions covered the current system in place, the information they provide and the role of the Secretariat in the system. It was also disclosed that the Secretariat had not received final catch statistics for 1993-1995. A listing of the missing catch statistics and which Contracting Parties had not complied was requested by STACTIC and provided in by the Secretariat (Annex 3, Part II). Regarding the operation of the hail system, STACTIC recommended that: each Contracting Party identify a contact by name; the Secretariat provide a calendar of deadlines to each person to summarize current requirements for the submission of data; and that the Executive Secretary contact each identified contact person in the event data are not submitted as per requirements. This recommendation was **adopted** by the Fisheries Commission. In addition it was agreed (in FC Working Paper 96/12 and FC Doc. 96/5) that "target species" be reported in hail reports.
- (e) Discussion of Other Conservation and Enforcement Measures:
- i) Regarding compatibility and applicability of discard/retention rules for conservation and utilization of fishery resources (the Workshop), Contracting Parties agreed that they will emphasize the importance of current measures on the collection of information relating to composition and amount of discards to inspectors of Contracting Parties and to fishing vessel masters. STACTIC recommended amendments to Part VI, paragraphs 3(b) and 7 of the Conservation and Enforcement Measures (see STACTIC Working Paper 96/18, Revised). These amendments were **adopted** by the Fisheries Commission (FC Doc. 96/6).
- ii) Regarding consideration of amendment of Part V. Schedule II, Attachment I (Type of Fishing Gear) and Part II of the Conservation and Enforcement Measures, Iceland introduced Working Papers 96/10 and 96/11 regarding specifications to identify and measure double trawls for more accurate determinations of effort were recommended by STACTIC for forwarding to the Scientific Council. The Fisheries Commission **adopted** this recommendation.

iii) Regarding consideration of the 90mm mesh size for mid-water trawls in the redfish fishery in Divs. 3LN proposed by the Russian Delegation in STACTIC Working Paper 96/19, STACTIC agreed that the use of 90mm mesh in mid-water trawls for redfish could be permitted provided that additional measures are defined and included in the Conservation and Enforcement Measures. Seven measures relating to this issue were discussed and STACTIC agreed to seek a decision from the Fisheries Commission as to whether STACTIC and the Scientific Council should proceed to provide further detail on these proposed changes to the Conservation and Enforcement Measures.

iv) Regarding sampling protocols, STACTIC agreed that Contracting Parties should send sampling protocols now in use to T. Curran (EU) with a view to assisting in the development of a working paper for discussion at the next STACTIC meeting.

v) Regarding the item on the review of the list of apparent infringements subject to paragraph 10 in the Scheme of Joint International Inspection and Surveillance, upon the request of Canada, the item was removed from the STACTIC agenda.

- (f) Other Matters; Iceland expressed concern over the amendment of the 1995 STACTIC Report, which indicated that Canada would pay for observer coverage in the NRA. In response to a request by Iceland for clarification of this matter, STACTIC suggested that appropriate procedures be developed for adoption of reports and that unilateral changes should not take place. The Executive Secretary informed STACTIC that the report had been amended as a result of a letter from Canada explaining its position.

3.3 The Fisheries Commission **adopted** the STACTIC report and its recommendations as noted in the Fisheries Commission Report were also **adopted**. This was followed by further discussion and comments on the following issue:

- (a) The Chairman of the Fisheries Commission pointed out that although the measure proposed by Russia for a 90mm mid-water trawl for redfish has been agreed to in principle, not all Contracting Parties want the derogation to the 130mm mesh size. He stated that two Working Papers have been tabled with the most recent NAFO/FC Working Paper 96/15. He asked if details as discussed are acceptable.

The Representative of Russia stated that following further discussions with the Chairman of STACTIC and the Canadian delegation, NAFO/FC Working Paper 96/15 was prepared by Canada in consultation with Russia and so is acceptable to Russia. In response to a question for clarification by Denmark, the Representative of Russia responded that the derogation is to apply only in **divisions 3LN**.

The Chairman, with the agreement of the Contracting Parties, noted that the 90mm net fishery of redfish would apply to Russian vessels and the Meeting **adopted** the proposal (FC Doc. 96/9) and **requested** that Russia provide all

information on this issue for review by STACTIC and the Scientific Council so that STACTIC might advise the Fisheries Commission on the proper course of action for the future of this fishery.

4. Conservation of Fish Stocks in the Regulatory Area (items 10-15)

- 4.1 Before the presentation of the scientific advice, a slide presentation was given by the Chairman of the Standing Committee on Fisheries Environment (STACFEN), Dr. M. Stein (EU), on the current state of the environment in the Northwest Atlantic.
- 4.2 With respect to climatic conditions, the Representative of Norway asked if there is any relationship between the cold climate and the seal population in the Northwest Atlantic. In response, the Chairman of the Scientific Council stated that this relationship is not presently known, and pointed out that this issue was covered in last year's presentation to the Fisheries Commission.
- 4.3 For item 10 of the FC Agenda, the Chairman of the Scientific Council, Mr. W. R. Bowering (Canada) gave a summary of SCS Doc. 96/16, "Report of the Scientific Council, 5-19 June 1996" which provided scientific advice for the management of fish stocks in the NAFO Regulatory Area for 1997. He summarized this advice stock by stock as set out below.
- | | |
|--------------------------|---|
| Shrimp 3M | -catches at the lowest possible level |
| Cod 3M | -no directed fishery + lowest possible bycatch |
| Cod 3NO | -no directed fishery + lowest possible bycatch |
| Redfish 3LN | -not to exceed 14 000 tons |
| Redfish 3M | -not to exceed 20 000 tons |
| American plaice 3LNO | -no directed fishery + lowest possible bycatch |
| American plaice 3M | -no directed fishery + lowest possible bycatch |
| Witch flounder 3NO | -no directed fishery + lowest possible bycatch |
| Yellowtail flounder 3LNO | -no directed fishery + lowest possible bycatch |
| Greenland halibut 3LMNO | -catch should not exceed current TAC of 20 000 tons |
| Capelin 3NO | -no advice possible |
| Squid SA 3 & 4 | -no advice possible |
- 4.4 The presentation was followed by clarification from the Chairman of the Scientific Council on several on-going questions.
- 4.5 Regarding questions relating to the stock separation of cod in Div 2J3KL and the proportion of biomass of the cod stock in the RA, the Scientific Council concluded that it was appropriate to assess 3L cod as a unit of the 2J3KL stock complex. Currently there is no new information available that would change this conclusion.
- 4.6 With respect to the proportion of the cod biomass in 3L in the RA, the data have been updated to include the 1995 research vessel survey data. Estimates from these surveys indicate that the recent biomass of the 2J3KL cod stock is only about 1% of what it was in the 1980s. Mr. Bowering pointed out that estimates of proportions of biomass within and outside the RA can often be based on very small levels of catch and should be treated with caution.

- 4.7 Regarding the interrelation between seals and commercial fish stocks, much information was presented to this Commission last year as a result of a special symposium and a workshop on seals. No new information has been made available to the Scientific Council regarding this issue.
- 4.8 Regarding the question on coordinated research on Greenland halibut, a proposal was made last year concerning a synoptic survey throughout the range of its distribution from Davis Strait to the Flemish Cap. This survey was not carried out due to time, vessel support and funding considerations, but steps have been taken by the Scientific Council to deal with the currently limited survey coverage for Greenland halibut.
- 4.9 As to the question of a split TAC for Greenland halibut in SA2 + 3K versus 3LMNO, no new data were available in advance of the June 1996 meeting (or to date), and until survey coverage is extended throughout the range of the management area, a precise estimate of proportional distribution will not be available.
- 4.10 Regarding the question on further measures to protect juvenile fish of regulated species, particularly area and seasonal closures, the Scientific Council has concluded that species with a single well-defined nursery area could benefit from a closed area through enhanced juvenile survival. A year-round closure to all gears likely to catch juveniles of that species would be necessary for success, as seasonal and fleet-specific closures have generally not been successful in other areas. A sufficiently large closed area would also offer protection to other species. More traditional measures such as effort and catch restrictions, mesh size regulations, and improved selectivity of fishing gear can also contribute if enforcement is maintained. He stated that the Council is presently unable to quantify the effects of area closures, but effective area closures will require: precise definition of the species to be protected; careful definition of the boundaries with regard to species distribution; thorough understanding of the benefits to the fisheries to be effected; and the impacts of such closures on fishing fleets.
- 4.11 With respect to the optimum minimum fish sizes, especially in terms of yield per recruit; the Scientific Council examined information on yield and spawning stock biomass per recruit for 3LNO American plaice with a view to specifying an optimal size at first capture. The analysis indicated that while significant gains in terms of maximizing yield per recruit could not be realized by restricting the size of first entry to the fishery, gains in spawning stock biomass per recruit could be achieved through an increase in size at first capture. Alternative management objectives relating to a safe level of spawning stock biomass per recruit for this stock were considered, but the time series of data on spawning stock size and recruitment is insufficient to define a stock recruit relationship. Hence, it is not possible to identify the safe level of spawning stock size for this resource and an optimal minimum size for 3LNO American plaice cannot presently be determined.
- 4.12 In response to a request for information regarding 2J3KL witch flounder, the Chairman of the Scientific Council stated that the issue was not on the Agenda when the SC Report was compiled, however he stated that the Council would examine the request and respond.
- 4.13 The presentation was followed by further questions and requests for clarification by Contracting Parties.

- 4.14 With respect to 3M shrimp, the Representative of Denmark asked for an explanation regarding the indication of a 70% decline in the female component of 1993-1996 commercial catches. Also, he asked why the special comments to the SC Report state that the effort regulation did not reduce the exploitation of the 3M shrimp stock. Mr. Bowering responded that effort regulations imposed in 1996 did not reduce the exploitation of 3M shrimp due in particular to gains in efficiency such as the use of twin trawls and alterations in vessel speed. Hence, measures of effort based on numbers of vessels or fishing days are not a reflection of actual effective effort. Decline in female spawning stock biomass is related to the 1988 year class, which essentially made up the spawning stock biomass since the fishery began in 1993. As this year class declined through mortality, so did the spawning stock biomass. Nothing further came in until the 1993 year class, which has proven to be very strong as well, but has not yet changed sex and begun to contribute to the spawning stock. In response to further questioning regarding the scientific basis for the 1994 year class assessment, he cited the lack of two year old shrimp in the 1995 and 1996 surveys.

The Representative of Norway asked if the ratio between males and females in 3M shrimp is currently very different from that of other exploited stocks. He also asked if the Scientific Council had known last year that the 3M shrimp stock was at 50 000 tons, would they have recommended a closure of the fishery. The Chairman of the Scientific Council responded that by the time fishing began, the large 1988 year class was already female and a spawning component and it essentially comprised the fishery through 1995. However, the 1988 year class spawned a very large 1993 year class which has been fished for the last two years. It is difficult to say if there is any stock recruit relationship to that since the 1988 year class came from a very low spawning stock and the 1993 came from a very large spawning stock. Currently no real similarity exists between this and other stocks. Regarding closure of the fishery and 1993 year class strength, the 1995 and 1996 fisheries were almost entirely on the males, which is of great concern. NAFO will now never know the potential of the 1993 year class as a spawning stock and was unable to anticipate its large size due to a lack of data. This lack of data also makes it difficult to answer Iceland's question whether a total catch of 33,000 tons in 1997 would lead to a continuation of the present over-exploitation. This question was referred to the Scientific Council.

Note: (by the Secretariat) The Scientific Council considered the relative size of the 1988-1993 year-classes as well, their realized and potential yield to the fishery and advised that there would be an extremely high risk that the catch of 33,000 tons in 1997 will lead to a continuation of the present over-exploitation situation (SCS Doc. 96/17).

- 4.15 In discussions on 3M Cod, the Representative of Denmark asked why the Scientific Council changed its advice from a TAC last year to a moratorium this year. Canada further asked what the preliminary result of this year's EU surveys indicated for this stock. Mr. Bowering stated that 1995 EU survey data indicated a dramatic decline in the fishery to the lowest historical level with 1992-1994 year class recruitment very weak. The preliminary results of the 1996 EU survey shows that the situation is continued.
- 4.16 Regarding Greenland halibut, the Representative of the EU noted that the SC Report says that the Greenland Halibut fishery takes place on immature fish. He pointed out that the size at age of maturity for males and females in this species is different, with

females maturing at around 60cm and males maturing at shorter sizes. Therefore, while the statement of the SC Report may be true for females, it may not be true for males. He also asked Mr. Bowering for clarification on the shape of the exploitation pattern for this species and the relationship between mesh size and catch efficiency on larger fish. The EU then stated that if the fishing level on immature fish is reduced, we may expect a higher biomass of mature fish. But if the capacity of the 130mm mesh to retain larger fish is lower, we may end up with more biomass at sea, but not necessarily to higher long-term yields in the fishery. Mr. Bowering agreed with the EU observation that the SC Report references to juveniles mostly refer to the females in the stock. This is due to the common measurement of stock productivity based on egg-bearing females and the fact that males and females are not separated in these stocks. The exploitation pattern in these stocks is difficult to determine, although trawl patterns are probably more dome shaped. How much can be expected from larger spawning stock sizes is not known, but the probability of better productivity comes with a larger spawning stock size.

The Chairman of the Scientific Council, in response to a question by Canada concerning the adoption of a 145mm mesh size in the NRA (such as implemented by Canada), said that an increase in mesh size to 145mm would be a move in the right direction and stated that current mesh size would allow a 25% retention rate of about 30-35cm. Whereas the benchmark for 50% maturity for females was about 60cm, a 145mm mesh size would more adequately address this issue. Last year's SC Report stated that around 190-200mm mesh size was probably necessary to "delay recruitment to the fishery until about 60cm...".

- 4.17 In response to a question by Canada regarding 3M redfish, the Chairman of the Scientific Council stated that the 20 000 ton TAC recommended by the Council includes all catches, including unreported redfish bycatches in the shrimp fishery. In response to a request by the Representative of Denmark for clarification regarding the relationship between the reduction of bar spacings and the level of 3M redfish bycatch, Mr. Bowering noted out that Flemish Cap redfish have a good year class every 6-10 years, and that 1989 was very good with small sizes that contributed to the 1993-1994 bycatch. However, the reduction in bar sizes occurred at the same time as the 1989 year class grew to sizes that would not have been affected even had the bar size not been changed. Therefore the relationship between this conservation measure and the bycatch level is difficult to establish. Furthermore, in response to a request for clarification by the EU, Mr. Bowering stated that it is difficult to quantify the effect of redfish bycatch in the shrimp fishery and he pointed out that detailed projections showing this effect could be found in the SC Reports from 1995.

Canada asked for further clarification of the Scientific Council recommendation not to exceed 14 000 tons of 3LN redfish in 1997. Mr. Bowering stated that although it had been determined that the upper limit should be around 14 000 tons, an exact recommendation was difficult due to insufficient data. Many years of catches at or below this level will be necessary for proper evaluation of the stock. Continued poor recruitment will result in reduced spawning and recruit biomass. Even if a good year class occurs, it will take 7-10 years for corresponding catches to improve due to the slow growth rate of redfish.

- 4.18 Regarding 3LNO American plaice and 3LNO yellowtail flounder, the EU noted that there are some inconsistencies between the data of two different time series obtained by different sets of surveys, with the longer time series indicating a clear downward trend while the juvenile abundance surveys show a different picture (see SC Report: pages 77-79, fig. 25 & 27 and pages 87-89, fig. 35 & 37). He asked that given the inconsistency between these two sets of surveys and abundance indexes, what weight the Scientific Council has given to these data in the preparation of the management recommendations.

The Chairman of the Scientific Council stated that there was considerable debate over the time series of these surveys and that the Council recognized that the value for 1994 was unusually high. Given that the remaining survey values indicated a much more normal level of fluctuation, these data were used in setting the management recommendations with some consideration given to the high 1994 value as well. Regarding discards, it has been suggested that one way to deal with bycatch is through the use of closed areas. The EU asked in the case a closed area was established, what would be the minimum extension of this area (as a percentage of the total area of distribution of the juveniles of the species in question) to be effective for conservation. Mr. Bowering responded that this was discussed at length at the Scientific Council meeting in June. Generally the area would be on the Southeast Shoal, which is equidistant inside and outside of the Canadian EEZ. The juvenile area, however, covers a more significant section of the RA. American plaice is a separate issue and probably has several different areas that might be considered for closures.

- 4.19 For FC Agenda items 11 and 12, the Chairman noted that discussions on management and technical measures for fish stocks in the Regulatory Area and fish straddling national limits would develop stock by stock as usual.
- 4.20 Regarding 3M cod, the Representative of Denmark stated that it could not support a moratorium, citing good longline catches in accordance with the 1995 recommended TAC and improvements introduced into the fishery. The Representative of Canada, stressed the clear, longstanding Scientific Council advice on this stock and questioned how NAFO would justify a directed 3M cod fishery to non-Contracting Parties and others, especially given recent discussions concerning the use of the precautionary approach.
- 4.21 In consideration of 3M redfish, the Representative of Canada stated that he supported the Scientific Council advice that the catch should not exceed 20 000 tons particularly taking into account the significant bycatch of redfish in the 3M shrimp fishery. Japan, supported by the EU, Lithuania and Estonia, expressed concern over the new advice and called for a continuation of the status quo. He pointed out that the SC Report indicates that the catch is much less than 20 000 t and that a reduction in TAC would only penalize small fishing nations, as the larger countries do not use their entire quotas.
- 4.22 Regarding 3M shrimp, a number of Contracting Parties expressed concern over the objection and subsequent fishing activities of Iceland during the 1995 effort regulated fishery. Canada called for a moratorium, citing the poor status of the spawning stock and incomplete scientific data. The Representative of Denmark, supported by Estonia, Norway and Lithuania, supported the continuation of the effort-based system initiated in 1995 as long as all Contracting Parties participate. Others, including Latvia, the

United States, Japan, Cuba and France also agreed, but expressed concern over the possibility of large increases in effort in the future and called for a careful examination of the effort system with a view to establishing an appropriate management framework. The Representative of Russia proposed a status quo on last year's effort system, with the understanding that extensive scientific research should begin immediately in order to set a TAC in the future. He further stressed that any fishing activities should take place within the framework of NAFO.

The Representative of Iceland stated that they objected to the effort-based system last year because it is not economically efficient and would not lead to setting a reliable TAC system which Iceland feels is necessary to effective management. In explaining this position, he cited: the inability of the effort system to keep total catches within set limits; the difficulty in quantifying fishing days; and ability of vessels to increase catch without a reflection on effort through the use of new technology. He also expressed concern over transparency in the reporting system and non-Contracting Party activities in the fishery.

- 4.23 With respect to redfish in Div. 3LN, the Representative of Latvia, supported by Lithuania, France and Japan supported the Scientific Council advice of 14 000 tons. The United States also supported the suggested TAC, but emphasized the language "not to exceed..." in the advice and pointed out that 11 000 tons would achieve this goal. He further stated that the allocation formula might be the source of the problem in 3LN and that perhaps it should be reevaluated. Canada called for a continuation of last year's TAC (set at 11 000 tons).
- 4.24 Regarding 3LNO shrimp, while the Representative of Denmark stated that he saw no reason not to have a fishery, Canada expressed the view that, given the flatfish and redfish bycatch, lack of shrimp in the area and the situation in the 3M shrimp fishery, continuation of the trawl moratorium is appropriate.
- 4.25 In consideration of 3LMNO Greenland halibut, the Representative of Canada proposed that the TAC remain at the 1996 level of 20 000 tons, and stated that Canada would continue to manage 2+3K Greenland halibut at a level of up to 7 000 tons. Regarding catch of juvenile fish in this area, Canada further proposed an increase in mesh size to 145 mm and that the minimum fish size be increased to 35 cm. The EU expressed support for a 20 000 ton catch limit.
- 4.26 With respect to the cod stock in Div. 2J3KL, the Representative of Canada supported continuation of the moratorium and noted the proposal for a long term solution in a draft Resolution on the management and allocation of this stock (NAFO/FC Working Paper 96/6). At the closing session, the Fisheries Commission **adopted** the proposal on the sharing of the 2J3KL cod stock as a part of the NAFO Conservation Measures (FC Working Paper 96/14 and FC Doc. 96/10). The Chairman restated that the Fisheries Commission will act in accordance with Article XI of the Convention just as it does by adopting the proposal not to allow, for 1997, a directed fishery for 2J3KL cod in 3L (FC Doc. 96/7) (see point 4.29).
- 4.27 The Chairman then noted that further discussion would be unnecessary for the remaining stocks and, in the absence of comments, the decisions of the previous year concerning these stocks would be rolled over. No comments were offered.

4.28 The Representative of the United States made a statement regarding the treatment of newcomers in respect of fishing opportunities in the NAFO RA. The United States and France had consulted and agreed that as coastal States with long traditions of fishing in the area, they were entitled to fully participate in the fishery. It is important that NAFO (and other international fisheries regulatory bodies) recognize and accommodate the interests of new coastal State members in the RA. Otherwise, joining becomes a penalty. He stressed that this issue should be fully addressed by the members and worked out in the course of these meetings. The United States and France issued a joint statement on this topic along with quota requests for this year. (Annex 8)

4.29 The Chairman noted that after considerable discussion, **consensus had been reached** in Heads of Delegation meetings around the following proposals:

Cod 3M	-6 000 tons
Redfish 3M	-26 000 tons (1997 quota of Bulgaria is divided among; Denmark, Korea, the United States and France each receiving 90 tons and remainder attributed to "others")
American plaice 3M	-no directed fishery
Shrimp 3M	-effort limitation (with reservation by one Contracting Party; measure and amendments in NAFO FC Working Paper 96/12 and FC Doc 96/5)
Cod 3NO	-no directed fishery
Redfish 3LN	-11 000 tons
American plaice 3LNO	-no directed fishery
Yellowtail flounder 3LNO	-no directed fishery
Witch flounder 3NO	-no directed fishery
Capelin 3NO	-no directed fishery
Squid (Illex) (SA 3 & 4)	-150 000 tons (with 2 000 tons each to France and the United States from part not assigned to Contracting Parties)
Shrimp 3LNO	-no directed fishery
Greenland halibut 3LMNO	-20 000 tons
Cod 2J3KL in NRA	-no directed fishery (with measures as outlined in NAFO FC Doc. 96/10 being applied when a decision is taken to allow the resumption of fishing for 2J3KL cod in the NRA)

4.30 The Scientific Council management advice and responses to special requests (including those regarding 2J3KL witch flounder and 3M shrimp) are found in NAFO/SC Working Paper 96/46.

4.31 The Fisheries Commission then **adopted the Quota Table** (Annex 9). The Chairman then asked for statements from Contracting Parties regarding the decisions outlined.

- 4.32 The Representative of Iceland, citing the Scientific Council advice, pointed out that the condition of the 3M shrimp stock calls for a significant reduction in total catch and that this reduction cannot be achieved effectively in the absence of a set TAC that is divided among Contracting Parties. He stated that given the serious inadequacies and the economic inefficiencies that an effort-based system leads to, Iceland objected to this system last year and does not support it for this year. He further stated that Iceland intends to limit, though unilateral quota, the fishing activities of its vessels in 3M in order to ensure that the total Icelandic catch in 1997 will be significantly reduced from the current levels.
- 4.33 The Representative of Latvia expressed concern that some decisions are being made without proper scientific and informational basis. He also emphasized that decisions must take into account the interests of all parties, and asked to incorporate his Statement in the FC Report (Annex 10).
- 4.34 The Representative of Denmark stated that the management measures must be seen as a package. However, he expressed the view that a moratorium on 3M cod is unnecessary and called for a TAC of 6 000 tons. In respect to 3M shrimp, he supported the decisions taken regarding effort-based management and the use of grids and other technical improvements to address the bycatch problem, but pointed out that all Contracting Parties must participate in these solutions in order for success. He stressed that an objection by one Party could lead to further objections and would be a serious detriment to the stock. With respect to 3LNO shrimp, he stressed the connection between this and the 3M stock.
- 4.35 Regarding FC Agenda item 13(a), Fisheries Commission's Request for Scientific Advice on Management in 1998 of Certain Stocks in Subareas 3 and 4, the Chairman requested that Contracting Parties draft requests to the Scientific Council ahead of time to allow for speedy presentation and adoption. The resulting NAFO/FC Working Paper 96/13 also incorporates language relating to the precautionary approach and hence addresses FC Agenda item 13(b).
- The Representative of the European Union stated that paragraph 4 of the Working Paper should include 2J3KL stocks. The Canadian Representative responded that the request for information on these stocks would be included in the Canadian request. The Fisheries Commission adopted the document (Annex 11).
- 4.36 Regarding FC Agenda item 14, the Representative of Denmark reiterated his remarks of previous years dealing with the transfer of quotas between Contracting Parties (page 196, item 4.20 of the 1995 Meeting Proceedings) asking to keep this issue on the FC agenda for the next meeting.
- 4.37 Regarding FC Agenda item 15(a), the Representative of Iceland pointed out that there are several components of the existing conservation and management measures that together could secure information necessary to sound management. He called for improvement of the provisions relating to: submittal of reports on provisional monthly catches and annual catches from Contracting Parties; at-sea inspections; and the hail system, noting that proper implementation and further development are possible. He expressed concern that on board observers are inefficient and not always necessary and

stated that Iceland does not support this obligation beyond 1997. Citing technological developments of recent years, he further stated that it should be possible to have a more effective control system at a lower cost than presently in place. The European Union asked that STACTIC attempt to harmonize the language of this issue in order to allow for Contracting Parties to better express their perceptions of this issue.

It was **agreed** that a STACTIC intersessional meeting would take place in June 1997 and that reports regarding the status of Contracting Party efforts in this area would be due in May 1997. The draft agenda for the meeting was proposed by the Chair (Mr. Koster) as attached in Annex 12.

- 4.38 With regard to FC Agenda item 15(b), the Chairman noted that a summary of the Workshop on Compatibility and Applicability of Discard/Retention Rules for Conservation and Utilization of Fishery Resources in the Northwest Atlantic had been distributed to delegations (Annex 13). He asked that any observations regarding issues addressed in this workshop be presented to the Scientific Council and STACTIC at this time. The report was received by the Meeting for further consideration.
- 4.39 Regarding the Workshop report, the Representative of Norway asked what guidelines the Scientific Council would suggest for achieving the goal outlined in section 4, paragraph 4, that NAFO observers play a more efficient role in collecting full information on discards. The Chairman pointed out that this issue might also be considered by STACTIC. The Representative of Denmark pointed out the connections between this issue and those raised on page 4 of the STACTIC Report.

5. Closing Procedures (items 16-18)

- 5.1 Regarding FC Agenda item 16, it was agreed that the Fisheries Commission Annual Meeting, 1997, would take place in St. John's, Newfoundland, Canada, 15-19 September.
- 5.2 Item 17, Other Business; there was no other business discussed at the meeting.
- 5.3 Item 18, Adjournment; the Annual Meeting of the Fisheries Commission was adjourned at 1430 on 13 September 1996.

Adoption of the Report

The Report of the Fisheries Commission including proceedings of its Committee - STACTIC - has been finalized through two (2) circulations of the drafts to the Heads of Delegations and, therefore, adopted in accordance with the established procedure.

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- M. H. Testa, Special Counsel, National Audubon Society, 32 Wildwood Dr., New York, NY 11024

SECRETARIAT

- L. I. Chepel, Executive Secretary
- T. Amaratunga, Assistant Executive Secretary
- F. D. Keating, Administrative Assistant
- B. J. Cruikshank, Senior Secretary
- S. Goodick, Accounting Officer
- D. C. A. Auby, Clerk-Typist
- G. Moulton, Statistical Officer
- F. E. Perry, Desktop Publishing/Documents Clerk

Annex 2. Opening Remarks by Denmark (in respect of Faroe Islands and Greenland)

Mr. Chairman, this is a very important meeting in NAFO. This year there has not been a row of meetings as we had last year which resulted in the incorporation of many improvements of the enforcement measures which laid down the groundwork for the management of shrimp and 3M cod, recovery and rebuilding of the Greenland halibut, cod and flatfish currently under NAFO moratorium.

At the last year meeting NAFO managed to find a very important improvement of the NAFO Conservation and Enforcement Scheme regarding the shrimp fishery where the shrimp countries worked out an effort limitation which applied with the precautionary approach in principle and measures were established as an effort limitation by limitation of fishing days and number of vessels involved from each Contracting Party.

In addition improvements were introduced to solve the by-catch problem by mandatory using of sorting grids together with other technical improvements.

Mr. Chairman, everyone here is aware of the importance the shrimp countries attached with the adoption of the shrimp management measures agreed on the last annual meeting and we were more or less proud of it.

When looking at the result of how this effort limitation has worked out in practice this year many Contracting Parties are very disappointed in the observation of how some Contracting Parties increased their effort significantly.

Therefore Mr. Chairman, we fully understand the need of the implementation of precautionary approach to the NAFO managed stocks which should be introduced after consultations over a certain period.

In our waters we have a lot of experience when choosing between an effort limitation system including technical measures or a high graded fishery under a quota management regime.

This meeting is an historic opportunity for NAFO to demonstrate to the world that even objections benefit to Parties with the purpose only to maximize their fishing possibilities NAFO should be able to adopt effective conservation and management measures related to all species which we are responsible to regulate.

Annex 3. Opening Statement by the Head of Canadian Delegation

- Our challenge continues to be the conservation and rebuilding of the stocks of the northwest Atlantic.
- The assessments and recommendations of the Scientific Council underline the need for continuing restraint and vigilance in surveillance and enforcement of the fishing rules decided by NAFO to ensure juvenile fish are protected. The observer and satellite tracking pilot projects are important elements for stock rebuilding.
- The Scientific Council recommends continuing in 1997 current moratoria on fishing for groundfish stocks.
- The advice of the Scientific Council is especially serious with respect to 3M cod; the total stock biomass in 1995 is described as "the lowest on record".
- The Scientific Council also reported that 2J3KL cod remains at a very low level. Canada will seek to continue the moratorium on fishing for this stock in the NAFO area and will later table formally a proposal to facilitate conservation of 2J3KL cod in the long term.
- I also wish to inform NAFO that Canada currently has a moratorium on fishing inside the Canadian zone for 2J3KL witch flounder. Canadian scientists indicated that this stock remains at an extremely low level and that any exploitation in its present state continues to be unjustifiable from a conservation perspective. Accordingly, Canada is proposing that NAFO adopt a moratorium on 2J3KL witch flounder in the Regulatory Area to ensure effectiveness of the measures taken by Canada in its own waters.
- We must also be alert to other danger signals reported by the Scientific Council: high by-catches of juvenile redfish in the 3M shrimp fishery; a high proportion of catches of young, immature Greenland halibut; and signs of poor recruitment in 3LN redfish.
- It is clearly not yet time for us to begin to benefit from the restraint and vigilance we have practised over the past few years. It may be worthwhile to consider modifying or extending conservation measures or introducing new ones.
- In the NRA we must continue to persevere. For certain stocks, we may have to tighten our belts even more before we reach our goal. This will not be easy for any Contracting Party. Canada's objective is sustainable fisheries for all traditional users in the northwest Atlantic. I and other members of the Canadian delegation are here this week to work and cooperate with all of you toward achievement of that goal.
- Further to my reference above to 2J3KL witch flounder, Canada seeks the consent of the Fisheries Commission to request that the Scientific Council review available information, including any Canadian assessment documentation, and provide advice on the status of the 2J3KL witch flounder resource. Any information pertaining to the relative distribution of the resource within the stock area, as well as changes in this distribution over time should also be provided.

Annex 4. Opening Statement by the Representative of the United States of America

Mr. Chairman, Ladies, and Gentlemen,

On behalf of the U.S. delegation, it is my honor and pleasure to participate in the 18th Annual Meeting of NAFO. We are pleased to be able to join as a full and active partner in the conservation, management, and recovery of the fish stocks throughout the Northwest Atlantic region. We are also in the debt of the Government of the Russian Federation and the Russian delegation to this meeting for the excellent meeting facilities and the welcome we have received here.

Our interest in the fisheries covered by NAFO dates back over two centuries, when Thomas Jefferson, then Secretary of State, was asked to report to Congress on the declining harvests in the U.S. and Canadian Atlantic fisheries. So, you see, we have been at this business for a very long time.

We were a founding member of International Commission for the Northwest Atlantic Fisheries (ICNAF), NAFO's predecessor, in the period 1950-1979 and an active participant in the negotiation of the Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries. Our scientific contributions from the creation of ICNAF to the present are unbroken, and we have attended every meeting of NAFO as an observer. We are happy to take our place today as one of the four coastal States.

The U.S. delegation has three primary interests for the 18th Annual Meeting. First, we are here to promote the conservation, management, and recovery of fish stocks addressed by NAFO. Second, through good stewardship and advancing toward the goal of sustainable fisheries, the United States looks forward to participation in the allocation of benefits and restored fishing opportunities that are the common goals of this organization and that are consistent both with our historical participation in these fisheries and our contributions to their management. Third, we also intend to work toward further strengthening NAFO consistent with the United Nations (UN) Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks, which the United States became a Party to on August 21, 1996, and the Food and Agriculture Organization Code of Conduct for Responsible Fisheries, which the United States is taking steps to implement both domestically and internationally. Believing that NAFO should not wait until the UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks comes into force to implement some of its key provisions, we have offered proposals for NAFO to begin to address and implement the precautionary approach to fisheries management and conservation and transparency to open NAFO's decision-making processes to greater participation by appropriate intergovernmental and non-governmental organizations.

The U.S. delegation welcomes the opportunity to work with other delegations and the NAFO Secretariat in achieving equitable and sustainable development of the fisheries resources of the Northwest Atlantic Ocean. We intend to support your leadership, Mr. Chairman, and the efforts of all other delegations toward these objectives. Thank you very much.

Annex 5. Opening Statement by the Representative of the European Union

Mr. Chairman, distinguished Delegates, Ladies and Gentlemen,

I am pleased to see representatives of two new Contracting Parties now sitting at this table. My delegation and I bid the representatives of the United States of America and France (in respect of Saint Pierre and Miquelon) welcome in this forum. It is clear to me that with the accession of these two new Contracting Parties and potential new ones, NAFO as the appropriate regional fisheries organization will be strengthened.

I also have much pleasure in informing you that on 25 June 1996, the Community accepted the "FAO Compliance Agreement" and on 26 June 1996, it signed the UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks. Furthermore, I wish to refer to the Code of Conduct for Responsible Fisheries which was adopted in the FAO context in autumn 1995. Principles enshrined in all of these instruments will be relevant for the work within NAFO. However, in the implementation of these principles, NAFO will have to start an exercise of careful scrutiny and then elaborate comprehensive solutions which have due regard to the peculiarities of the fish stocks in the Northwest Atlantic region.

Last year's Annual Meeting was particularly successful. Enhanced cooperation in the effective conservation of the fish stocks concerned was put to a successful test. The set of measures adopted on that occasion made the waters covered by NAFO the most strictly regulated international fishing area in the world and, hence, they set the scene for other regional fisheries organizations. Our experience with these measures so far shows that they are workable and yield a high degree of conservation of the fish stocks concerned.

Against this background, this year's meeting will be more of a consolidation exercise. We have to bear in mind the risk of over-regulation which might lead to a loss of support from the fishermen concerned who, after all, have to live with and abide by the adopted measures. Our main challenge continues to be effective conservation through cooperation of all NAFO members involved and, on that basis, sensible management decisions which lead to the recovery of the fish stocks. Here again the long-term interest of fishermen comes into play, the task being to spare fishermen from being caught in a vicious circle with dwindling resources triggering higher, if not ruinous, competition. Furthermore, new elements will come under review, among which the elaboration of a genuine NAFO model for the application of the precautionary approach to NAFO managed fish stocks will be particularly important.

The task ahead is immense. Yet I am convinced that our ambitions cannot be high enough. With this in mind, my delegation and I are looking forward to working closely with all other Contracting Parties in a constructive way to secure an outcome of this important meeting, which is beneficial to all NAFO members.

Annex 6. Statement by the Delegate of France (in respect of St. Pierre et Miquelon)

Mr. Chairman,

First of all, being a new member of the Fisheries Commission, the Delegation of France (in respect of St. Pierre et Miquelon) would like to express its thanks for the NAFO support. The Archipelago of St. Pierre et Miquelon probably not well known to the participants. Nevertheless, the population of the Archipelago has been at all times living from the sea fish resources for more than five centuries. These resources are at stake at the moment and we are all aware that the present great fishery crisis hurts everybody. However, the whole population of St. Pierre et Miquelon is mainly dependent on sea resources and expecting to continue fisheries activity.

Mr. Chairman, I would say that the Archipelago is not completely unknown to the Participants for many reasons. First of all, many fishermen used to call to the St. Pierre harbour, and on the other hand, we were always active participants to the work of the Scientific Council providing data and scientists from IFREMER.

I would also like to stress that we are also devoted to cooperation with NAFO in order to improve monitoring and surveillance activity. We are also well aware and support the UN Agreement recently adopted. The idea of a precautionary approach mentioned by some delegates at this meeting would be very important as far as fisheries are concerned.

In conclusions, I would like to mention that St. Pierre et Miquelon located at the heart of 200-mile zone would be ready to provide any harbour facilities for monitoring and surveillance required.

Thank you Mr. Chairman and all delegates on behalf of the delegation of St. Pierre et Miquelon.

Annex 7. Agenda

I. Opening Procedure

1. Opening by the Chairman, H. Koster (EU)
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Admission of Observers
5. Publicity

II. Administrative

6. Review of Commission Membership
7. Participation of Intergovernmental and Non-governmental Organizations

III. Conservation and Enforcement Measures

8. Consideration of Improved Planning and Control of Research Vessels in the Regulatory Area
9. Report of STACTIC at the Annual Meeting

IV. Conservation of Fish Stocks in the Regulatory Area

10. Summary of Scientific Advice by the Scientific Council
11. Management and Technical Measures for Fish Stocks in the Regulatory Area
 - 11.1 Cod in Div. 3M
 - 11.2 Redfish in Div. 3M
 - 11.3 American plaice in Div. 3M
 - 11.4 Shrimp in Div. 3M
12. Management and Technical Measures for Fish Stocks Straddling National Fishing Limits
 - 12.1 Cod in Div. 3NO
 - 12.2 Redfish in Div. 3LN
 - 12.3 American plaice in Div. 3LNO
 - 12.4 Yellowtail flounder in Div. 3LNO
 - 12.5 Witch flounder in Div. 3NO

- 12.6 Capelin in Div. 3NO
- 12.7 Squid (*Illex*) in Subareas 3 and 4
- 12.8 Shrimp in Div. 3LNO
- 12.9 Greenland halibut in Div. 3LMNO
- 12.10 If available in the Regulatory Area in 1997:
 - i) Cod in Div. 2J3KL
 - ii) Witch flounder in Div. 2J3KL

- 13. Formulation of Request to the Scientific Council for:
 - a) Scientific advice on management of fish stocks in 1998
 - b) Implementation of precautionary approach to NAFO-managed stocks

- 14. Transfer of Quotas Between Contracting Parties

- 15. Consideration of other measures:
 - a) Review implementation of pilot project for observers and satellite tracking scheduled to expire on 31 December 1997
 - b) Consideration of recommendations of the Workshop on discard/retention rules

V. Closing Procedure

- 16. Time and Place of the Next Meeting
- 17. Other Business
- 18. Adjournment

**Annex 8. Common Statement on Behalf of the United States of America
and France (in respect of St. Pierre and Miquelon)**

First, we wish to thank the Contracting Parties to NAFO for allowing us to become full members of the Fisheries Commission.

As new members, we look forward to working with all the Parties in the conservation and management of the stocks.

And, as Coastal States with special recognition as defined in Article 1, paragraph 3 of the NAFO Convention, with long histories and traditions of fishing in the area, we wish to exercise our rights to participate in the fisheries in 1997 and the future. In that regard, we expect to receive appropriate quota shares.

Annex 9. Quota Table for 1997

QUOTA TABLE. Total allowable catches (TACs) and quotas (metric tons) for 1997 of particular stocks in Subareas 3 and 4 of the NAFO Convention Area. The values listed include quantities to be taken both inside and outside the 200-mile fishing zone, where applicable.

Contracting Party	Cod		Redfish		American plaice		Yellowtail		Witch		Capelin		Greenland halibut		Squid (Illex) ^{2,3}	
	Div. 3M	Div. 3NO*	Div. 3M	Div. 3LN	Div. 3M*	Div. 3LNO*	Div. 3LNO*	Div. 3LNO*	Div. 3NO*	Div. 3NO*	Div. 3LMO	Div. 3LMO	Div. 3LMO	Div. 3LMO	Subareas 3+4	
1. Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	500	
2. Canada	47	0	650	4 686	0	0	0	0	0	0	3 000	-	-	3 000	N.S. ⁴	
3. Cuba	222	-	2 275	1 078	-	-	-	-	-	-	-	-	-	-	2 250	
4. Denmark (Faroe Islands and Greenland)	1342	-	90	-	-	-	-	-	-	-	-	-	-	-	-	
5. European Union	2992	0	4 030	374	0	0	0	0	-	-	11 070	-	-	-	N.S. ⁴	
6. France (St. Pierre and Miquelon)	-	-	-	90	-	-	-	-	-	-	-	-	-	-	2000	
7. Iceland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8. Japan	-	-	520	-	-	-	-	-	-	-	2 050	-	-	-	2 250	
9. Korea	-	-	90	-	-	-	-	-	-	-	-	-	-	-	2 000	
10. Norway	555	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
11. Poland	231	-	-	-	-	-	-	-	-	-	-	-	-	-	1 000	
12. Estonia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
13. Latvia	588 ¹	0	18 005 ¹	4 796 ¹	0	-	-	-	0	0	-	-	-	-	5 000 ¹	
14. Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
15. Russia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2 550	
16. United States of America	-	-	90	-	-	-	-	-	-	-	-	-	-	-	-	
17. Others	23	0	160	66	0	0	0	0	0	0	1 330 ⁶	-	-	1 330 ⁶	2000	
Total Allowable Catch	6 000	*	26 000	11 000	*	*	*	*	*	*	20 000	*	*	150,000 ⁷		

¹ Quotas to be fished by vessels from Estonia, Latvia, Lithuania and the Russian Federation. The provisions of Part I, Section A.3 of the NAFO Conservation and Enforcement Measures shall apply.
² The opening date for the Squid (*Illex*) fishery is 1 July.
³ Any quota listed for squid may be increased by a transfer from any "coastal state" as defined in Article 1, paragraph 3 of the NAFO Convention, provided that the TAC for squid is not exceeded. Transfers made to Contracting Parties conducting fisheries for squid in the Regulatory Area shall be reported to the Executive Secretary, and the report shall be made as promptly as possible.
⁴ Not specified because the allocation to these Contracting Parties are as yet undetermined, although their sum shall not exceed the difference between the total of allocations to other Contracting Parties and the TAC.
⁵ The TAC would remain at 150 000 tonnes subject to adjustment where warranted by scientific advice.
⁶ Of which no more than 40% (532 t) may be fished before 1 May 1997 and no more than 80% (1064 t) may be fished before 1 October 1997.
⁷ Quota of Bulgaria to be distributed among Denmark (Faroe Islands & Greenland), France (St. Pierre & Miquelon), Korea, the USA and others for 1997.
 * No directed fishing. The provisions of Part I, Section A.4b) of NAFO Conservation and Enforcement Measures shall apply.

Annex 10. Statement of Latvia at the Closing Session of the Fisheries Commission

Latvia is ready to participate in any discussion when NAFO decision making. We would like to focus attention only on the way of preparation phase for these decisions. We consider some of these decisions underdeveloped, without the basis of reliable information and scientific substantiation. We are not ready for adoption of the "last minute decisions" and accept them "eyes closed". It is necessary to have beforehand a detailed description of any proposal of the Contracting Party, as well as the historical background and statistical information in order to evaluate reasonably the proposals of other Parties. It does not matter how big the interest of the country in the topic is - 99% or 0.1%. We think that the Party is a Party. Each of them has to be conformable to the same rights, responsibilities and the same obligations. Of course, there are small and big countries, bigger and smaller fishing nations, we are not against supporting of decisions covering the interests of one or other Party, but in the future we only wish to participate in the decision making, taking into account the interests of all the NAFO Community. Especially, we mean the decision making for 2J3KL cod allocation. We are unable to participate in the discussions without beforehand provision of statistical and historical information on the proposals, because it is impossible to evaluate it reasonably. In addition, there were intense discussions on the stocks which were out of the question. Nevertheless, the final decision is made by Contracting Parties. We do believe and hope that they have information enough and have carefully evaluated the topic before the acceptance.

Latvia prefers to follow the scientific recommendations for 3LN redfish to be managed on the highest possible level. We consider that there is few fish stocks in the NAFO region available for fisheries, there is no scientific, economic nor biological reasons to decrease 3LN redfish fishery. There is no intention to overcatch this stock.

Latvia cannot accept the way of national quota distribution based on the conditions as before. This year we kindly have supported the new NAFO members to obtain their quotas. The quantity of quota is small, but it is a substantial support for the participation in the Organization of these countries.

Latvia has long historical traditions for its regulatory area, but it has not any national quota. It seems like a discrimination towards our country if we compare the situation in which the previous NAFO members were as well as the newcomers are now. We are ready to make our formal position on the matter as it was during the previous years. Latvia is against block-quota and Other quotas instead of national quotas. We would like to maintain equal rights and liabilities in the Organization. But we do like to make other Contracting Parties insure that in case of objection Latvia does not intend to break the common decision of the NAFO and is not prepared for separate or autonomous decisions which caused additional problems in management of stocks, quota distribution and common decision making. We invite all the other Contracting Parties for common effort to solve these problems especially for the next session as agreed by US proposal.

Annex 11. Fisheries Commission's Request for Scientific Advice on Management in 1998 of Certain Stocks in Subareas 3 and 4

1. The Fisheries Commission with the concurrence of the Coastal State as regards the stocks below which occur within its jurisdiction, requests that the Scientific Council, at a meeting in advance of the 1997 Annual Meeting, provide advice on the scientific basis for the management of the following fish and invertebrate stocks or groups of stocks in 1998:

Cod (Div. 3NO; Div. 3M)
 Redfish (Div. 3LN; Div. 3M)
 American plaice (Div. 3LNO; Div. 3M)
 Witch flounder (Div. 3NO)
 Yellowtail flounder (Div. 3LNO)
 Capelin (Div. 3NO)
 Squid (Subareas 3 and 4)
 Shrimp (Div. 3M)
 Greenland halibut (Subareas 2 and 3)

2. The Commission and the Coastal State request the Scientific Council to consider the following options in assessing and projecting future stock levels for those stocks listed above:

- a) For those stocks subject to analytical type assessments, the status of the stock should be reviewed and management options evaluated in terms of their implications for fishable stock size in both the short and long term. As general reference points the implications of fishing at $F_{0.1}$, F_{1996} and F_{max} in 1998 and subsequent years should be evaluated. The present stock size and spawning stock size should be described in relation to those observed historically and those expected in the longer term under this range of options.

Opinions of the Scientific Council should be expressed in regard to stock size, spawning stock sizes, recruitment prospects, catch rates and TACs implied by these management strategies for 1998 and the long term. Values of F corresponding to the reference points should be given. Uncertainty in the assessment should be evaluated.

- b) For those stocks subject to general production-type assessments, the time series of data should be updated, the status of the stock should be reviewed and management options evaluated in the way described above to the extent possible. In this case, the general reference points should be the level of fishing effort or fishing mortality (F) which is calculated to be required to take the MSY catch in the long term and two-thirds of that effort level.
- c) For those resources of which only general biological and/or catch data are available, no standard criteria on which to base advice can be established. The evidence on the stock should be evaluated in the context of management requirements for the long-term sustainability.

- d) Spawning stock biomass levels that might be considered necessary for maintenance of sustained recruitment should be recommended for each stock. In those cases where present spawning stock size is a matter of scientific concern in relation to the continuing productive potential of the stock, management options should be offered that specifically respond to such concerns.
- e) Presentation of the results should include the following:
- i) for stocks for which analytical type assessments are possible:
 - a graph of yield and fishing mortality for at least the past 10 years.
 - a graph of spawning stock biomass and recruitment levels for at least the past 10 years.
 - a graph of catch options for the year 1998 over a range of fishing mortality rates (F) at least from $F_{0.1}$ to F_{max} .
 - a graph showing spawning stock biomass at 1/1/1999 corresponding to each catch option.
 - graphs showing the yield-per-recruit and spawning stock per-recruit values for a range of fishing mortality.
 - ii) for stocks for which advice is based on general production models, the relevant graph of production on fishing mortality rate or fishing effort.

In all cases the three reference points, actual F, F_{max} and $F_{0.1}$ should be shown.

3. The Fisheries Commission with the concurrence of the Coastal State requests that the Scientific Council continue to provide information, if available, on the stock separation in Div. 2J+3KL and the proportion of the biomass of the cod stock in Div. 3L in the Regulatory Area. Information is also requested on the age composition of that portion of the stock occurring in the Regulatory Area.
4. The Fisheries Commission requests that the Scientific Council comment on Article 6 and Annex II of the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks; and provide the following information for the 1997 Annual Meeting of the Fisheries Commission, a report that includes for all stocks under the responsibility of the Fisheries Commission (i.e. cod in 3M and 3NO, American plaice in 3M and 3LNO, yellowtail flounder in 3LNO, witch flounder in 3NO, redfish in 3M and 3LN, Greenland halibut in SA 2+ 3, capelin in 3NO, shrimp in 3M and squid in SA 3+4):
 - a) recommendation for the limit and target precautionary reference points described in Annex II indicating areas of uncertainty;

- b) information including medium term consideration and associated risk or probabilities which will assist the Commission to develop the management strategies described in paragraphs 4 and 5 of Annex II in the Agreement;
 - c) information on the research and monitoring required to evaluate and refine the reference points described in paragraphs 1 and 3 in the Agreement Annex II; these research requirements should be set out in order of priority considered appropriate by the Scientific Council; and,
 - d) any other aspect of Article 6 and Annex II of the Agreement which the Scientific Council considers useful for the implementation of the Agreement's provisions regarding the precautionary approach to capture fisheries.
5. The Fisheries Commission requests that the Scientific Council develop criteria to be evaluated *during any consideration of possible fisheries reopenings.*
6. The Fisheries Commission requests that, in 1997, the Scientific Council carry out a thorough analysis of the time series of juvenile abundance and other relevant biological data of American plaice in 3LNO and 3M, with a view to assessing the possibility to reopen the fishery.
7. The Fisheries Commission requests that, in 1997, the Scientific Council will carry out a thorough analysis of all the relevant biological data of cod in Div. 3M with a view to the possible closure of this fishery.
8. The Fisheries Commission requests that Scientific Council *review available information*, including any Canadian assessment documentation, and provide advice on the status of the 2J3KL witch flounder resource. Any information pertaining to the relative distribution of the resource within the stock area, as well as changes in this distribution over time should also be provided.
9. The Scientific Council is requested to assess possible changes in yield and spawning stock biomass of Greenland halibut in Subarea 2 and Div. 3KLMNO based on the assumption of a dome-shaped exploitation pattern and a different age of maturity and mortality rates for males and females, for the following scenarios:
- a) the current situation, and
 - b) a minimum landing size of 60 cm.

**Annex 12. Proposal re Intersessional STACTIC Meeting
(by the FC Chairman)**

The meeting would be held in Dartmouth, Nova Scotia, in June. The NAFO Secretariat would establish the specific date and inform the Contracting Parties. The purpose of the meeting is to review the general implementation of the NAFO Conservation and Enforcement Measures to determine if the measures are being properly implemented. STACTIC would also be asked to review reports on the implementation of the observer and satellite pilot project with a view to evaluating the pilot projects and providing advice to the Fisheries Commission in the 1997 annual meeting.

The agenda would be as follows:

1. Opening Remarks by Chairman of STACTIC
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Review of implementation of Conservation and Enforcement Measures with particular attention:
 - a) hail system
 - b) submission of catch statistics
 - c) operation of surveillance and inspection
 - d) review reports from the Contracting Parties with respect to the pilot project on observers and satellite tracking
 - e) establish criteria for review of the pilot project
5. Adjournment

Annex 13. Summary of the Workshop on Compatibility and Applicability of Discard/Retention Rules for Conservation and Utilization of Fishery Resources in the Northwest Atlantic

7-8 September 1996, St. Petersburg, Russia

I. Current by-catch/juvenile rules in the Northwest Atlantic have been reviewed.

All Contracting Parties apply a variety of measures for the purpose of reducing juvenile catches as well as by-catches of species in excess to applicable catch restrictions.

These measures consist of:

- changing of fishing grounds
- temporary and definitive closures of sensitive areas
- improved selectivity of gear
- minimum mesh sizes
- the use of grids
- minimum fish size
- maximum by-catch limits

These measures imply restrictions applicable to immature fish and by-catches. In some cases they are accompanied by an obligation to *discard juveniles and unauthorized by-catches* (only legal catches may be retained on board) whilst in other cases it is compulsory to keep on board and to land all catches (discard ban).

The main reason for compulsory landing of all catches is the necessity to record the total *fishing mortality* caused by fishing activities and to count all catches for quota management.

The main reason for the obligation to discard is to avoid the commercialization of such catches. During inspections at sea and in dockside inspections, inspectors can ascertain that only legal catches are retained on board. In this way, fishermen have no incentive to target illegal catches.

The main problem in applying a no-discard rule is the difficulty to achieve full compliance whilst, on the other hand, the problem related to requirements to discard lies in the fact that the unrecorded and uncontrolled discards make it difficult to assess the real fishing mortality.

Little information is available within Contracting Parties on selectivity and discards in gillnet and longline fisheries in the NAFO area.

Norway applies a discard ban for principal commercial species. *The experience with the application of this scheme shows that the very existence of a discard ban has changed fishermen's attitudes in a positive direction. In the case where in certain areas by-catch levels exceed the authorized levels trawling will be prohibited. These areas are defined on the basis of test fishing (commercial fishing vessels chartered by the authorities -*

budget 3.5 million dollars per year). The closure will last in general some weeks and the reopening is determined on the basis of test fishing. Illegal catches are landed and sold by the sales organizations but fishermen are not paid for. In order to reduce further the catch of small fish, Norway will oblige, as from 1 January 1997, the use of grids in trawl fishery for demersal species.

Canada applies a discard ban for the groundfish fishery. At the beginning of each year, quantitative catch restrictions, by-catch levels mesh sizes and fish sizes as well as monitoring rules are negotiated with the fleets authorized to carry out groundfish fishery in a certain area (small fish protocols and monitoring programmes). The expenditure for implementation of the agreed rules must be borne by the industry. If by-catches or the amount of small fish exceed prescribed limits the fishery is closed down for the whole fleet in the whole area for in principle 10 days but this period may be extended. The decision to close is based on information from observers on board of commercial fishing vessels as well as information from inspections at sea and ashore. Fishermen may market small fish or by-catches but these quantities are counted for quota registration.

In Greenland and the Faroe Islands partial discard laws have recently been introduced. In the Faroe Islands the fishery control authorities may close areas for a short period with a view to protect juvenile fish. Fishermen in these countries may freely market the landings of illegal catches.

In Iceland discarding of catch is generally prohibited. However, a release of live fish of certain length, caught by handline is mandatory. Catch may also be thrown overboard if it is diseased or if it is damaged in a manner that could not be avoided in the process of the fishing concerned. The same applies to fish species which are not subject to provisions of TAC if they are of no marketing value. Iceland has been using a system of area closures for decades to protect juvenile fish and spawning fish. This includes a mandate for the Marine Research Institute (MRI) to close areas immediately for one week if certain by-catch limit is reached upon inspection. There are several regulations concerning fishing gear. For example inspection. The use of sorting grid in the shrimp fishery is mandatory, and the minimum mesh size for cod fisheries is 155 mm. Fish kept on board under the no-discard rules may be marketed.

The European Community, the United States and Japan do not apply a discard ban.

Highgrading means that fishermen attempt to maximize the commercial value of their catch. In fact this problem is not new. Fishermen discard traditionally catches which have no commercial value. Furthermore, when the storage capacity on board is a limiting factor, low value catches are also discarded. More recently examples are observed where subject to market opportunities, the crew is charged by shipowners to discard the low value part of their legal catch. Norway mentioned the example of mackerel where individuals above 600 grammes are exported for a price which is far above the price for individuals under 600 grammes. Since no-discard rules are difficult to enforce at sea, it introduced the requirement that landings must consist of a minimum proportion of small individuals. This minimum proportion corresponds to the natural proportion of small fish in a mackerel shoal based on scientific recommendations.

- II. The NAFO Fisheries Commission has established over the last five years a management scheme which is based principally on sea inspections in the Regulatory Area (i.e. hail system, one net rule, minimum mesh size, minimum fish sizes, change of fishing area, the use of grids in shrimp fishing, full observer coverage, and 35% coverage for satellite tracking). An observer on each vessel checks the reality of catch recording whilst inspectors at sea will check the gear used as well as the presence on board of any illegal catch. Furthermore, they will compare the catch composition of the last haul with the recorded catch in the logbook and the catch stocked on board. Minimum mesh size and minimum fish size have been set with a view to reduce discard of undersized fish whilst the change of fishing area and the use of grids also contribute to a reduction in discards.
- III. The Scientific Council addressed in its 1992 report the question concerning reduction in catches of juvenile fish (closed areas, closed seasons, gear selectivity). However, there is insufficient information on discards and other unrecorded catch in order to determine the scope of the problem of by-catches of juveniles, high grading and non-targeted species. More accurate analyses can be made when more information is available. At this stage, most groundfish fisheries in the NAFO are under moratoria. The fisheries carried out currently consist of:
- shrimp fishery
 - greenland halibut fishery
 - groundfish fishery in Div. 3M
 - redfish fishery (midwater trawling)
 - occasionally some vessels target skate

The shrimp fishery caused by-catches and discards of small redfish which may have been reduced considerable by the introduction of the use of grids.

The Greenland halibut fishery is carried out with mainly by-catches of American plaice and grenadier. The discards of undersized fish are believed to be small.

Some discards will occur in the groundfish fishery and redfish fishery whilst potentially the skate trawl fishery could cause important discards when it would be carried out by many vessels using 130 mm gear. Vessels have carried out skate fishery with large mesh size trawls which avoided successfully by-catches.

Furthermore, the operation of some non-Contracting vessels (using small mesh sizes) adds to the uncertainty concerning the real fishing mortality and notably the fishing of immature fish.

- IV. Any fishing activity causes fishing mortality on the target stock as well as other stocks, individuals of which are caught in the same fishing operation. In addition to overall catch limitations, fishing management attempts on the basis of scientific advice to limit catches of immature fish as well as, when necessary, by-catches of non-targeted fish.

The instruments available to fishing management are limitation of the input in the fishery (fishing effort: number of vessels, size of the vessels and the gear and the fishing time) as well as output limitation (quantitative catch/landing restrictions such as TACs and quotas). Gear selectivity and measures to avoid fishing in sensitive areas may be used as instruments to limit juvenile catches and by-catches.

**Annex 14. List of Decisions and Actions by
the Fisheries Commission
(18th Annual Meeting; 09-13 September 1996)**

Substantive issue (propositions/motions)	Decision/Action (FC Doc. 96/13, Part I; item)
1. New members of the Fisheries Commission - France (in respect of St. Pierre et Miquelon) and United States of America.	Noted the decision by the General Council; item 2.1
2. Transparency in the FC decision-making process (Participation of Intergovernmental and Non-Governmental Organizations)	Noted: this issue was covered by the General Council discussion (items 2.2-2.10 of the GC Report); item 2.2
3. Amendments to the Conservation and Enforcement Measures (on presentation by STACTIC):	Discussed/Adopted; items 3 and 4
- Improved planning and control of research vessels in the Regulatory Area	No consensus was reached; the issue was referred to the 1997 Meeting; item 3.1
- Discard/retention rules; FC Doc. 96/6	Adopted; item 3.2(e)i)
- Type of fishing gear; W.P. 96/10 and 96/11	Agreed to refer this issue to the Scientific Council; item 3.2(e)ii)
- Sampling protocols	Agreed to forward information available to the EU delegate (T. Curran) for summary and the following review at the next STACTIC meeting; item 3.2(e)iv)
- Experimental redfish fishery for Russian vessels with 90 mm mesh size in 1997; FC Doc. 96/9 (Revised)	Adopted; item 3.3(a)
4. STACTIC Report at the Meeting (Part II)	Adopted; item 3.3
5. TACs and Regulatory Measures for major stocks in the Regulatory Area for 1997	Discussed/Adopted; item 4
- Cod 2J3KL in Reg. Area; FC Doc 96/7	Adopted: no directed fishery; item 4.29
- Cod in Div. 3M	6 000 tons
- Redfish in Div. 3M	26 000 tons
- A. plaice in Div. 3M	no directed fishery
- Cod in Div. 3NO	no directed fishery
- Redfish in Div. 3LN	11 000 tons
- A. plaice in Div. 3LNO	no directed fishery
- Yellowtail flounder in Div. 3LNO	no directed fishery

In order to assess the state of fish stocks accurately fishing mortality is an indispensable and most important parameter. When the scientists provide advice, this must be based on the total fishing mortality and not only on the quantity landed (expressed in live weight). The difference between the landed quantity and the total catch caught should be explained by *discards and/or unrecorded catches*.

For the above reason, it is extremely important that the total fishing mortality is accurately recorded. Apart from changes in sea conditions or other external reasons, the success of any management strategy will depend on the fact that actual fishing mortality is kept within the limits recommended by the scientists and set by fishing management. An efficient enforcement scheme at sea and ashore should ensure *proper recording* of basic parameters for estimation of actual fishing mortality. The NAFO observer could play a more efficient role in collecting full information on discards.

A full assessment of the efficiency and costs/benefits of different management strategies requires much more information than was made available at the workshop and should take account of the specific situation of a particular region. It was considered that measures with a view to minimize discards such as gear selectivity and avoiding fishing in sensitive areas are much more effective than the no-discard rule as such. Furthermore, it was considered that the risk of marketing illegal catches would vary according to local market characteristics.

- V. Canada has established a management system on the Grand Banks based on a coherent set of management measures. Therefore a derogation to the NAFO scheme appears justified.

The granting of a derogation to other Contracting Parties which do not apply in the NAFO Regulatory Area any alternative management measures would seriously impede on the enforcement strategy in the NAFO Regulatory Area.

Some discussion took place on possible ways in which the Fisheries Commission could manage fisheries according to alternative models. Measures concerning gear technology and changing fishing area (observers on board) fit in the current management strategy. Annual closures of fishing areas seem also feasible. However, temporary closures of areas on the basis of prefixed trigger levels should be examined carefully. In the first place the determination of the areas as well as the commencement and duration of temporary closures should be based on scientific advice (test fishing?) and decided by the Fisheries Commission. These measures should be non-discriminatory and not affect the capacity of Contracting Parties to exploit available fishing opportunities. Finally, the cost/benefit of such measures should be examined.

Substantive issue (propositions/motions)	Decision/Action (FC Doc. 96/13, Part I; item)
<ul style="list-style-type: none"> - Witch flounder in Div. 3LNO - Capelin in Div. 3NO - Squid (<i>Illex</i>) in SA 3 and 4 - Greenland halibut in Div. 3LMNO 	<ul style="list-style-type: none"> no directed fishery no directed fishery 150 000 tons 20 000 tons
6. Long-term management of the Cod stock in Div. 2J3KL; FC Doc. 96/10	Adopted; item 4.29
7. Schedule 1-Quota Table for 1997; NAFO Conservation and Enforcement Measures	Adopted; item 4.31 and Annex 9
8. Management of shrimp fishery	No directed fishery in 1997; item 4.29
- Shrimp in Div. 3LNO	Adopted: effort limitation; item 4.29
- Shrimp in Div. 3M; FC Doc. 96/5	
9. Other Conservation and Enforcement Measures	Discussed/Agreed; item 3
- Reporting deadlines on disposition of apparent infringements	Agreed: to reinforce by the Contracting Parties the deadlines (as required by Part IV.16 of the Conservation and Enforcement Measures) for reporting of their disposition of apparent infringements; item 3.2(a)
- Satellite Tracking Pilot Project	Agreed: to convene a technical experts Working Group at the NAFO Headquarters in 1997; item 3.2(c)
- Hail Reports Amendment; FC Doc. 96/5	Adopted: to include "target species" in Part III, Annex 1 of the Conservation and Enforcement Measures and establish authorized contacts between the Contracting Parties and NAFO Secretariat; item 3.2(d)
10. Request to the Scientific Council for scientific advice on management of fish stocks in 1998; FC Doc. 96/11	Adopted: item 4.35
11. Transfer of Quota between Contracting Parties; item 14	Referred to the Annual Meeting, 1997; item 4.36

Substantive issue (propositions/motions)	Decision/Action (FC Doc. 96/13, Part I; item)
12. Intersessional STACTIC Meeting, 1997	Agreed: to call the Meeting in June 1997 to discuss the general implementation of the NAFO Conservation and Enforcement Measures and, in particular, the observer satellite pilot project; the report from Contracting Parties re this issue(s) shall be done by <u>May 1997</u> ; item 4.37
13. Workshop on Compatibility and Applicability of Discard/Retention Rules; FC Doc. 96/4	Received: further observations by Contracting Parties be presented to the Scientific Council and STACTIC; item 4.38

PART II

Report of the Standing Committee on International Control (STACTIC)

18th Annual Meeting, 09-13 September 1996
St. Petersburg, Russia

1. Opening of the Meeting

The Chairman, D. Bevan (Canada) opened the meeting at 1030 on 09 September 1996. Representatives from the following Contracting Parties were present: Canada, Cuba, Denmark (in respect of the Faroe Islands and Greenland), Estonia, the European Union (EU), France (in respect of St. Pierre et Miquelon), Iceland, Japan, Latvia, Norway, Poland, Russia and the United States of America.

2. Appointment of Rapporteur

Wayne Evans (Canada) was appointed Rapporteur.

3. Adoption of Agenda

The agenda was adopted as circulated (Annex 1).

4. Review of Annual Return of Infringements

The representative from Denmark proposed that a deadline be set for reports to be submitted on the disposition of infringements.

The representative from Canada noted that deadlines are currently prescribed in the Conservation and Enforcement Measures (NAFO/FC Doc. 96/1).

The representative from Iceland indicated there was no action taken on most of the apparent infringements for vessels from Iceland for 1993 (2 apparent infringements) and 1994 (8 apparent infringements) because national legislation regarding hauls and the provisions of documentation had not been in place at that time.

STACTIC **recommended** that the Fisheries Commission reinforce with Contracting Parties that deadlines for the reporting on the disposition of apparent infringements do exist and that these deadlines be vigorously adhered to.

5. Review of Surveillance and Inspection Reports

A report was tabled by Canada reviewing Canada's surveillance activities and inspections in the Regulatory Area (STACTIC Working Paper 96/1).

The report was **accepted** and forwarded to the Fisheries Commission.

6. Review of the NAFO Observer Scheme Pilot Project and Satellite Tracking

The Chairman requested Contracting Parties to first report on the Observer Scheme Pilot Project.

Representatives from Norway, Canada, Japan, Iceland, Denmark and Russia submitted oral reports. Written reports relevant to the Observer Scheme Pilot Project are contained in STACTIC Working Papers 96/3 and 96/8.

STACTIC noted that the NAFO Observer Scheme Pilot Project has been implemented.

The Chairman requested Contracting Parties to report on Satellite Tracking. Written reports relevant to Satellite Tracking are contained in STACTIC Working Papers 96/3, 96/9, 96/12 and 96/13.

The Representative from Norway reported that it had implemented a 100% requirement for satellite tracking on its vessels fishing in 3M. The Norwegian system had an average time delay of 70 minutes in positioning from the vessels to Norway and back to NAFO.

The Representative from Norway stated that the NAFO Secretariat was not prepared to deal with the satellite tracking information received.

Representatives from Latvia, Estonia, Iceland, Canada and the EU reported that they had implemented satellite tracking on their vessels.

The Representative from Denmark reported that the Faroe Islands was not able to implement satellite tracking and will be taking the matter up with vessel owners.

The Representative from the United States reported that it will submit a report to NAFO prior to the 1997 Annual Meeting on satellite tracking being implemented in its waters.

The Secretariat noted they were unable to process and transmit data from the satellite tracking systems onboard fishing vessels.

STACTIC concluded the Pilot Project for satellite tracking was only partially implemented. While Contracting Parties have installed appropriate equipment on their fishing vessels, the Secretariat does not currently have the capability to process and transmit those data to Contracting Parties with patrol vessels in the NAFO Regulatory Area.

Respecting this issue STACTIC is forwarding 2 options to the Fisheries Commission for consideration:

- Option 1. Convene a meeting of technical experts in Dartmouth, Canada with a mandate of developing the appropriate infrastructure within the Secretariat to receive, collate and transmit data on a timely basis to the Contracting Party with patrol vessels operating in the NAFO Regulatory Area.
- Option 2. Expand the mandate of the above meeting to include evaluation of possibilities to expand the satellite tracking program.

7. Review of Operation of the Hail System

Representatives from Canada, Norway, Iceland, Denmark, the EU and the Secretariat reported on the operation of the hail system.

There was considerable discussion about hail systems in place, information they provide and what the Secretariat's role is in the hail system.

A number of delegations indicated there were problems in receiving data from the hail system.

It was noted by the Secretariat that some information required in hails was not always submitted. The Secretariat's Report on Operation of the Hail System was circulated to STACTIC (W.P. 96/7, Annex 2).

There were no further discussions on the obligations of Contracting Parties to submit data to the NAFO Secretariat.

In the discussions it was disclosed that the Secretariat had not received final catch statistics for the years 1993, 1994 and 1995. STACTIC asked the Secretariat to provide a list of missing catch statistics and which Contracting Parties have not complied. This information was provided (Annex 3). The idea of using the hail system to transmit daily catch reports was raised by Iceland.

STACTIC recommended that:

- (1) Each Contracting Party identify a contact (by name).
- (2) The Secretariat provide a calendar of deadlines to each contact person to summarize current requirements for the submission of data.
- (3) The Executive Secretary contact each identified contact person in the event data is not submitted as per requirements.

8. Discussion of Other Conservation and Enforcement Measures

- a) Compatibility and applicability of discard/retention rules for conservation and utilization of fishery resources (Workshop)

The Fisheries Commission asked that STACTIC consider what measures might be needed to improve collection of information regarding the composition and amount of discards and retained catch with a view to providing better information on fishing mortality.

STACTIC agreed that there are current measures dealing with the collection of information regarding the amount and composition of discards. Contracting Parties agreed that they will emphasize the importance of these current measures to both inspectors of Contracting Parties and fishing vessel masters. STACTIC further recommended that the following amendments to the Conservation and Enforcement Measures be implemented (STACTIC Working Paper 96/18, Revised):

Part VI - Pilot Project for Observers and Satellite Tracking

Amend para 3(b)

collect catch and effort data on a set-by-set basis. This data shall include location (latitude/longitude), depth, time of net on the bottom, catch composition and discards; in particular the observer shall collect the data on discards and retained undersized fish as outlined in the protocol developed by the Scientific Council.

Amend para 7

The vessel on which an observer is placed shall provide suitable food and lodging during the observer's deployment. Vessel masters shall ensure that all necessary cooperation is extended to observers in order for them to carry out their duties including providing access, as required, to the retained catch, and catch which is intended to be discarded.

b) Consideration of amendment of Part V. Schedule II, Attachment I (Type of Fishing Gear) and Part II of the Conservation and Enforcement Measures

Iceland introduced Working Papers 96/10 and 96/11 related to specifications to identify and measure double trawls so that effort could be more accurately determined.

Canada noted that the code has already been developed to identify use of double trawls.

In discussion Iceland noted that the reason for these proposals was to better quantify effort and better provide information for analysis by the Scientific Council.

STACTIC **recommended** that Iceland's proposal be forwarded to the Scientific Council for their consideration to determine if Icelandic proposals would provide the required information.

c) Consideration of 90 mm mesh size for mid-water trawls in redfish fishery

The Russian delegation proposed that use of 90 mm mesh size for mid-water trawls in the redfish fishery be permitted. This proposal is contained in STACTIC Working Paper 96/19.

A number of other Contracting Parties suggested there would be a need for other conservation and enforcement measures to apply in any fishery using a 90 mm mesh size in order to avoid by-catches, small fish and minimize discard. STACTIC agreed that the use of 90 mm minimum mesh size in mid-water trawls in the redfish fishery could be permitted provided that specific additional control and enforcement measures are defined and included in the NAFO Conservation and Enforcement Measures. The measures necessary to avoid increasing by-catch discards, in addition to the current 100% observer coverage provided under the pilot project, include the following:

1. 90 mm minimum mesh size applies only to midwater trawl in 3LN
2. provisions for stowage of nets when not in use

3. that small fish protocols apply
4. that by-catch protocols apply
5. provision be made for timely orders to change from 90 mm to 130 mm mesh if standards for by-catch and small fish are exceeded
6. based on advice from the Scientific Council, time and area closures could apply to avoid by-catch of fish in the NAFO Regulatory Area
7. that the permitted maximum size and dimensions of the strengthening ropes (round straps) be prescribed

STACTIC **agreed** to seek a decision from the Fisheries Commission as to whether or not they agree that STACTIC and the Scientific Council should proceed to provide further details on the changes described above that would be needed in the NAFO Conservation and Enforcement Measures.

d) Sampling protocols

Item was introduced by EU and Canada.

There were no working papers.

STACTIC **agreed** Contracting Parties would send sampling protocols now in use to Tony Curran (EU) with a view to assisting in the development of working paper to be discussed at the next STACTIC meeting.

e) Review list of apparent infringements subject to paragraph 10 in the Scheme of Joint International Inspection and Surveillance

This item was put on agenda by Canada who requested it be withdrawn. This was **agreed** to by STACTIC.

9. Time and Place of the Next Meeting

The next meeting will be in conjunction with the next Fisheries Commission meeting or subject to any decision by the Fisheries Commission to call an intersessional STACTIC meeting.

10. Other Matters

Iceland raised the issue that the STACTIC report from the 1995 meeting had indicated that Canada would pay for observer coverage in the NRA. In bilateral discussions Iceland noted that Canada would not pay and moreover the report, after being adopted by STACTIC, had been changed. The delegation from Iceland asked that the events leading to this change be explained.

STACTIC suggested that appropriate procedures should be in place for the adoption of reports and that unilateral changes should not take place.

The Executive Secretary informed STACTIC that the report had been amended as a result of a letter from Canada specifically explaining its position on the subject.

11. Adoption of Report

The draft STACTIC report was reviewed and adopted by the Committee. The Chairman, D. Bevan, was instructed to report to the Fisheries Commission.

12. Adjournment

The meeting adjourned on 12 September 1996.

Annex 1. Agenda

1. Opening by the Chairman, D. Bevan (Canada)
2. Appointment of Rapporteur
3. Adoption of Agenda
4. Review of Annual Returns of Infringements
5. Review of Surveillance and Inspection Reports
6. Review of the NAFO Observer Scheme Pilot Project and Satellite Tracking
7. Review of Operation of the Hail System
8. Discussion of Other Conservation and Enforcement Measures:
 - a) compatibility and applicability of discard/retention rules for conservation and utilization of fishery resources (Workshop)
 - b) consideration of amendment of Part V. Schedule II, Attachment I (Type of Fishing Gear) and Part II of the Conservation and Enforcement Measures
 - c) consideration of 90 mm mesh size for pelagic trawls in redfish fishery
 - d) sampling protocols
 - e) review list of apparent infringements subject to paragraph 10 in the Scheme of Joint International Inspection and Surveillance
9. Time and Place of the Next Meeting
10. Other Matters
11. Adoption of Report
12. Adjournment

Annex 2. Review of Operation of the NAFO Hail System (by NAFO Secretariat)

1. Introduction

The Hail System reports management has been in place at the NAFO Secretariat since the official adoption of the system by the Fisheries Commission (27 July 1991). The following functions were performed by the Secretariat:

- receive hails via telex or fax from Contracting Parties and verify all hail reports and their sequential numbering.
- to compile reports from different Contracting Parties/vessels and transmit via telex or fax the hails received to Contracting Parties with an inspection presence in the Regulatory Area.
- to develop the NAFO database of automated hail systems.

2. Costs and volume of hail reports, 1994-1996

	<u>1994</u>	<u>1995</u>	<u>1996</u>
Transmissions* (from NAFO)	525	786	808
Costs of transmissions (\$Cdn)	5,774.00	7,113.80	7,639.09

*Note: Each transmission from NAFO Secretariat consists of several reports of Contracting Parties forwarded to the NAFO Secretariat during one day; time of transmission approximately 1600.

3. NAFO Working Group on the NAFO automated system

The NAFO Working Group met for the first time in April 1992 and its recommendations were officially adopted by the Fisheries Commission in September 1993. The Working Group consists of Canada, the EU and NAFO Secretariat.

a) Hardware/Software

- After the initial testing between Brussels and Canada was completed, Canada donated a Personal Computer (February 1993) - a 386 with 8 megabytes of RAM, 125 megs of hard drive and SVGA monitor with DOS 5.0, Windows 3.1 and PROCOM + for Windows.
- The Secretariat then installed a 2400 baud X-25 connection.

The NAFO System was set in place by December 1993.

b) Results of Automated Testing

- Through extensive communication between participating Parties, the Secretariat was able to receive its first hail message from Brussels via the X-25 line in March of 1995.
- However, it took some time for mutual adjustment of the systems in Brussels-Ottawa-NAFO Secretariat before hail messages were received from Brussels and transferred to Canada along with all reported hails on a daily basis in February 1996.
- Finally, around the same time, the Secretariat changed from DBase to MSACCESS 7.0 and to-date have been receiving and transmitting hails on a daily basis between Brussels and Canada along with sending copies by fax.

4. Considerations and Recommendations

- a) The computerized automated hail report system developed by the Working Group as described above is suitable for the purpose and herewith recommended for incorporation by all Contracting Parties. The format of hail reports is appended (Attachment 1).
- b) Considering that this system would resemble to some extent a NAFO E-mail system of hail reports, the most important advantages of this internal NAFO communication would be - low costs, low labour and effective operativeness of all communication.
- c) The introduction of the system to its full and effective operation would require all Contracting Parties to centralize all hail reports in their headquarters and transmit the reports to the NAFO Secretariat database.

Besides of the best rationale of the automated system (costs, labour and operativeness), such procedure would streamline and monitor fishing activity by Contracting Parties in the NAFO Regulatory Area.

(Annex 2 - Attachment 1)

Vessel	Country	Report Type	Date	Time	Position	Division	Number																														
Garoya II	EHIM	VI-5 10090	European Union	Departure Report	27/06/96	08:15:48-21N 46-14W	3M	452																													
								<i>Current Stock</i>																													
								RED	30.2																												
								HKR	22.4																												
								PLA	6.1																												
								WIT	19.8																												
								GHL	396.2																												
								RNG	37.8																												
								CAT	27.5																												
								DGX	8.4																												
								SKA	24.1																												
PAN	162.3																																				
								528																													
Genny and Doug	V04 961	100646	Canada	Entry Report	10/02/96	10:30:43-25N 51-50W	3O	1																													
								V04 961	100646	Canada	Entry Report	23/02/96	01:00:43-59N 50-20W	3N	5																						
															V04 961	100646	Canada	Departure Report	25/02/96	09:00:43-28N 51-38W	3N	9															
																						V04 961	100546	Canada	Entry Report	07/05/96	10:00:46-45N 48-23W	3N	24								
																													<i>Current Stock</i>								
																													COD	1.2							
																													HAD	0.1							
																													HAL	0.3							
																													HKW	7.3							
																																					25
																													<i>Current Stock</i>								
HAL	0.4																																				
								26																													
<i>Current Stock</i>																																					
COD	1.2																																				
HAD	0.1																																				
HAL	0.4																																				
HKW	7.3																																				
								27																													
								32																													
								33																													
Gilston	OW 2183	KG-33	Faroe Islands	Departure Report	04/05/96	12:00:47-56N 45-53W	3M	34																													
								<i>Current Stock</i>																													
								PAN	398.4																												
								40																													
Gissur	TFTV	AR-6	Iceland	Entry Report	04/05/96		3M	130																													
								TFTV	AR-6	Iceland	Entry Report	07/06/96		3M	139																						
															TFTV	AR-6	Iceland	Departure Report	24/06/96	47-40N 45-54W	3M	178															
																						TFTV	AR-6	Iceland	Entry Report	01/07/96		3M	186								
																													TFTV	AR-6	Iceland	Departure Report	23/07/96	47-30N 44-06W	3M	229	

**Annex 3. Statistical Data Still Outstanding for the Years
1993, 1994 and 1995**

1993

STATLANT 21B - Final catch and effort data by month, gear, tonnage and division

Faroe Islands
France (SP)
United States of America

1994

Statlant 21A - Provisional nominal catches by species and division

Cuba
Korea
Lithuania
United States of America (partial submission due to computer change over)

STATLANT 21B - Final catch and effort data by month, gear, tonnage and division

Cuba
Denmark
Great Britain
Faroe Islands
France (SP)
Greenland
Korea
Lithuania
Norway
United States of America

1995

Statlant 21A - Provisional nominal catches by species and division

Cuba
Estonia
Faroe Islands
Lithuania
United States of America

Statlant 21B

Information not available at the present time.