SECTION VII

(pages 275 to 316)

Report of the Fisheries Commission and its Subsidiary Body (STACTIC), 19th Annual Meeting 15-19 September 1997 St. John's, Newfoundland, Canada

Report of the Fisheries Commission

Part I.

	1.	Opening Procedures	277
	2.	Administrative	277
	3.	Conservation and Enforcement Measures	278
	4.	Conservation of Fish Stocks in the Regulatory Area	282
	5.	Closing Procedures	291
		Annex 1. List of Participants	292
		Annex 2. Agenda	301
		Annex 3. Quota Table	303
		Annex 4. Declaration of France (on behalf of St. Pierre et	
		Miquelon) concerning Yellowtail Flounder in Divs. 3LNO Annex 5. Fisheries Commission's Request for Scientific Advice	304
		on Management in 1999 of Certain Stocks in SA 3 and 4	305
		Annex 6. List of Decisions and Actions by the Fisheries	
		Commission	308
Part II.	Re	port of the Standing Committee on International Control (STACTIC)	310
	1.	Opening of the Meeting	310
	2.	Appointment of Rapporteur	310
	3.	Adoption of Agenda	310
	4.	Review of Annual Return on Infringements	310
	5.	Review of Surveillance and Inspection Reports	311
	6.	Review of the Pilot Project for Observers and Satellite Tracking	311
	7.	Review of Operation of the Hail System	311
	8.	(a) Compatibility and applicability of discard/retention	
		rules for conservation and utilization of fishery resources	311
		(b) Consideration of amendment of Part V. Schedule II,	
		Attachment I (Type of Fishing Gear) and Part II of the	
		Conservation and Enforcement Measures (SC recommendations)	313

(c)Sampling Protocols.....

the Contracting Parties.....

 Party vessels
 313

 9. Other Matters
 314

 10. Time and Place of the Next Meeting
 314

 11. Adoption of Report
 314

(d) Review of disposition of outstanding infringements by

(e) Consideration of measures to prohibit at-sea transshipment activities between Contracting Parties and Non-Contracting

12.	Election o	f Chairman	315
	Annex 1.	Agenda	316

PART I

Report of the Fisheries Commission Meeting

(FC Doc. 97/14)

19th Annual Meeting, 15-19 September 1997 St. John's, Newfoundland, Canada

- 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 16 September 1997 at 15:00 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. R. Steinbock (Canada) was appointed Rapporteur.
- 1.3 The provisional Agenda was adopted. (Annex 2)
- 1.4 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 been no further applications received by the NAFO Secretariat for observer status.
- 1.5 It was agreed, for item 5 of the Fisheries Commission (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 6-8)

- 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).
- 2.2 It was agreed that item 7 of the FC Agenda, Transparency of NAFO decision-making process (participation of inter-governmental and non-governmental organizations), was covered during the previous session of General Council which referred the matter to the Working Group on Transparency, and needed no further discussion by the Fisheries Commission.
- 2.3 With respect to item 8 of the Agenda, "Election of Chairman and Vice-Chairman", the Fisheries Commission referred this to the closing session, at which P. Gullestad (Norway was elected Chairman and D. Swanson (USA) was elected Vice-Chairman for the next term of two years, 1998-1999. The Fisheries Commission thanked the outgoing Chairman, H. Koster (EU) for his efficient and able management of the Fisheries Commission business during two (2) consecutive terms, 1993-1997.

3. Conservation and Enforcement Measures (items 9-16)

- With respect to item 9 of the FC Agenda, Consideration of Improved Planning and Control of Research Vessels in the Regulatory Area, the Representative of Canada reiterated his concerns which had been conveyed in the past about fisheries research programmes which may have a greater commercial than scientific purpose. He noted that these concerns had been discussed in Scientific Council and the Heads of Delegation meeting. He acknowledged the issue was complex given that some scientific research cruises can be carried out effectively using commercial fishing vessels and that catches can help finance the research but that concerns remained about the targeting for large catch volumes to cover the costs of scientific data of low priority. He concluded there was a need for continuing vigilance to ensure that commercial fisheries were not conducted in the guise of scientific research. He agreed to withdraw the Canadian proposal that had remained on the table from the 1996 meeting (FC Working Paper 96/1 (REVISED), however, he reserved the right to pursue this issue if the problem continued.
- 3.2 For item 10 of the FC Agenda, Consideration of a permanent scheme for observers and satellite tracking (in the NAFO Regulatory Area), the Chair summarized the discussions from the Heads of Delegation meeting. He stated that this was a crucial issue for the Organization and that a decision on adoption of permanent observer and satellite coverage should be made as soon as possible. While all Contracting Parties had implemented the Pilot Project on observers, there were delays in implementing the satellite portion of the Project. He noted that observers had collected scientific data from more than 25,000 trawls in the NAFO Regulatory Area but much of this data was not being used. He referred to FC Working Paper 97/8 in which the Scientific Council recommended a protocol to ensure the enhanced collection of scientific data from these fisheries. He suggested that STACTIC should meet intersessionally to determine how best the protocol can be implemented.

There was discussion of an agenda for this meeting which will be developed by the Executive Secretary with Mr. Koster and Mr. Bevan.

The Chairman referred to FC Working Paper 97/15 - the proposal by Canada for amending the Conservation and Enforcement Measures to continue the Pilot Project as outlined in Part VI of the said Measures for a further year beginning on January 1, 1998; subject to amendments to improve the current scheme, and which may reduce cost without compromising conservation and enforcement effectiveness, to be considered at the 20th Annual Meeting of NAFO, the Parties agreed that such a scheme will be implemented on a permanent basis effective January 1, 1999.

The Representative of the United States supported the continuation of the pilot project and the need to make it permanent. He also urged Contracting Parties to make available their observer data to NAFO and that efforts be made to standardize the format for this data to ensure its optimal use by the Scientific Council. The Representatives of Lithuania, Russia, Estonia, the EU, Norway, Denmark, and France supported a one-year extension of the pilot program as proposed by Canada. The Representative of Iceland stated that he could not support continuation of the pilot project. He voiced concern that continuation of 100% observer coverage was unjustified on conservation grounds for the Flemish Cap shrimp fishery as this was a single species fishery where concerns for groundfish bycatches had been largely resolved. He added that 100% observer coverage placed an excessive economic burden on the fleets, which threatened their economic viability. In view of the foregoing, his delegation had concluded that a lower level of

observer coverage was appropriate for the shrimp fishery. The Fisheries Commission adopted the Canadian proposal for one year extension of the Pilot Project (FC Working Paper 97/15).

Russia, Norway and Denmark (F+G) indicated that the scope of the scheme should be reviewed with respect to the period after 1 January 1999.

- 3.3 With respect to item 11 of the FC Agenda, Report of STACTIC on its activities during the current year (W.G. on Satellite Tracking and Review of the Conservation and Enforcement Measures), the Chairman of STACTIC, Mr. D. Bevan (Canada), reported that the May 1997 Working Group had reviewed various satellite systems, the capability of the NAFO Secretariat to receive and transmit this information and the opportunity to improve the current infrastructure. STACTIC recommended holding a further intersessional meeting on satellite systems in 1998 to review these and other relevant issues. He reported that the STACTIC meeting June 24-26 reviewed the Conservation and Enforcement Measures, in particular the hail system, the provision of reports on the pilot observer and satellite project and developed evaluation criteria for the pilot project. STACTIC noted improvements in the hail system.
- 3.4 With respect to item 12 of the FC Agenda, Report of STACTIC at the Annual Meeting, the Chairman of STACTIC reported the conclusions and recommendations of STACTIC to the following items of the agenda:
 - (a) Review of Annual Return of Infringements: it was noted that there were still significant information gaps dating back to 1993. While the Conservation and Enforcement Measures are very specific about the type of information that Contracting Parties are required to provide, several Contracting Parties had not submitted the required information. All Contracting Parties were asked to review their apparent infringements and provide written updates to the Executive Secretary as soon as possible.
 - (b) Review of the Pilot Project for Observers and Satellite Tracking: it was noted that evaluation reports had been presented by representatives of the following Contracting Parties: Canada, Denmark (in respect of the Faroe Islands), Denmark (in respect of Greenland), the EU, Iceland, Japan, Norway, Russia and the United States. He noted however that several Contracting Parties had not submitted evaluation reports.
 - (c) Compatibility and applicability of discard/retention rules for conservation and utilization of fishery resources: He noted that Canada had presented a proposal (FC Working Paper 97/6) calling for amendments to the Conservation and Enforcement Measures to clarify that discarded fish must be reported by Contracting Parties as part of their total reported catch and must be counted against the overall catch limits. He noted that this issue will require additional discussion.
- 3.5 It was agreed to hold a STACTIC Working Group intersessional meeting of technical experts as recommended by STACTIC to seek ways of implementing an automated satellite tracking system to allow the Secretariat to receive and transmit data to Contracting Parties' inspection vessels in the NRA, to address improvements to the satellite tracking system introduced under the 1995 Pilot Project, to develop a hail system that can operate using satellite technology, and establish the needed formats and data

exchange protocols and consider the appropriateness of the available databases with respect to vessel positions and hails with a view to improving the database and its appropriate distribution as outlined in FC Working Paper 97/17

With respect to the disposition of apparent infringements, the Representative of Canada echoed the importance of timely reporting and the concerns of STACTIC over the continuing large gaps in reporting. He noted that all Contracting Parties are obligated to report to the Executive Secretary, twice a year, on the disposition of apparent infringements found on their vessels during inspections carried out under the Scheme of Joint International Inspection and Surveillance. This reporting requirement is very important as it provides the necessary transparency to ensure confidence regarding the handling and final results of alleged infringements.

The Representative of Canada especially emphasized that for those Contracting Parties that provide inspection vessels and inspectors to the Regulatory Area, these reports are considered important as they provide Contracting Parties with the comfort that comes with the knowledge that the flag state of a vessel has taken any reports of infringements seriously. Unfortunately, as noted, a number of Contracting Parties have consistently failed to provide the information specified under the Scheme. FC Doc. 97/6, and its Corrigendum, list well over 50 vessels with apparent infringements going back as far as 1993, for which there is no information on their disposition. The Scheme is quite clear and specific on the information that Contracting Parties are obliged to provide including the current status of each case. He noted that Canada raises this issue each year at STACTIC, but that many Contracting Parties continue not to provide the necessary information. He requested that delegations review the noted documents and submit the necessary information to the Executive Secretary as soon as possible. The Chairman echoed the importance of Contracting Parties providing this information to NAFO.

- 3.7 The Representative of Iceland expressed disappointment that STACTIC did not undertake an evaluation of the Pilot Project as envisaged by its agenda. The Chairman stated that the Pilot Project had been discussed extensively during this meeting.
- 3.8 The Fisheries Commission adopted the STACTIC report and its recommendations. This was followed by further discussion and comments on the following issues. The Representative of the EU noted that the issue of equitable distribution of inspections in the NRA had not been resolved and requested that this be addressed at a future meeting. The Chairman summarized the Fisheries Commission discussion and findings confirming that this issue should remain on the STACTIC agenda as well as the issues of discards and consideration of measures to prohibit at-sea transshipment activities between Contracting Party and Non-Contracting Party vessels.
- 3.9 For item 13 of the FC Agenda, Implementation of the Precautionary Approach to NAFO-managed stocks, the Chairman of the Scientific Council, Mr. W. R. Bowering (Canada) stated that pursuant to a request from the Fisheries Commission at the 1996 Annual Meeting, the Scientific Council reviewed the science implications of the UN Agreement on the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks Article 6 (Application of the Precautionary Approach) and Annex II (Guidelines for Application of precautionary reference points in conservation and management of straddling fish stocks and highly migratory fish stocks).

The Scientific Council at its June 1997 meeting recognized the need to apply the precautionary approach in providing scientific advice as described in the above provisions and proposed a provisional framework for its implementation. It recommended a Scientific Council Workshop in March 1998 to develop a program to determine meaningful precautionary reference points for biomass and fishing mortality and an "Action Plan for the Development of a Framework on the Precautionary Approach" for stocks in the NAFO Regulatory Area. (See Pages 27-49 of NAFO SCS Doc. 97/14).

The Chairman of STACFIS, Mr. H.P. Cornus (EU), presented a slide presentation on the historical development of the concept and its relevance to the provision of scientific advice.

The Representative of the USA suggested that the March 1998 Workshop provide some examples of possible management actions or decision rules for stocks under different reference points. He also proposed that the Scientific Council may find it useful to collaborate with other relevant fisheries organizations that had initiatives underway to implement the precautionary approach. It was noted that the proposed timing for the Workshop was based on anticipated developments in these other groups prior to March 1998.

The Fisheries Commission endorsed the proposed Action Plan. It was recognized that it was also necessary for fisheries managers to study the implications of the precautionary approach to fisheries management decisions. It was agreed to hold a Fisheries Commission STACTIC Working Group in the spring of 1998 on this subject. It was proposed that scientists participate in this meeting to facilitate productive discussions.

3.10 With respect to item 14 of the FC Agenda, Increase of Inspection Presence in the NAFO Regulatory Area, the Chairman noted that this item, a carryover from the June 1995 Special Meeting of the Fisheries Commission, concerned the increased deployment of inspection vessels by Contracting Parties, in addition to Canada and the EU, in the NAFO Regulatory Area. He expressed the view that the Scheme of Joint International Inspection and Surveillance is not effective without inspections taking place in the Regulatory Area and that a greater deployment of inspection vessels needs to be considered.

The Representative of the EU stated that this issue was of the highest importance to his delegation which would study it carefully in the framework of the Pilot Project and its evaluation. The Representative of Canada supported the EU statement. He noted that atsea monitoring and inspections are the cornerstone of the management of NAFO stocks and part of an effective and comprehensive surveillance program. He expressed the view that membership in the Organization comes with benefits and responsibilities and that there was a need for more equitable participation in these activities by all Parties which benefit from resources in the NRA.

The Representative of Denmark (in respect of the Faroe Islands and Greenland) noted that Denmark will contribute inspectors to the Joint International Scheme of Inspection and Surveillance in the near future. It was agreed to keep this item on the agenda for future discussion.

- 3.11 For item 15 of the FC Agenda, NAFO Allocation Practice, the Chairman referred to the United States Position Statement on NAFO Quotas (FC Working Paper 97/4) and the proposal by the U.S. delegation in FC Working Paper 97/14 Terms of Reference for the Working Group on the Allocation of Fishing Rights to Contracting Parties of NAFO and Chartering. The Representative of the USA proposed that the Working Group meet before March 1, 1998 under the Chairmanship of Mr. H. Koster (EU). The proposal was supported by the meeting.
- 3.12 With respect to item 16 of the FC Agenda, Review of NAFO Rules Regarding Discards, it was agreed that STACTIC would continue to address this issue at future meetings.
 - 4. Conservation of Fish Stocks in the Regulatory Area (items 17-21)
- 4.1 For item 17 of the FC Agenda, Summary of the Scientific Advice by the Scientific Council, the Chairman of the Scientific Council, Mr. W.R. Bowering (Canada) gave a summary of SCS Doc. 97/14, "Report of Scientific Council, 4-19 June 1997" which provided scientific advice for the management of 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	no directed fishery + lowest possible bycatch
Redfish 3M	catches not to exceed 20,000t
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	stock capable of sustaining limited directed fishery, catch of 4,000t would not be detrimental
Greenland halibut 3LMNO	Catch should not exceed current TAC of 20,000t until it is clear that spawning biomass is increasing at that level.
Capelin 3NO	no advice possible
Squid SA 3&4	no advice possible

- 4.2 The presentation was followed by clarification from the Chairman of the Scientific Council of several on-going questions.
- 4.3 He noted that with respect to the stock separation of cod in Div. 2J3KL and the proportion of biomass of the cod stock in the Regulatory Area, 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 that would change this conclusion. Results of the autumn surveys conducted in all three Divisions (2J, 3K and 3L) by Canada from 1981 to 1996, showed that the proportion of the cod stock in the Regulatory Area at that time of year was less than 1%, on average, of the total Div. 2J+3KL biomass. Both the 1995 and 1996 surveys indicated that the proportion of the Div. 2J+3KL stock in the Regulatory Area was less than 1% and the total stock biomass was still at an extremely low level. Survey data indicated that the proportion of total stock biomass occurring in the Regulatory Area was less than 10% in winter and less than 5% on average in spring and autumn.

- With respect to 2J3KL witch flounder, Mr. Bowering noted that this stock was reviewed in 1996 including data from an EU survey. Surveys indicated that the stock had declined by about 95% compared to the 1981-84 average when the stock was stable. The Scientific Council noted that the stock was under moratorium inside the Canadian zone since 1994 and unregulated in the NRA and recommended that the stock should be treated as a single unit throughout the entire range of Div. 2J and 3KL and managed accordingly.
- 4.5 With respect to 2+3 Greenland halibut, Mr. Bowering noted that the Scientific Council had been requested by the Fisheries Commission to assess possible changes in yield and spawning stock biomass 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. He summarized the information in the chart on the top of page 27 of SCS Doc. 97/14. The Scientific Council agreed that a dome shaped partial recruitment pattern in the trawl fishery and differences in mortality by sexes are the most likely scenario for Greenland halibut. He concluded that it was clear that the trawl fishery catches too many small size fish, that the current mesh size of 130mm is too small, and that any increase in mesh size would be a step in the right direction.
- 4.6 With respect to the Fisheries Commission's ongoing request on the Greenland halibut stock components, Mr. Bowering noted that in 1996, the Canadian autumn groundfish survey covered almost all of the stock range, although coverage in deepwater areas of Div. 2GH and Div. 3O was minimal. This survey indicated that about 17% of the surveyed biomass was located in Div. 2GH, about 65% in Div. 2J+3K, and about 18% in Div. 3LMNO (SCR Doc. 97/52). About two-thirds of the estimated biomass was comprised of fish smaller than 36 cm, and the proportion of small fish in the biomass varied by Division.
- 4.7 The presentation was followed by further questions and requests for clarification by Contracting Parties.
- With respect to 3M cod, the Representative of Denmark (in respect of the Faroe Islands and Greenland) asked whether the SC advice reflected the advice of STACFIS which had stressed that because of uncertainties associated with the fit of the XSA model, the results of the analysis could only be used to infer trends in biomass and fishing mortalities, and at present could not be used as a basis for any catch prediction. Mr. Bowering noted that sequential population analyses were not accepted in their entirety. Survey indices indicated that the biomass had reached a record low in 1996. Age 3 recruitment was poor in 1995 and 1996 and also expected to be so in 1997 and 1998. He noted that given that the 3M cod fishery has been an opportunistic fishery, which has been fishing out the recruitment, a continued fishery would be difficult with the anticipated low recruitment. In reply to a question from the Representative of Canada as to the results of the EU survey, Mr. Bowering noted that the EU survey confirmed the recruitment levels in 1995 and 1996.
- 4.9 With respect to 3LNO yellowtail flounder, the Representative of the USA, noting the SC concerns about bycatches of cod and American plaice, asked what level of bycatch was anticipated with a TAC of 4,000t. Mr. Bowering stated that there were no details on the level of expected bycatch. He noted that the average bycatch in flatfish fisheries was estimated at 15% although this could be considerably higher in some areas. However, the

level of cod bycatch was lower, which may also be a reflection of the low level of the 2J3KL cod stock. In response to a question by the Representative of the EU on criteria used to develop the SC advice, Mr. Bowering acknowledged that different estimates had been derived from use of the Campelen trawl surveys but that conversions with previous surveys had not yet been made. He noted that the advice was based on a total review of the stock.

In response to a question by the Representative of the EU on the effect that reopening the 3LNO yellowtail fishery would have on rebuilding the 3NO cod stock, the SC Chairman noted that while cod bycatch is more variable than American plaice, there is little doubt there would be some cod bycatch.

In response to questions from the Representative of Canada, Mr. Bowering noted that the SC recommendation would translate into a very conservative exploitation rate of 6% compared to the F0.1 rate of about 27%. With respect to bycatch, he replied that the expected level of bycatch of American plaice could be 600t assuming a 15% average bycatch, compared to an expected level of 900t of American plaice in the skate fishery. He noted that the level of bycatch is variable depending on the area of the fishery. See also paragraph 4.23 regarding the Canadian proposal for a change in mesh size for groundfish from 130mm to 155mm which would also apply to this stock (FC Working Paper 97/7).

- With respect to 2+3KLMNO Greenland halibut, the Representative of the USA requested 4.10 clarification of the advice that the TAC should not exceed the current level until the spawning biomass is increasing at that catch level. Mr. Bowering clarified that the advice is to maintain the status quo - the 1997 TAC of 27,000t should not be exceeded. Considering the significant reduction in catches after 1994, and the indications of good recruitment, STACFIS concluded that the stock is showing signs of recovery but that the fishable biomass is still at a low level. The Representative of the EU asked a series of questions. In reply Mr. Bowering said that catches are included in the formulation of the advice for Greenland halibut. He stated that if the mesh size were increased from 130mm to 155mm as proposed by Canada, this would result in a lower CPUE and would require a considerable increase in effort with reduced efficiency to attain the same catch levels. He noted there was no information on escapement mortality although this could be high. In reply to a question regarding the effect on the stock of a 15-25% increase in TAC, he stated that any increase in catches would result in increased catches of juveniles, which is a significant concern. In response to a question from the Representative of Russia on proposed measures to avoid bycatch of juvenile Greenland halibut, Mr. Bowering said that increased mesh size in the trawl fishery is the only measure currently under consideration. In response to a question from the Representative of the USA, Mr. Bowering replied that if catches were at the 27,000t level, this would increase the current exploitation rate assuming that the stock is stable.
- 4.11 With respect to 3M shrimp, the Representative of Denmark (in respect of the Faroe Islands and Greenland) asked whether the groundfish trawl surveys used were in fact appropriate for obtaining estimates of the shrimp biomass. Mr. Bowering noted that a time series of biomass estimates was produced from catches of shrimp taken in EU groundfish surveys in Div. 3M from 1988 to 1997 and that directed surveys for shrimp also were conducted in 1996 by Canada and in 1997 by the Faroe Islands. The Scientific Council uses the EU surveys, although they are groundfish directed and not designed for shrimp, as they provide an idea of trends in the spawning component. However, they do not provide information on recruiting year classes.

The Representative of Denmark (in respect of the Faroe Islands and Greenland) requested an explanation for the apparent inconsistency of 1993-94 year classes with those in 1996. Mr. Bowering said that the inconsistency underscored the need for fishery independent data as well as the uncertainty in estimating recruitment.

In reply to a question on the basis for recommending lower catches and reduced fishing effort, Mr. Bowering stated that any fishing permitted in 1998 will be directed at what remains of the 1993 year-class and additional recruitment of the 1994 year-class. A significant reduction in fishing intensity is necessary to arrest the apparent continued decline in the female component of the stock and to conserve males. Lacking the tools to assess recruitment, the SC is unable to advise on the level of catch required to halt or reverse the trend in female biomass. However, catches beyond those projected for 1997 at 25,000t would create a very high risk of continuing the trend and catches at the 1997 level might not be low enough to halt the decline in the stock.

The Representative of Iceland voiced his country's interest in participating in a recruitment survey to obtain a better understanding of the 3M shrimp stock. The SC Chairman recalled that the idea of a joint survey was welcomed in STACREC.

In reply to a question from the Representative of Norway on the location and timing of the stock's spawning, Mr. Bowering noted that this is currently unknown; with no evidence to date that it originates elsewhere, the stock is considered self-sustaining.

The Representative of the USA expressed interest in Iceland's proposal for a recruitment survey and looked forward to developing its details. The Representative of the USA was concerned about the recommendation for reduced fishing intensity to arrest the continued decline in the female stock component. He asked for an explanation of why recruitment was being underestimated and whether this was a long-term pattern. Mr. Bowering stated that while past reports had underestimated recruitment, this was based on fishery data. He noted that the 1993 year-class was much stronger than expected, accounting for much of the record high catch in 1996 and was still contributing to catches in the first half of 1997. The 1994 year-class was thought to be very weak in September 1996 but it was well represented in the Canadian survey of September-October and in commercial sampling data from the second half of 1996. Although some optimism is warranted regarding the 1994 year-class, the situation underscores the uncertainty in estimating recruitment. He noted that the fishery quickly became a recruitment fishery, dependent on one or two year-classes of males entering the fishery. The female stock continues to decline because males are heavily exploited before they can change sex and contribute to the spawning stock.

The Representative of Canada asked whether NAFO effort regulations in 1996 and 1997 had been effective in reducing exploitation of the shrimp resource in 3M. Mr. Bowering replied in the negative noting that the catch and effort in 1996 were the highest recorded in the brief history of the fishery and that the reduction in catch and effort in 1997 was not related to the tightening of NAFO's effort control system.

The Representative of Norway expressed the view that the effort control system adopted in 1995 would have succeeded in 1996 if one Contracting Party had not increased its effort significantly and therefore suggested it was premature to conclude that this system had not worked.

The Representative of the EU stated, in the interests of balance, that it should be recalled that the noted Contracting Party had imposed a quota of 6,800t in 1997.

The Representative of Iceland agreed with the Scientific Council's assessment that the effort limitation system had not impacted on catches. This was due, in part, to the fact that Contracting Parties had different definitions for effort days. He added that the potential for achieving further reductions in effort days in the shrimp fishery was huge and suggested a 10% annual reduction in effort days as necessary to balance the advances in technology in the shrimp fishery. He noted that Iceland's quota of 6,800t coupled with ITQs allocated to 14 vessels during 1997 had reduced its catches by one-fourth from 1996; this was in sharp contrast to the effort control system in which the Icelandic vessel fishing under Polish charter caught 800t in only 100 effort days.

- 4.12 With respect to Illex squid in Subareas 3+4, the Representative of the USA asked what no SC advice meant in terms of the precautionary approach for this stock. He expressed the view that the stock in SA 3+4 migrates from SA 5+6 where the USA as the relevant coastal state is actively managing the fishery. Mr. Bowering noted that while there have been no active surveys of SA 3+4 squid, more definitive information should be available after March 1998. He acknowledged that the current TAC ceilings may be meaningless as the Illex species lives only one to one and half years. The Representative of the USA hoped additional survey work in this area would be carried out.
- 4.13 With respect to the interrelationship between seals and commercial fish stocks, the Representative of Denmark (in respect of the Faroe Islands and Greenland) asked for comments on the consumption of cod by seals, the age composition of cod consumed, the impact of this consumption on recent year-classes, and an assessment of the recovery for 2J3KL cod. Mr. Bowering noted that a Seals Workshop was held earlier in 1997 and its report is still relevant. It concluded that possible marine mammal consumption of juvenile cod is impeding the recovery of the 2J3KL cod stocks. He said that the prognosis for the recovery of the stocks is very low, that all year-classes after 1994 are weak and that the 1996 year-class is extremely weak.
- 4.14 For 2J3KL witch flounder, the Representative of Canada asked whether SC's lack of a specific recommendation meant that a moratorium was unnecessary in 3L outside the Canadian zone. Mr. Bowering noted that the SC's reply was based on the Fisheries Commission request for advice on the status of the stock and the relative distribution of the resource within the stock area, as well as changes in this distribution over time. He noted that the stock had virtually collapsed and was at an extremely low level, having declined by about 95% compared to the 1981-84 average when the stock was stable. The stock was now in worse condition than American plaice. He concluded that given that the stock has been under moratorium in the Canadian zone, it is implicit that extension of the moratorium into the NRA would be prudent.
- 4.15 For items 18 and 19 of the FC Agenda, the Chairman noted that discussions on management and technical measures for fish stocks in the Regulatory Area and fish stocks straddling national limits would proceed on a stock by stock basis as required.
- 4.16 Regarding 3M cod, the Representative of Denmark stated that he could not support a moratorium, citing good catches and low bycatches by Faroese longliners in accordance with the 1997 TAC and improvements introduced into the fishery. He suggested a possible reduction in the TAC from the 1997 level. The Representative of Canada stressed the clear, longstanding Scientific Council advice on this stock in support of a

moratorium and concluded no directed fishery was necessary if this stock is to be rebuilt. The Representative of the USA supported Canada's position. The Representative of Estonia supported measures to facilitate recovery of the stock.

- 4.17 With respect to 3M redfish, the Representative of Japan, supported by the Republic of Korea and France (in respect of Saint Pierre et Miquelon), took note of the Scientific Council advice for a TAC of 20,000t but requested some flexibility on quotas to avoid penalizing those Contracting Parties with small NAFO quotas. The Representative of the USA suggested that the Japanese concerns highlight the need for a review of the NAFO quota distribution but stressed adhering to the Scientific Council advice. The Representative of the EU, supported by Estonia, suggested setting a TAC slightly higher than the Scientific Council advice. The Representative of Canada said that arrangements may be possible to accommodate Japan's concerns but catches should not exceed the recommended TAC of 20,000t. The Representative of Russia supported a TAC of 20,000t.
- 4.18 Regarding 3M shrimp, the Representative of Denmark, supported by Lithuania, Poland and Estonia, supported continuation of the 1997 effort limitation system as there was no change in the Scientific Council advice. The Representative of Canada reiterated the concerns expressed by the Scientific Council and urged Contracting Parties to ensure that management measures provide for meaningful conservation.
- 4.19 With respect to redfish in Div. 3LN, the Representative of Russia clarified that while Russian scientists had dissented with the June 1997 Scientific Council recommendation for a moratorium, Russia would not oppose the majority view. The Representative of Canada supported the Scientific Council recommendation for introducing a moratorium. The Representative of the EU proposed a TAC as low as possible instead of a moratorium.
- 4.20 Regarding 3LNO yellowtail flounder, the Representatives of Japan and France (in respect of Saint Pierre et Miquelon) supported the Scientific Council recommendation for a TAC not to exceed 4,000t. The Representative of Canada said he was pleased that fishing mortality has been reduced on all ages as a result of the moratorium and that there were positive signs of recovery since the 1996 assessment. He stated that Canada supports following the Scientific Council advice, restricting the fishery to 3NO and opening it August 1 after the spawning period. He noted that allowing a yellowtail catch would mean bycatches of American plaice and therefore further recommended that a minimum mesh size of 155mm be mandatory in this fishery. He stated that Canada would intend to fish this stock under strict controls including keeping bycatches at the lowest possible level, protecting nursery areas and further protecting juvenile fish through the implementation of strict small fish protocols. The Representatives of the EU and the USA expressed reservations about the consequences of reopening the fishery because of bycatches.
- 4.21 With respect to squid in Subareas 3+4, the Representative of the USA was of the view that the potential for an uncontrolled fishery was undesirable, that the TAC should be set well below the current level of 150,000t and that there was a need to set a precautionary TAC to avoid undermining U.S. squid management measures in SA 5+6. The Representatives of Japan, the Republic of Korea, Canada, Norway, the EU, France (in respect of Saint Pierre et Miguelon) and Estonia supported maintaining the current TAC

at 150,000t given that the species is short-lived, the fishery is undertaken in an opportunistic fashion, and there is an absence of Scientific Council advice.

4.22 For 3LNO shrimp, the Representative of Denmark proposed expansion of the shrimp fishery in 3M into Divisions 3LNO since it has been demonstrated that the shrimp stocks could be utilized without significant bycatches of groundfish.

The Representative of Norway noted that while he remained concerned about the risk to groundfish in Divisions 3LNO, he was prepared to consider an approach which would permit extension of the 3M shrimp fishery into 3LNO.

The Representative of Canada stated that Canada, as the coastal state, has strong concerns over the state of the straddling stocks in Divisions 3LMNO. In light of the groundfish moratoria that will be applied to most stocks in these divisions in 1998, any shrimp fishery using small mesh gear could have negative consequences. He added that a 1996 Canadian survey showed that abundance of shrimp is generally low in Divisions 3LNO relative to the abundance found in more northern areas. However, even if there was evidence of an abundant shrimp stock, Canada would still insist on the moratorium since the issue was not the state of the shrimp resource but the potential negative effects such a fishery would have on several other important stocks. He proposed continuation of the ban on shrimp trawling in Divisions 3LNO in 1998 due to these biological considerations. The Representatives of the EU and the USA supported Canada.

The Representative of Iceland supported the proposal by Denmark since the sorting grid had been shown to be effective in reducing bycatch. He added that expansion into Divisions 3LNO would reduce fishing pressure on 3M shrimp which is consistent with one of the elements of the precautionary approach calling for distribution of fishing effort over a larger area.

4.23 With respect to 3LMNO Greenland halibut, the Representative of Canada referred to optimism that this stock will show signs of recovery over the next couple of years. However, the Scientific Council also advised that the TAC should not exceed the current level until it is clear that the fishable stock is increasing at that catch level. He proposed that the TAC remain at the 1997 level of 20,000t which recognizes that Canada will continue to set the TAC in 2+3K at 7,000t. In view of the Scientific Council's concerns about catches consisting mainly of young, immature fish, he proposed that the minimum mesh size be increased from 130mm to 155mm for this stock and all principal groundfish, flatfishes and other groundfish and other fish with the exception of capelin and redfish (FC Working Paper 97/17 - Change in Mesh Size for Groundfish). He said that if the necessary protective measures are not taken now to protect juveniles, then a moratorium may be necessary in future. The Representative of the USA agreed that catches of Greenland halibut should not increase beyond their current level and supported a substantial increase in mesh size.

The Representatives of the EU and Denmark expressed concerns over increasing mesh size. The Representative of Japan saw no compelling scientific reason to impose an additional burden on fishermen to carry different types of gear. The Representatives of Russia and Estonia expressed reservations about the Canadian proposal and suggested that vessels should move when they experience high catches of small fish.

- The Representative of Canada reiterated the Scientific Council advice that measures should be considered to reduce the exploitation of juvenile Greenland halibut.
- 4.24 Regarding 2J3KL witch flounder in the NRA, the Representative of Canada pointed out that the stock is at an extremely low level and any exploitation thereof in its present state continues to be unjustifiable from a conservation standpoint. He proposed a moratorium on 3L witch in the NRA be implemented consistent with the management measures taken by Canada as the coastal state (FC Working Paper 97/10). The Representative of the EU supported the Canadian proposal.
- 4.25 The Chairman noted that after considerable discussion, overall agreement, with the exception of the Representative of Iceland on 3M shrimp, was reached in the Heads of Delegation meetings around the following proposals:

Cod 3M	2,000t
Redfish 3M	20,000t (However the quotas to Contracting Parties will remain at the same level as in 1997 totalling 26,000t. Each Contracting Party shall notify the Executive Secretary bi-weekly of catches taken by its vessels from this stock. The Executive Secretary shall notify without delay all Contracting Parties of the date on which, for this stock, accumulated reported catch taken by vessels of the Contracting Parties is estimated to equal 100 per cent of the TAC for that stock. At that date each Contracting Party, to which a quota has been allocated or which vessels are engaged in fishing under the "Others" quota, shall prohibit fishing by its vessels for that stock.)
American plaice 3M	no directed fishery
Shrimp 3M	effort limitation (with amendments in NAFO FC Working Paper 97/11)
Cod 3NO	no directed fishery
Redfish 3LN	no directed fishery
American plaice 3LNO	no directed fishery
Yellowtail flounder 3LNO	4,000t (The provisions of Part I, Section A.4b) of the NAFO Conservation and Enforcement Measures shall apply. FC Doc. 97/1)
Witch flounder 3NO	no directed fishery
Capelin 3NO	no directed fishery
Squid (Illex) (SA 3&4)	150,000t (The TAC would remain at 150,000t subject to adjustment where warranted by scientific advice.)
Shrimp 3LNO	no directed fishery (as per FC Working Paper 97/13)
Greenland halibut 3LMNO	20,000t
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.)
Witch 2J3KL in NRA	no directed fishing (as per FC Working Paper 97/10)

- 4.26 The Fisheries Commission then adopted the Quota Table (Annex 3). The Chairman then asked for statements from Contracting Parties regarding the decisions outlined.
- 4.27 The Representative of Korea stated that while his country had been provided NAFO squid and redfish quotas, the amounts were insufficient to warrant sending even one vessel to the NRA. He noted that since Korea joined NAFO in December 1993, it had contributed to conservation in the NRA as well as the development of the new Conservation and Enforcement Measures. While the NRA was historically an important fishing area for Korean fishermen, they were unable to participate meaningfully in NAFO fisheries, complaining that NAFO membership has not provided anticipated fishing rights. He stated that if Korea cannot obtain a more reasonable level of NAFO quotas the Korean Government will need to consider withdrawal from the Organization. Contracting Parties need to consider the Korean Government's domestic difficulty.
- With respect to Greenland halibut, the Representative of the EU proposed that Parties agree that, if the scientific advice confirms the encouraging improvement of the Greenland halibut stock which has occurred since 1996, they will consider a certain increase in the level of the TAC on the basis of the available scientific information and advice (FC Working Paper 97/19). The proposal was adopted.
- 4.29 The Representative of France (in respect of Saint Pierre et Miquelon) stated that trawlers registered in Saint Pierre et Miquelon have been fishing yellowtail flounder continuously since at least 1970, that this track record is documented in NAFO publications, and based on his catch history, France expects that once the moratorium is lifted, it will be able to recover fishing rights with respect to this stock corresponding to its historical fishing activities. He reserved his rights to bring this issue to the attention of appropriate NAFO bodies and to discuss it bilaterally as appropriate. (Annex 4)
- 4.30 The Representative of the USA confirmed that with respect to 3M shrimp, the prohibition on the transfer of fishing days between Contracting Parties applies to 1998 only and is without prejudice to future decisions. He also noted that with respect to squid, the USA proposes adding a Fisheries Commission request to the Scientific Council to review the historical and current status of Illex squid in Subareas 3+4, and in Subareas 5 and 6; to describe the major aspects of the biology and population dynamics of the species in these regions and, further, to describe the Illex fisheries in these regions and review the basis for considering Illex in SA 3,4, 5 and 6 as a unit for this stock. He noted that the Scientific Council may provide additional information on Illex which could warrant adjusting the TAC. The Representative of France (in respect of Saint Pierre et Miquelon) supported the USA proposal.
- 4.31 The Representative of Iceland reiterated his concerns that there was no conservation or economic justification for requiring 100% observer coverage in the 3M shrimp fishery. He also reiterated that a TAC and quota system should be established for the 3M shrimp fishery instead of an effort limitation scheme. In the absence of agreement on a TAC system, he stated that Iceland must object to this NAFO decision and set a unilateral quota for its vessels for 1998.
- 4.32 The Representative of Denmark (in respect of the Faroe Islands and Greenland) commented that the management measures must be seen as package. He expressed the view that the 3M cod stock is still fishable in spite of the Scientific Council advice. He

thanked Contracting Parties for the flexibility shown on the TAC decision for this stock and noted that the TAC of 2,000t will allow information to continue to be provided to scientists. He stressed the shrimp fishery was of major importance and in his view it should be expanded into Divisions 3LNO as this could be done without significant groundfish bycatches. He agreed to withdraw his proposal for a 3LNO shrimp fishery on condition that all Contracting Parties respect the above-noted package of decisions.

- 4.33 Regarding item 20 of the FC Agenda, Formulation of Request to the Scientific Council for Scientific advice on the management of fish stocks in 1999, NAFO/FC Working Paper 97/18 was adopted which also incorporates language relating to the precautionary approach (Annex 5).
- 4.34 Regarding FC Agenda item 21, Transfers of Quotas between Contracting Parties, the Representative of Denmark (in respect of the Faroe Islands and Greenland) recalled his remarks dealing with the transfer of quotas between Contracting Parties (page 196, item 4.20 of the 1995 Meeting Proceedings) asking that this issue be kept on the FC agenda for the next meeting.

5. Closing Procedures (Items 22-24)

- 5.1. Regarding FC Agenda item 22, it was agreed that the Fisheries Commission Annual Meeting in 1998 would take place in Lisbon, Portugal from 14-18 September.
- 5.2 Item 23, Other Business: a notional timetable was proposed for intersessional working group meetings. It was agreed that the Executive Secretary would specify dates for these working group meetings and seek concurrence of the Contracting Parties by mail.
- 5.3 Item 24, Adjournment; the Annual Meeting of the Fisheries Commission was adjourned at 12:30pm on 19 September 1997.

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.

Annex 1. List of Participants

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- 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 B. T. Crawford, Graphic Arts/Printing Technician

Annex 2. 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.	Transparency of NAFO decision-making process (participation of inter-governmental and non-governmental organizations)
8.	Election of Chairman and Vice-Chairman
	III. Conservation and Enforcement Measures
9.	Consideration on Improved Planning and Control of Research Vessels in the Regulatory Area
10.	Consideration on the establishment of a permanent scheme for observers and satellite tracking (in the NAFO Regulatory Area)
11.	Report of STACTIC on its activities during the current year (W.G. on Satellite Tracking and Review of the Conservation and Enforcement Measures)
	a) Hail System
12.	Report of STACTIC at the Annual Meeting
13.	Implementation of precautionary approach to NAFO-managed stocks
14.	Increase of inspection presence in the NAFO Regulatory Area
15.	NAFO Quota Allocation Practice
16	Review of NAFO Rules regarding Discards

IV. Conservation of Fish Stocks in the Regulatory Area

17. Summary of Scientific Advice by the Scientific Council

18.	Manage	ement and Technical Measures for Fish Stocks in the Regulatory Area
	18.1	Cod in Div. 3M
	18.2	Redfish in Div. 3M
	18.3	American plaice in Div. 3M
	18.4	Shrimp in Div. 3M
19.	Manag	ement and Technical Measures for Fish Stocks Straddling National Fishing Limits
	19.1	Cod in Div. 3NO
	19.2	Redfish in Div. 3LN
	19.3	American plaice in Div. 3LNO
	19.4	Yellowtail flounder in Div. 3LNO
	19.5	Witch flounder in Div. 3NO
	19.6	Capelin in Div. 3NO
	19.7	Squid (Illex) in Subareas 3 and 4
	19.8	Shrimp in Div. 3LNO
	19.9	Greenland halibut in Div. 3LMNO
	19.10	If available in the Regulatory Area in 1998:
		i) Cod in Div. 2J3KL
		ii) Witch flounder in Div. 2J3KL

- 20. Formulation of Request to the Scientific Council for:
 - a) Scientific advice on the management of fish stocks in 1999
- 21. Transfer of Quotas Between Contracting Parties

V. Closing Procedure

- 22. Time and Place of the Next Meeting
- 23. Other Business
- 24. Adjournment

Annex 3. Quota Table

		200	•						•		•
Contracting Party	Div. 3M	Div. 3NO	Div. 3M	Div. 3LN*	Div. 3M*	Div. 3M Div. 3NO* Div. 3M Div. 3LN* Div. 3M* Div. 3LNO* Div. 3LNO Div. 3NO*	Div. 3LNO	Div. 3NO*	Div. 3NO•	Div. 3LMNO	Subarcas 3+4
Canada	91	J	650	0	0	0	30008	c	=	3 000	2
Cuba ·	74	•	2 275	С	, ,	, '		•	0 0	200	2,360
Denmark (Faroe Islands			1	•		ı	•		5	•	007 7
and Greenland)	447	•	06	,	•	•	•	•	•	1	
European Union		3	4 030	0	9	0	808	•	· c	020 11	, 40 W
France (St. Pierre					•	•	3 '		•		Ġ.
and Miquelon)	٠	•	8	1	•	•	,	'	•	,	000 6
feeland	٠	•	1	,	•	•	,	٠	•	• 1	000 7
Japan	٠	•	520	1	•	•	,	,	•	050 6	1 250
Korea	•	•	06	•	•	•	•	•		300	000 6
Norway	185	•	1	,	•	,			٠ <	•	7
Poland	11	•	•	•	•	٠			9 5	•	96
Estonia								ı	Þ.		300
12. Latvia	1961	0	18 0051	0	0	1	ı	0	0		5 0001
										030 6	
United States										7 220	
of America	•	•	9	1		٠	1	1	•	,	000 6
6. Others	œ	0	160	0	0	0	20*	0	•	1 330*	3 500
Total Allowable Catch	2 000	•	20 0007	•	*	•	4 000	*	•	20 000	150,000

Total allowable catches (TACs) and quotas (metric tons) for 1998 of particular stocks in Subarras 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.

OUUTA TABLE

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 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. shall be made as promptly as possible.

for that stock. At that date each Contracting Party, to which a quota has been allocated or which vessels are engaged in fishing under the "Others" quota, shall prohibit fishing Contracting Parties shall inform the NAFO Executive Secretary before 1 December 1997 of the measures to be taken to meet the advice of the NAFO Scientific Council. by its vessels for that stock.

No directed fishing . The provisions of Part I, Section A.4b) of NAFO Conservation and Enforcement Measures shall apply. The provisions of Part I, Section A.4b) of NAFO Conservation and Enforcement Measures shall apply (FC Doc. 96/1)

Each Contracting Party shall notify the Executive Secretary bi-weekly of eatches taken by its vessels from this stock. The Executive Secretary shall notify without delay all Contracting Parties of the date on which, for this stock, accumulated reported eateh taken by vessels of the Contracting Parties is estimated to equal 100 percent of the TAC

Of which no more than 40% (532 t) may be fished before 1 May 1998 and no more than 80% (1064 t) may be fished before 1 October 1998.

The TAC would remain at 150 000 tonnes subject to adjustment where warranted by scientific advice.

² The opening date for the Squid (Illex) fishery is 1 July.

Annex 4. Declaration of France (on behalf of St. Pierre et Miquelon) concerning Yellowtail Flounder in Divs. 3LNO

Trawlers registered in St. Pierre et Miquelon have been fishing yellowtail flounder continuously since at least 1970. St. Pierre et Miquelon has a proven track record in this fishery as indicated in the NAFO publication entitled "NAFO Statistical Bulletin – Supplementary Issue – Fishery Statistics for 1960-1990" (page 98, Table 43. Nominal catches for Yellowtail Flounder in divisions 3LNO).

From 1976 to 1985, due to their status within the Republic of France, the French isles of St. Pierre et Miquelon were integrated within the European Community. When NAFO was created in 1979, St. Pierre et Miquelon's historical rights to the Yellowtail Flounder fishery in 3LNO served as a basis for the allocation of a quota for this species to Europe. From that moment on, catches of Yellowtail Flounder by trawlers of St. Pierre et Miquelon were tallied against the quota allocated by NAFO to the European Union. In the statistical reference given above, catches of Yellowtail Flounder by St. Pierre et Miquelon fishers are indicated next to the heading "FRA-SP".

In 1985, as a result of changes to the status of St. Pierre et Miquelon within the Republic of France, the French isles were no longer considered a part of Europe. Nevertheless, the European Union continued to act as an intermediary between St. Pierre et Miquelon and NAFO until the France on behalf of St. Pierre et Miquelon officially joined NAFO in 1996.

France on behalf of St. Pierre et Miquelon expects that once the moratorium is lifted, it will be able to recover fishing rights with respect to the Yellowtail Flounder in 3LNO, corresponding to its historical fishing activities. France on behalf of St. Pierre et Miquelon reserves the right to bring this issue to the attention of appropriate NAFO bodies and to discuss it within the context of its bilateral relations with concerned Contracting Parties.

Annex 5. Fisheries Commission's Request for Scientific Advice on Management in 1999 of Certain Stocks in Sub-areas 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 1998 Annual Meeting, provide advice on the scientific basis for the management of the following fish and invertebrate stocks or groups of stocks in 1999:

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 (Sub-areas 3 and 4)
Shrimp (Div. 3M)
Greenland halibut (Sub-areas 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 stocks 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}, F₁₉₉₇ and F_{max} in 1999 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 1999 and the long term. Values of F corresponding to the reference points should be given. Uncertainties 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 1999 over a range of fishing mortality rates (F) at least from $F_{0.1}$ to F_{max}
 - A graph showing spawning stock biomass at the beginning of 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, $F_{0.1}$ and F_{max} should be shown.

- 3. In 1996, the Fisheries Commission requested 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 the the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks. Noting the progress made by the Scientific Council on the development of a framework for implementation of the Precautionary approach, the Fisheries Commission requests that the Scientific Council provide in their June 1998 report the following information for the 1998 Annual Meeting of the Fisheries Commission 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) 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 implementation of the Agreement's provisions regarding the precautionary approach to capture fisheries.
- 4. The Fisheries Commission requests that the Scientific Council develop criteria to be evaluated during any consideration of possible fisheries reopenings.
- 5. 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.
- 6. The Fisheries Commission with the concurrence of the Coastal State requests that the Scientific Council review available information, including any Canadian assessment documentation on the stock status, and provide advice on catch levels for 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.

- 7. The Fisheries Commission requests that the Scientific Council undertake a review of the historical and current status of <u>Illex</u> squid in Subareas 3 and 4, and in Subareas 5 and 6, and to describe the major aspects of the biology and population dynamics of the species in these regions. The Council is further requested to describe the <u>Illex</u> fisheries in these regions and review the basis for considering <u>Illex</u> in SA 3, 4, 5 and 6 as a unit stock.
- 8. The Fisheries Commission requests that the Scientific Council provide information on the shrimp stock in 3LNO with regards to catches in recent years, bycatches of groundfish in such fisheries, abundance indices and the distribution of the stock. The Scientific Council is also requested to provide information on annual yield potential for this stock.
- 9. The Fisheries Commission requests the Scientific Council to evaluate the impact, in terms of changes in spawning biomasss per recruit and yield per recruit, as well as the implication on effort in the short term and long term resulting from the use of a mesh size of 155mm versus 130mm for the 2+3 Greenland halibut stock in the NAFO Regulatory Area.

Annex 6. List of Decisions and Actions by the Fisheries Commission (19th Annual Meeting, 15-19 September 1997)

Substantive issue (propositions/motions)	Decision/Action (FC Doc. 98/14, Part I; item)
Transparency in the FC decision-making process (Participation of Intergovernmental and Non-Governmental Organizations)	Noted that the issue was covered by the General Council; item 2.2
2. Election of Chairman and Vice-Chairman	Elected Mr P. Gullestad, Norway, Chairman and Mr D. Swanson, USA, Vice-Chairman for two years, 1998-1999; item 2.3
 NAFO Conservation and Enforcement Measures (on presentation by STACTIC): Improved planning and control of research vessels in the Regulatory Area 	Discussed and withdrawn from the table; item 3.1
- Scheme for observers and satellite tracking FC Doc. 97/11	Adopted for one year extension of the Pilot Project; item 3.2. (Noted: indication by Contracting Parties to review the scope of the scheme after 01 January 1999); item 3.2
- Implementation of automated satellite tracking system at the NAFO Secretariat	Agreed to call an intersessional W.G. meeting at the NAFO Headquarters (in Oct 1997); item 3.5
- STACTIC Report at the Meeting	Adopted; item 3.8
4. Implementation of Precautionary Approach t NAFO-managed stocks	Endorsed the Scientific Council Action Plan (SCS Doc. 97/14, pp. 36-37) and agreed to hold STACTIC W.G. Meeting in Spring 1998 (May 12-14, Copenhagen, Denmark)
5. Increase of inspection presence in the RA	Agreed to keep this item on the agenda for further discussion; item 3.10
6. NAFO Allocation (of fish quotas) Practice	Agreed that a Working Group meet intersessionally to continue discussion; Chairman H. Koster, EU; item 3.11 (W.G. to meet in Brussels, 4-6 March 1998) Note: This W.G. will consider as well the issue of chartering vessels as per GC report
7. NAFO rules regarding discards	Agreed to continue to address this issue at STACTIC meeting in future; item 3.12
8. TACs and Regulatory Measures for major stocks in the Regulatory Area for 1998	Discussed/Adopted; item 4.25
Cod 2J3KL in RA; FC Doc. 97/10Cod 3MRedfish 3M	no directed fishery 2,000 tons 20,000 tons; notification bi-weekly catches to the Executive Secretary
American plaice 3MCod 3NORedfish 3LN	no directed fishery no directed fishery no directed fishery

- American plaice 3LNO

- Yellowtail flounder 3LNO

- Witch flounder 3NO

- Witch 2J3KL in the RA; FC Doc. 97/7

- Capelin 3NO

- Squid (Illex) 3+4

- Greenland halibut 3LMNO

- Shrimp 3M; FC Doc. 97/8

- Shrimp 3LNO; FC Doc. 97/9

 Schedule 1 – Quota Table, 1998; NAFO Conservation and Enforcement Measures

10. Greenland halibut quota increase

 Request to the Scientific Council for Scientific Advice on management of fish stocks in 1999; FC Doc. 97/13

12. Transfer of quotas between Contracting Parties

no directed fishery

4,000 tons; provisions of Part I.A.4b apply

no directed fishery no directed fishery no directed fishery

150,000 tons; subject to scientific advice

20,000 tons effort limitation no directed fishery

Adopted; item 4.26

Adopted; on the basis of the available scientific

advice; item 4.28

Adopted; item 4.33

Referred to the Annual Meeting 1998; item 4.34

PART II

Report of the Standing Committee on International Control (STACTIC)

1. Opening of the Meeting

The Chairman, D. Bevan (Canada) opened the meeting at 1000 on 15 September 1997. 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, Lithuania, Norway, Poland, the Republic of Korea, Russia and the United States of America.

2. Appointment of Rapporteur

Paul Steele (Canada) was appointed Rapporteur.

3. Adoption of Agenda

The Chairman requested comments on the proposed agenda. The Canadian representative suggested an additional agenda item related to a Canadian proposal for an increase to the minimum mesh size for groundfish (FC Working Paper 97/7). The European Union representative suggested that the 1997 derogation of the minimum mesh size for the redfish fishery also be added to the agenda. Contracting Parties agreed to the addition of both of these items to the agenda. The modified agenda was then adopted. (Annex 1)

4. Review of Annual Return on Infringements

The Chairman invited Contracting Parties to provide any relevant updates of the reports that they had submitted at the June, 1997 STACTIC meeting in Copenhagen and which formed the basis for the Summary of Inspection Information for 1996 (NAFO/FC Doc. 97/5). Updates on the status of particular apparent infringements were provided by the representatives from the European Union and Denmark.

The representative from Canada commented that the 1996 summary report is missing a significant amount of information regarding the disposition of apparent infringements. He pointed out that the NAFO Conservation and Enforcement Measures are very specific about the type of information that Contracting Parties are required to provide in this regard. He noted that, in many cases, Contracting Parties are not submitting the required information or are not providing a sufficient level of detail in their reports.

The Chairman encouraged Contracting Party representatives to review the 1996 summary and to provide updates later during the meeting, if possible, regarding the disposition of apparent infringements.

5. Review of Surveillance and Inspection Reports and 7. Review of Operation of the Hail System

The Chairman asked if Contracting Party representatives wished to make any changes to the reports they had submitted at the June, 1997 STACTIC meeting in Copenhagen. It was agreed that no amendments were required to the report of the Copenhagen meeting (NAFO FC Doc 97/3).

6. Review of the Pilot Project for Observers and Satellite Tracking

At the June, 1997 STACTIC meeting Contracting Parties had been asked to carry out evaluations of the pilot project with a view to presenting reports at the annual meeting. Reports were presented by representatives of the following Contracting Parties: Canada (STACTIC Working Paper 97/32), Denmark, in respect of the Faroe Islands (97/31), Denmark, in respect of Greenland (97/25), the European Union (97/33 and 97/34), Iceland (97/35), Japan (97/23), Norway (97/28 and 97/30) and the United States (97/29).

Russia submitted an oral report on satellite tracking and confirmed that observers had been deployed on all vessels that fished in the Regulatory Area. With regard to satellite tracking, Russia has established two land stations to receive positional information and they have purchased 100 tracking devices, some of which have already been installed on vessels. The technical work has been completed and administrative and procedural issues are now being worked on. The Russian representative expressed his thanks to Norway for their assistance in setting up the satellite tracking program. (A written report, STACTIC Working Paper 97/38, was later submitted by the Russian representative).

The Lithuanian representative also submitted an oral report, indicating that Lithuania has implemented observer and satellite tracking programs, with the assistance of Canada and the European Union, respectively.

The representative from Norway pointed out that the effectiveness of the satellite tracking pilot project has been hampered by the fact that the NAFO Secretariat office is not properly equipped to handle positional information that could be received from fishing vessels equipped with tracking devices and to make that information available automatically to inspection vessels present in the Regulatory Area. He noted that the report of the April, 1997 meeting of the STACTIC working group on satellite tracking highlighted the fact that it is technically possible and relatively inexpensive to transmit information on a real time basis to the NAFO Secretariat and to Contracting Parties with vessels in the Convention Area. It was agreed that this report would be brought to the attention of STACFAD so that that Committee could set aside sufficient funds in the NAFO budget for 1998 in order to upgrade the equipment and software capabilities of the NAFO Secretariat.

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

The Canadian representative presented a proposal (FC Working Paper 97/6) calling for amendments to the Conservation and Enforcement Measures to clarify that discarded fish must be reported by Contracting Parties as part of their total reported catch and must be counted against the overall catch limits.

The European Union representative indicated that further consideration of the proposal would be required and that, before making a decision, it would be necessary to get a clearer understanding of the extent of the discarding problem, if in fact it is a problem.

The United States representative agreed in principle with the Canadian proposal. He asked whether the NAFO Scientific Council takes discards into account when developing their advice regarding overall catch limits. The Chairman agreed to refer this question to the Scientific Council and to report back to STACTIC regarding the Council's response. The Scientific Council later provided their advice (STACTIC Working Paper 97/37).

The representative from Denmark stated that Faroese and Greenlandic vessels which fish in the Regulatory Area already meet the requirements proposed by Canada in that they report all catches, including discards.

The Norwegian representative was of the opinion that, in principle, all dead fish should be counted against quotas and he indicated sympathy for the Canadian proposal. He noted, however, that in some fisheries there may be discards of species for which the vessels involved do not have quotas.

The representative from Iceland stated that the Conservation and Enforcement Measures already require that discards be recorded and reported by Contracting Parties, and that these discarded fish be counted against quotas. He agreed, however, that it would be appropriate to consider revisions to the current wording of the Measures to ensure that the requirements are clearly understood by all Contracting Parties. He stated that STACTIC should attempt to develop clear definitions for "accumulated reported catch" and "estimated unreported catch" (terms used in Part I.A.2 of the Conservation and Enforcement Measures).

The European Union representative suggested that, as a policy issue which could have significant implications for Contracting Party vessels, the discarding proposal should be addressed by the Fisheries Commission rather than STACTIC.

The representative from the United States indicated that, after having reviewed the advice of the Scientific Council (STACTIC Working Paper 97/37), he wished to re-affirm the support of the United States delegation for the Canadian proposal.

The European Union representative stated that he found the Scientific Council advice to be somewhat ambiguous and inconclusive. He expressed the view that the Scientific Council does not, in fact, consider discards in formulating the scientific advice for all fisheries, and that the approach varies on a fishery by fishery basis. He suggested that further information should be requested from the Scientific Council. He also indicated that the European Union has concerns about the practicality and enforceability of the Canadian proposal. A particular concern is with regard to situations whereby vessels discard a type of fish for which they have no quota. He felt that the Canadian proposal could create an inequitable situation where Contracting Parties with quotas for those stocks would be penalized.

The Chairman stated that the advice of the Scientific Council seems to be clear and he felt that it would not be appropriate to seek further clarification from the Council.

The Canadian representative agreed and stated that he did not share the European Union representative's concerns regarding enforceability.

The Norwegian representative indicated that an option could be to set aside an amount of fish, within the overall TAC, to account for anticipated discards.

The representative from Denmark stated that, since a TAC is the amount of fish that can be taken from the water, the discards must be counted against these overall quotas.

The Icelandic representative expressed the view that, since the Canadian proposal does not change the substance of the existing Control and Enforcement Measures, it appears that the current practices of some Contracting Parties, with regard to discards, are not consistent with the rules.

The Chairman indicated that this issue will be left open for discussion at the next STACTIC meeting. The European Union representative suggested that Contracting Parties exchange data on discards prior to that discussion.

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

The representative from Iceland indicated that the proposed amendments submitted by Iceland at the 1996 annual meeting, regarding the logbook reporting requirements with respect to the size of the trawl (STACTIC Working Papers 96/10 and 96/11), have not yet been addressed by the Scientific Council. The Icelandic representative stated that he would re-consider whether or not Iceland will continue to pursue this proposal.

8(c). Sampling Protocols

At the 1996 annual meeting Contracting Parties were asked to submit to the European Union representative copies of any sampling procedures currently being used by their inspectors within their own jurisdictions. The European Union representative indicated that he had not yet received this information. The Chairman asked Contracting Parties to forward the information to Mr. Tony Curran so that this issue can be discussed at the next STACTIC meeting.

8(d). Review of disposition of outstanding infringements by the Contracting Parties

The Canadian representative noted that Contracting Parties have not yet provided information regarding the disposition of many of the apparent infringements listed in NAFO FC Doc. 97/6.

The representatives from Canada, Denmark, the European Union and Norway provided verbal updates regarding the disposition of some of the apparent infringements. The Chairman asked that all Contracting Parties review their apparent infringements and provide written updates to the Executive Secretary as soon as possible. A revised report (NAFO FC Doc. 97/6) was circulated by the NAFO Secretariat later during the meeting.

8(e). Consideration of measures to prohibit at-sea transshipment activities between Contracting Parties and Non-Contracting Party vessels

The Chairman advised that this issue is being handled by STACFAC. He indicated that STACFAC will be making a proposal to the General Council on this issue.

9. Other Matters

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

The Chairman asked the Russian delegation whether they had prepared a report regarding the use of 90 mm mesh for mid-water trawls in the redfish fishery. The Russian representative indicated that this fishery had been very limited in 1997 and there had not yet been an opportunity to prepare the report that had been requested at the 1996 annual meeting. He asked that Contracting Parties consider approving an extension of the derogation for one additional year.

The representative from the United States indicated that, since the requirement for a report, on all information collected during the project as well as the bycatch protocol, had not been fulfilled, the United States does not support an extension of the derogation.

The Canadian representative agreed and noted that a possible moratorium on 3LN redfish is being considered by the Fisheries Commission. He suggested that, if this moratorium is not approved, the Russian delegation may want to raise the proposed extension of the derogation with the Fisheries Commission.

The European Union agreed with the positions taken by the United States and Canada.

It was agreed that, from a technical point of view, STACTIC does not support an extension of the derogation.

b) Report on the objectivity in the realization and distribution of inspection between the Contracting Parties in 1996

The Executive Secretary presented a revised report on this subject (STACTIC Working Paper 97/21). He asked that Contracting Party representatives review the data for accuracy and advise him of any discrepancies. Some concerns were expressed regarding the methodology used to produce the tables in the report. It was agreed that Contracting Parties would further review the data and methodology.

c) Canadian proposal to increase the minimum mesh size for groundfish

It was decided that STACTIC would not discuss this issue, as it was being addressed by the Fisheries Commission.

10. Time and Place of the Next Meeting

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

11. Adoption of Report

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

12. Election of Chairman

It was moved by the European Union representative, and seconded by the Norwegian representative, that the term of the Chairman, Mr. Bevan, be extended for two years. This motion was approved.

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 Pilot Project for Observers 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 (follow-up of the Workshop and Scientific Council recommendations)
 - b) consideration of amendment of Part V. Schedule II, Attachment I (Type of Fishing Gear) and Part II of the Conservation and Enforcement Measures (Scientific Council recommendations)
 - c) sampling protocols
 - d) review of disposition of outstanding infringements by the Contracting Parties
 - e) consideration of measure to prohibit at-sea transshipment activities between Contracting Parties and Non-Contracting Party vessels

Other Matters

- a) consideration of 90 mm mesh size for mid-water trawls in the redfish fishery
- b) report on the objectivity in the realization and distribution of inspection between the Contracting Parties in 1996
- c) Canadian proposal to increase the minimum mesh size for groundfish
- 10. Time and Place of the Next Meeting
- 11. Adoption of Report
- 12. Election of Chairman and Vice-Chairman
- 13. Adjournment